

# RECEIVED

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PUBLIC SERVICE COMMISSION

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

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

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APPLICATION OF ATMOS ENERGY CORPORATION	)	
TO EXTEND ITS DEMAND-SIDE MANAGEMENT PROGRAM,	)	Case No. 2017-00424
AS AMENDED, AND COST RECOVERY MECHANISM,	)	(4)
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: <a href="https://doi.org/10.2013/nates/">The Application of Atmos Enemy Corporation for An Adjustment of Rates and Tariff Modifications, Case No. 2013-00148.</a>
- 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".
- 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.

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 301th 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 30 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 4<sup>th</sup> or 5<sup>th</sup> 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

<b>Equipment Type</b>	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			\$25.00
Thermostat			

#### 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

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

<b>Equipment Type</b>	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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## **Program Summary**

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

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

#### 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
0.	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 .6266		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
	1)	Weatherization		60	60	0
	m)	Commercial Fryer		5	0	5
	n)	Commercial Griddle		5	0	5
	0)	Commercial Oven		5	0	5
	p)	Commercial Steamer		5	0	5
4.	1.7	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	4.57	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 .8290 EF tankless W/H	\$	839		
		Incremental Cost for Gas Fryer	\$	468		
		Incremental Cost for Gas Griddle	\$	121		
		Incremental Cost for Gas Oven	\$	119		
10	Discoun	Incremental Cost for Gas Steamer	Φ	2,103		
10.	DISCOUL	l Nato		7.73%		

Atmos Variable Data Page 2 of 27

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

		Kentuc	ky
		The state of the s	Savings
Measure	Efficiency Level	Savings (CCF)	(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	0.8290 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

Deemed Savings Page 3 of 27

Atmos Energy

Demand Side Management (DSM) Program

**Billing Factor Calculation** 

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

May 1, 2018

DCRC = DSM C	st Recovery-Current
--------------	---------------------

Program Costs		G-1	Residential		G-1 C	ommercial
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 R	lesidential	G-1 Com	nmercial
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 Res	sidential				G-1 Commercial	
	Estimated	Balancing			Estimated	Balancing
Under/(Over) Recovery	Residential Sales	Adjustment	Une	der/(Over) Recovery	Commercial Sales	Adjustment
\$ 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 Estimated Residential Customers 109,894,930 Ccf 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
OTAL DSMRC	S	782.059	\$ 0.00708	s	0.0708

Annual Cost Recovery per G-1 Residential Customers

4.94

G-1 Commercial

Estimated Commercial Sales Estimated Commercial Customers 48,854,530 Ccf 17,416

	 Recovery Amount		Rate, per Ccf	Rate	e, 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
Demand Side Management (DSM) Program
Schedule A - Current Year Participation Detail

Program Year End: December 31, 2018

	Program	Program CCF Conservation			Re	Measure		
G-1 Residential Efficiency Heating Savings	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		

	Program CCF Conservation				Re	Measure			
G-1 Commercial Efficiency Heating Savings	Participants	Per Participant	Total	-	mount		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
Totale	55	NΔ	5.836		NΙΔ	2	15 250		

	Program CCF Conservation				Re	bate	•	Measure		
G-1 Residential Water Heating Savings	Participants	Per Participant	Total	-	Amount		Total	Life	Source	
Tank Water Heater EF .6266	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	S	191 000			

	Program	Program CCF Conservation			Re	bate	)	Measure		
G-1 Commercial Water Heating Savings	Participants	Per Participant	Total	Amount			Total	Life	Source	
Tank Water Heater EF .6266	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			

	Program	Program CCF Conservation			Re	bat	Measure		
G-1 Commercial Cooking Equipment Savings	Participants	Per Participant	Total	-	mount		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		NΔ	\$	10.000		

	Program	CCF Conse	rvation	Rebate				Measure		
Weatherization	Participants	Per Participant	Total	Α	mount		Total	Life	Source	
	60	100.3875	6,023	\$	3,000	\$	180,000	25	DEER	

**Education Program** \$ 34,000

	Program	CCF Conse	rvation	Rebate	)
Totals by Customer Class	Participants	Per Participant	Total	Amount	Total
G-1 Residential Totals	1,715	Varies see above	140,974	Varies see above \$	649,375
G-1 Commercial Totals	95	Varias sas above	17 443	Varies see above \$	31 750

Atmos Energy Demand Side Management (DSM) Program Annual Savings

#### **SAVINGS**

		ļ		G-1	G-1 Comm.				
	G-1 Res.	G-1 Comm.	G-1 Res.	Comm.	Cooking	Weather-		Comm.	
Year	Heating	Heating	Water	Water	Equipment	ization	Res. Total	Total	Total
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	1-	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	- 1	6,023
24	-	-	-	-	-	6,023	6,023	-	6,023
25	-	-	-	-	-	6,023	6,023	-	6,023

Annual Savings Page 6 of 27

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

			Re	esidential	Co	mmercial		
	Ur	nit Cost		Costs		Costs	To	otal Cost
Estimated Rebates			in.	1,655	P EN	95	100 0	
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

	FURNACES		1					
Contractor Location	Brand	Unit Sizing		g. 80% ficiency		g. 90% iciency	Inc	crementa 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	Incre	mental Cost			\$	602
Contractor			Av	g. 80%	Av	g. 92%	Inc	rementa
Location	Brand	Unit Sizing	Eff	ficiency	Eff	iciency		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
OWEIISDUID			-	700	•	4 000	1	000
Owensboro	Carrier	2,000 sq. ft.	\$	700	\$	1,300	\$	600

Contractor Location	Brand	Unit Sizing	g. 80% ficiency		g. 94% iciency		emental 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
		THE CONTRACTOR OF THE PARTY OF	Average	Ingran	antal Cast	•	669

Contractor Location	Brand	Unit Sizing		vg. 80% ficiency		g. 96% iciency	Inc	remental 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	Increm	ental Cost	\$	1,238

#### Boilers

Contractor Location	Brand	Unit Sizing	g. 80% ficiency		g. 85% iciency	In	cremental 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	Increm	antal Cost	\$	1 583

WATER H	EATERS - TANK	( TYPE				
Contractor Location			Avg. 58% Efficiency	Avg. 62% Efficiency	Incremental Cost	
2011 ASHRAE Wint	er Conference				\$	38

38 Average Incremental Cost \$

Contractor Location	Brand	Unit Sizing	vg. 58% fficiency	1	. 67% ciency	emental Cost
Lowes	A.O. Smith	50 gallon	\$ 409	\$	656	\$ 247
Home Depot	Rheem	40 gallon	\$ 400	\$	639	\$ 239
Lowes	State	40 gallon	\$ 379	\$	935	\$ 556
			Average	ncrem	ental Cost	\$ 347

WATER	WATER HEATERS - TANKLESS							
Contractor	Brand		589	6 Eff Tank		82% Eff.	In	cremental
Location Comparison Unit Sizing			Type		Tankless		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		1	Average	moretine	intai oost	•	700
Contractor Location	Brand Comparison	Model Number	Non- Programmable		Programmabl e		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	Increme	ntal Cost	\$	39

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	Total
Program Participants											
A. High Efficiency Appliances	0	0	0	0	~	0	0	0			*
B. Weatherization Program	0	0	0	0	0	0	0	0			
Total Participants	0	0	0	0	0	0	0	0			-
Total Conservation in Ccf											
A. High Efficiency Appliance Savings	0	0	0	0	0	0	0	0			
B. Weatherization Program	0	0	0	0	0	0	0	0			-
Total Ccf Savings	0	0	0	0	0	0	0	0			-
Total Lost Sales	\$ -	\$ - 9	s - 9	s - s	- 9	\$	- \$				\$ -

Atmos Energy

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

Program Year End: December 31, 2018

**Current Year Conservation (Ccf)** 

	G-1 Residential			G-1 Commercial				al	NYMEX Futures Prices				
	Pr	ojected	Annual	С	ommodity	Pr	ojected	Annual	Co	mmodity		Average	
Year	Ga	s Cost*	Savings		Savings	Ga	s Cost*	Savings		Savings	Year	Cost	Escalation
2017	\$	0.491	140,974	\$	69,286	\$	0.491	17,443	\$	8,573	2017	3.05	
2018	\$	0.497	140,974	\$	69,998	\$	0.497	17,443	\$	8,661	2018	3.09	101.0%
2019	\$	0.469	140,974	\$	66,142	\$	0.469	17,443	\$	8,184	2019	2.92	94.5%
2020	\$	0.458	140,974	\$	64,604	\$	0.458	17,443	\$	7,993	2020	2.85	97.7%
2021	\$	0.462	140,974	\$	65,133	\$	0.462	17,443	\$	8,059	2021	2.87	100.8%
2022	\$	0.468	140,974	\$	65,993	\$	0.468	17,443	\$	8,165	2022	2.91	101.3%
2023	\$	0.478	140,974	\$	67,437	\$	0.478	17,443	\$	8,344	2023	2.97	102.2%
2024	\$	0.489	140,974	\$	68,940	\$	0.489	17,443	\$	8,530	2024	3.04	102.2%
2025	\$	0.500	140,974	\$	70,503	\$	0.500	14,839	\$	7,421	2025	3.11	102.3%
2026	\$	0.510	140,974	\$	71,913	\$	0.510	14,839	\$	7,570			
2027	\$	0.520	140,974	\$	73,351	\$	0.520	7,486	\$	3,895			Deemed Escalation
2028	\$	0.531	140,974	\$	74,818	\$	0.531	7,486	\$	3,973	Current A	tmos CGA	Rate After 2022
2029	\$	0.541	140,974	\$	76,315	\$	0.541	6,907	\$	3,739	\$ 0.491		2%
2030	\$	0.552	133,350	\$	73,631	\$	0.552	6,636	\$	3,664			
2031	\$	0.563	133,350	\$	75,104	\$	0.563	6,636	\$	3,738			
2032	\$	0.574	115,254	\$	66,211	\$	0.574	6,033	\$	3,466			
2033	\$	0.586	115,254	\$	67,535	\$	0.586	6,033	\$	3,535			
2034	\$	0.598	115,254	\$	68,886	\$	0.598	6,033	\$	3,606			
2035	\$	0.610	28,034	\$	17,090	\$	0.610	800	\$	488			
2036	\$	0.622	28,034	\$	17,432	\$	0.622	800	\$	498			
2037	\$	0.634	6,023	\$	3,820	\$	0.634	-	\$	-			
2038	\$	0.647	6,023	\$	3,897	\$	0.647	-	\$				
2039	\$	0.660	6,023	\$	3,975	\$	0.660	-	\$	-			
2040	\$	0.673	6,023	\$	4,054	\$	0.673	-	\$	-			
2041	\$	0.687	6,023	\$	4,135	\$	0.687	-	\$	-			
Total Co	mm	odity Sav	rings	\$	1,310,203				\$	112,102			
Discount Rate 7.73%							7.73%						
Program	Ber	nefits			\$672,230					\$66,230			

<sup>\*</sup>Atmos GCA, escalated using NYMEX futures prices at Henry Hub

(present value of commodity savings)

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

TICO.// VVV	w.cmcgro	up.com/trac	ing/energy	maturar-ge	I	T quotes	settiements Tu	
				1	0.		Estimated	Prior Day
Month	Open	High	Low	Last	Change	Settle	Volume	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	-	-	-	_	(0.00.)	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	-	-	-	0.000	(0.001)	2.776		517
Nov-20			-		(0.001)	2.849	-	501
Dec-20					(0.001)	3.002	-	780
Jan-21	3.11	3.11	3.11	3.105	(0.003)	3.114	5	265
Feb-21					(0.004)	3.114		186
	-	-	-	-		3.037		187
Mar-21	-	-	-		-0.006		-	
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			- 0.77	0.774	-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

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
	4.00	4.00			-0.001	2.750	0	20
May-22	4.22	4.22	4.22	-	-0.001	2.775		14
Jun-22		-	-	-	-0.001	2.802	-	15
Jul-22		-		-	-0.001	2.822	-	15
Aug-22		-	-	-	-0.001	2.822	-	14
Sep-22		-	-	-	-0.001	2.848	-	14
Oct-22	-			-	-0.001	2.923	-	14
Nov-22		-	-	-	-0.001	3.078	-	19
Dec-22		-	-	-	-0.001	3.201	-	4
Jan-23	-	-	-	-	-0.001	3.178	-	1
Feb-23	-	-		-		3.176	-	12
Mar-23				-	-0.001		-	
Apr-23		-		-	-0.001	2.829	-	12 19
May-23		-	-	-	-0.001	2.811 2.836	-	19
Jun-23	-		-	-	-0.001		-	
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		

				·			<b></b>	·
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 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<sub>t</sub> = 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<sub>t</sub> = Incentives paid to the participant by the Utility

PC<sub>t</sub> = Participant costs in year t, which include

incremental captial costs

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

#### 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 <sub>t</sub>	INC <sub>t</sub>	$B_P$
1	106,769	-	467,125	573,894
2	107,570	-	-	107,570
3	103,237	-	-	103,237
4	101,508	-	· <u>-</u>	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		(A)	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<sub>t</sub> = Incentives paid to the participant by the Utility

Participant Test B Page 12 of 27

Atmos Energy Demand Side Management (DSM) Program Participant Test

BRt = Bill reductions in year t

G-1 Residential												
(4)												
	(1)		(2)		(3)	(2	2) + (3)		$(1) \times (4)$			
	Ccf	Pr	ojected		Demand	Cor	mbined					
t	Conserved	Ga	s Cost*		Charge	- 1	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 0.7		0.72		102,042			
14	133,350	\$	0.552		0.1825		0.73		97,968			
15	133,350	\$	0.563		0.1825	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

			G-1	Co	mmerciai			
	(1)		(2)		(3)		(4) ) + (3)	(1) x (4)
	Ccf	Pr	ojected		Demand	Cor	nbined	
t	Conserved	Ga	s Cost*		Charge	F	Rate	BRt
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	\$ 11,17
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	\$ 11,71
9	14,839	\$	0.500	\$	0.1825	\$	0.68	\$ 10,129
10	14,839	\$	0.510	\$	0.1825	\$	0.69	\$ 10,27
11	7,486	\$	0.520	\$	0.1825	\$	0.70	\$ 5,26
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	\$ 4,56
17	6,033	\$	0.586	\$	0.1825	\$	0.77	\$ 4,636
18	6,033	\$	0.598	\$	0.1825	\$	0.78	\$ 4,70
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.

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

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

Dema	s Energy nd Side Management (DSM) Program ipant Test			
TC <sub>t</sub>	= Tax credits in year t (presently no federal tax	c credits are available	in 2014)	
		(1) <b>Program</b>	(2) Residential	(1) x (2)
	A. High Efficiency Heating Savings	Participants	Energy Credits	TCt
	B. High Efficiency Water Heating Savings			
	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
Demand Side Management (DSM) Program
Participant Test

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

Energy Savings by Customer Class	INC <sub>t</sub>
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

# 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) Bl <sub>t</sub>	(2) <b>PC</b> <sub>t</sub>	(1) + (2) <b>C</b> <sub>P</sub>
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

Bl<sub>t</sub> = Bill increases in year t (not accounted for in participant cost test).

PC<sub>t</sub> = Participant costs in year t, which include incremental capital costs

Atmos Energy Demand Side Management (DSM) Program Participant Test

PC<sub>t</sub> = Participant costs for t = 1

	(1)	(2)		(1) x (2)
	Program	Increme	ntal	
A. High Efficiency Heating Savings	<b>Participants</b>	Cost		PC <sub>t</sub>
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
B. High Efficiency Water Heating Savings Tank W/H .6266 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
C. High Efficiency Commercial Kitchen Equ	<u>iipment</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

Participant Test PC Page 17 of 27

<sup>(1)</sup> 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<sub>pa</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t

PRC<sub>t</sub> = Program Administrator Costs in year t INC<sub>t</sub> = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = 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 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 <sub>t</sub>
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<sub>t</sub> scheduled per calculation performed for RIM test

UAC<sub>t</sub> = Utility avoided supply costs in year t

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

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

	(1)	(2)	(3)	
t	PRC <sub>t</sub>	INC <sub>t</sub>	UICt	$C_pa$
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<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = Utility increased supply costs in year t

Program Admin C

- (1) Program costs scheduled from PRC<sub>t</sub> which was calculated for the RIM Test
- (2) Incentives scheduled from INC<sub>t</sub> 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} = $ (1,008,771)$ 

Benefit-Cost Ratio

0.42

#### Conclusion:

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

Where:

NPV<sub>RIM</sub> = Net present value levels

 $B_{RIM}$  = Benefits to rate levels or customer bills  $C_{RIM}$  = Costs to rate levels or customer bills

$$B_{RIM} \sum_{t=1}^{N} \underbrace{UAC_{t}}_{(1+d)^{t-1}}$$

$$C_{RIM} \sum_{t=1}^{N} \underbrace{UIC_{t} + RL_{t} + PRC_{t} + INC_{t}}_{(1+d)^{t-1}}$$

 $\begin{array}{lll} \mathsf{UAC}_t & = & \mathsf{Utility} \ \mathsf{avoided} \ \mathsf{supply} \ \mathsf{costs} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \mathsf{UIC}_t & = & \mathsf{Utility} \ \mathsf{increased} \ \mathsf{supply} \ \mathsf{costs} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \mathsf{RL}_t & = & \mathsf{Revenue} \ \mathsf{loss} \ \mathsf{from} \ \mathsf{reduced} \ \mathsf{sales} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \mathsf{PRC}_t & = & \mathsf{Program} \ \mathsf{administrator} \ \mathsf{costs} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \end{array}$ 

 $(1+d)^{t-1}$ 

INC<sub>t</sub> = 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 Demand Side Management (DSM) Program Ratepayer Impact Measure (RIM) Test

$$B_{RIM} \sum_{t=1}^{N} \underbrace{UAC_{t}}_{(1+d)^{t-1}}$$

t	UAC <sub>t</sub>
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<sub>t</sub> = Utility avoided supply costs in year t

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

UAC<sub>t</sub> = Utility avoided supply costs in year t

	G-1 Residential						G-	1 Commerci	al		
	Pr	ojected	Annual	C	ommodity	P	rojected	Annual	Co	mmodity	
t	Ga	as Cost*	Savings		Savings	G	as Cost*	Savings		Savings	UAC <sub>t</sub>
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 Cor	nmodit	y Savings		\$	1,310,203				\$	112,102	\$ 1,422,305

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

<sup>(1)</sup> Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.

<sup>(2)</sup> Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

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

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

t	(1) UIC <sub>t</sub>	(2) <b>RL</b> <sub>t</sub>	(3) <b>PRC</b> <sub>t</sub>	(4) INC <sub>t</sub>	(1) + (2) C <sub>RIM</sub>	
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				
14	-	102,844		-	107,042 102,844	
15	-	104,389		-	104,389	
16	-	91,812		-	91,812	
17	-	93,205		-	93,205	
18	-	94,626		-	94,626	
19	-	22,841		4	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

 $\begin{array}{lll} \text{UIC}_t & = & \text{Utility increased supply costs in year t} \\ \text{RL}_t & = & \text{Revenue loss from reduced sales in year t} \\ \text{PRC}_t & = & \text{Program administrator costs in year t} \end{array}$ 

INC<sub>t</sub> = 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 Demand Side Management (DSM) Program Total Resource Cost (TRC) Test

NPV TRC = B TRC - C TRC

$$B_{TRC} = $ 738,460$$
 $C_{TRC} = 1,241,164$ 
 $NPV_{TRC} = $ (502,704)$ 

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<sub>TRC</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t

TC<sub>t</sub> = Tax credits in year t

UIC<sub>t</sub> = Utility increased supply costs in year t PRC<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

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

# 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) <b>UAC</b> <sub>t</sub>	(2) <b>TC</b> <sub>t</sub>		B <sub>TRC</sub>
1	\$	77,859	101	\$	77,859
	Φ	78,659	-	φ	78,659
2		74,326	_		74,326
4		72,597	_		72,597
5			-		73,192
6		73,192	-		74,158
7		74,158	-		
		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<sub>t</sub> = Utility avoided supply costs in year t

TC<sub>t</sub> = Tax Credits in year t

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

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

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

	(1)	(2)	(3)	
t	PRC <sub>t</sub>	PCN <sub>t</sub>	UICt	C <sub>TRC</sub>
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<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

UIC<sub>t</sub> = 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<sub>t</sub> from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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## **Program Summary**

			1 6	ar i	
		G-1 l	Residential	G-1	Commercial
Total DSM Cost for recovery	California Tests	\$	189,804	\$	(63,178)
Program Costs	DCRC	\$	180,000	\$	-
Lost Sales	DLSA	\$	1,099	\$	-
Program Incentive	DIA	\$	(21,900)	\$	=
Program Balancing Adjustment	DBA	\$	30,605	\$	(63,178)
Annual Average Recovery Cost per Customer	<u>DSMRC</u>	\$	1.20	\$	(3.63)

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

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

1. 2. 1a. 2a. 3.		# Kentucky Residential Customers Residential Sales Volumes (Ccf) # Kentucky Commercial Customers Commercial Sales Volumes (Ccf) Estimated Participants		158,221 109,894,930 17,416 48,854,530 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 .6266		-	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
	1)	Weatherization		60	60		0
	m)	Commercial Fryer		-	0		0
	n)	Commercial Griddle		-	0		0
	0)	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 -	15.1	250			
		Furnace AFUE 94 -		325			
		Furnace AFUE 96 (		400			
		Boiler AFUE > 85	\$	250			
		Tank Water Heater		200			
		Tank Water Heater		300			
		Tankless/Condensi		400			
		Programmable The		25			
		Commercial Fryer E		500			
		Commercial Griddle		500			
		Commercial Oven I		500			
		Commercial Steam		500			
8.		Weatherization Pro	- T-	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 .8290 EF tankless W/H	\$	839			
		Incremental Cost for Gas Fryer	\$	468			
		Incremental Cost for Gas Griddle	\$	121			
		Incremental Cost for Gas Oven	\$	119			
40	D:	Incremental Cost for Gas Steamer	\$	2,103			
10.	Discoun	т кате		7.73%			_

Atmos Variable Data Page 2 of 27

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

		Kentuc	ky
			Savings
Measure	Efficiency Level	Savings (CCF)	(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	0.8290 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

Demand Side Management (DSM) Program

**Billing Factor Calculation** 

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

May 1, 2018

DCRC = DSM Cost Recovery-Current

Program Costs		G-1 I	Residential		G-1 Cor	nmercial
Rebates		\$	-		\$	
Program Costs (Weatherization & Education)		\$	180,000		\$	-
Customer Awareness		\$			\$	
Program Administration		\$	-		\$	-
Supplies		\$	-		\$	-
Program Overhead		\$	-		\$	-
TOTAL DCRC G	6-1 Residential	\$	180,000	G-1 Commercial	\$	
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 DLSC	60	6,023		\$ 1,100

DIA = DSM Incentive Adjustment

	G-1 I	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

ment	G-1 Res	sidential				G-1 Commercial	
		Estimated	Balancing			Estimated	Balancing
	Under/(Over) Recovery	Residential Sales	Adjustment	Under	(Over) Recovery	Commercial Sales	Adjustment
\$	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
Estimated Residential Customers

109,894,930 Ccf 158,221

	Recovery Amount	Rate, per Ccf	Rate	e, per Mcf
DCRC	\$ 180,000	\$ 0.0016	\$	0.0160
DLSA	\$ 1,099	\$ -	\$	3=0
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

5

G-1 Commercial

Estimated Commercial Sales Estimated Commercial Customers 48,854,530 Ccf 17,416

1.20

Recovery Amount	F	Rate, per Ccf	Rate	, per Mcf
\$ -	\$	#1	\$	-
\$ *	\$	*	\$	-
\$	\$	81	\$	~
\$ (63,178)	\$	(0.0013)	\$	(0.0129)
\$ (63,178)	\$	(0.0013)	\$	(0.0129)
\$ \$ \$ \$ \$ \$	\$ - \$ - \$ - \$ (63,178)	\$ - \$ \$ - \$ \$ - \$ \$ (63,178) \$	\$ - \$ - \$ - \$ - \$ - \$ - \$ (63,178) \$ (0.0013)	\$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ (63,178) \$ (0.0013) \$

Annual Cost Recovery per G-1 Commercial Customers

(3.63)

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

Program Year End: December 31, 2018

	Program	CCF Conse				bate			leasure
G-1 Residential Efficiency Heating Savings	Participants	Per Participant	Total	-	mount		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
Total	-	NA	-		NA	\$	-		
	Program	CCF Conse			Re	bate		M	easure
G-1 Commercial Efficiency Heating Savings	Participants	Per Participant	Total	A	mount		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 >	1	135.00	-	\$	400	\$	-	18	DEER
Boiler AFUE >85		42.33	-	\$	250	\$	-	18	DEER
Programmable Thermostat		60.32	-	\$	25	\$	-	15	DEER
Total	-	NA	-		NA	\$	-		
	Program	CCF Conse	rvation		Re	bate	1	M	easure
G-1 Residential Water Heating Savings	Participants	Per Participant	Total	A	mount		Total	Life	Source
Tank Water Heater EF .6266	-	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
Total	-	NA	-		NA	\$	-		
	Program	CCF Conse	rvation		Re	bate		M	easure
G-1 Commercial Water Heating Savings	Participants	Per Participant	Total	Α	mount		Total	Life	Source
Tank Water Heater EF .6266		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	\$	-		
	Program	CCF Conse	rvation			bate		M	easure
G-1 Commercial Cooking Equipment Saving	: Participants	Per Participant	Total	A	mount		Total	Life	Source
Fryer EnergyStar Rated	•	520.73	-	\$	500	\$	-	8	Energy Sta
Griddle EnergyStar Rated	-	115.72	-	\$	500	\$	-	12	Energy Sta
Oven EnergyStar Rated		216.97	-	\$	500	\$	-	10	NEEP
Steamer EnergyStar Rated	0	1,253.62	-	\$	500	\$	-	10	Energy Sta
Totals	-	NA	-		NA	\$	-		
	Program	CCF Conse	rvation		Re	bate		M	easure
Weatherization	Participants	Per Participant	Total	A	mount		Total	Life	Source
	60	100.3875	6,023	\$	3,000	\$	180,000	25	DEER
( *									
Education Program						\$	-		
Education Program	- Program	CCF Conse				\$ bate	-		

	Program	CCF Conse	rvation	Rebat	е
Totals by Customer Class	Participants	Per Participant	Total	Amount	Total
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 Demand Side Management (DSM) Program Annual Savings

#### SAVINGS

				G-1	G-1 Comm.				
	G-1 Res.	G-1 Comm.	G-1 Res.	Comm.	Cooking	Weather-		Comm.	
Year	Heating	Heating	Water	Water	Equipment	ization	Res. Total	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	-	-	-	-	7 <del>4</del>	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

Annual Savings Page 6 of 27

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

			R	esidential		nmercial	-	
	Ur	nit Cost		Costs	(	Costs	10	tal 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

Man Strategic Strategic	FURNACES		l			0.00		
Contractor			Av	g. 80%	Αv	g. 90%	Incr	emental
Location	Brand	Unit Sizing	Eff	ficiency	Eff	iciency		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	Increr	mental Cost			\$	602
Contractor			Av	g. 80%	Av	g. 92%	Incr	emental
Location	Brand	Unit Sizing	Eff	ficiency	Eff	iciency		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
DOWNING GIEEN			\$	1,950	\$	2,467	\$	517
	York	2,000 sq. ft.	Ф	1,000	Ψ	2,101		
Bowling Green Owensboro	York Heil	2,000 sq. ft. 2,000 sq. ft.	\$	750	\$	1,200	\$	450

	Ave	erage l	ncremental	Cost 9	0-92 AFUE	\$ 654
			Average	Increm	ental Cost	\$ 716
2,000 sq.	ft.	\$	700	\$	1,300	\$ 600
2,000 sq.	ft.	\$	750	\$	1,200	\$ 450
2,000 sq.	ft.	\$	1,950	\$	2,467	\$ 517

Average Incremental Cost \$

38

Contractor Location	Brand	Unit Sizing	g. 80% ficiency		g. 94% iciency	emental 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	Increm	nental Cost	\$ 668

Contractor Location	Brand	Unit Sizing	vg. 80% fficiency		g. 96% iciency	Inc	remental 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	Increm	nental Cost	\$	1,238

	Boilers		ı					
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency			g. 85% ficiency	Increment 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	Incren	nental Cost	\$	1,583

WATER H	EATERS - TANK	(TYPE				
Contractor Location			Avg. 58% Efficiency	Avg. 62% Efficiency	Incre	mental ost
2011 ASHRAE Wint	er Conference				\$	38

Contractor			Avg. 58%	Avg. 62%	Incre	mental
Location	Brand	Unit Sizing	Efficiency	Efficiency	C	ost
2011 ASHRAE Wint	er Conference				\$	38

Contractor Location	Brand	Unit Sizing		vg. 58% fficiency	(S) (S) (S)	ı. 67% ciency	emental Cost
Lowes	A.O. Smith	50 gallon	\$	409	\$	656	\$ 247
Home Depot	Rheem	40 gallon	\$	400	\$	639	\$ 239
Lowes	State	40 gallon	\$	379	\$	935	\$ 556
			_	Average	Increm	ental Cost	\$ 347

WATER	WATER HEATERS - TANKLESS							
Contractor Location	Brand Comparison	Unit Sizing	58	% Eff Tank Type		82% Eff. Tankless	In	cremental 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 8	3 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	 Von- ammable	Progr	ammabl e		mental ost
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
			Averege	Ingrama	ntal Cost	Ф.	20

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											
A. High Efficiency Appliances	0	0	0	0	141	0	0	0			-
B. Weatherization Program	0	0	0	0	0	0	0	0			-
Total Participants	0	0	0	0	0	0	0	0			•
Total Conservation in Ccf		18									
A. High Efficiency Appliance Savings	0	0	0	0	0	0	0	0			-
B. Weatherization Program	0	0	0	0	0	0	0	0			-
Total Ccf Savings	0	0	0	0	0	0	0	0			-
Total Lost Sales	\$ -	\$ -	\$ -	\$ - :	5 - 5	- 9	- 5	-			\$ -

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

Program Year End: December 31, 2018

**Current Year Conservation (Ccf)** 

		(	G-1 Reside	ntia	Ţ.		G	-1 Comme	rcial		<b>NYMEX Futures Prices</b>			
	Pr	ojected	Annual	Co	mmodity	Pr	ojected	Annual	Cor	nmodity		Average		
Year	Ga	s Cost*	Savings		Savings	Ga	s Cost*	Savings	S	avings	Year	Cost	Escalation	
2017	\$	0.491	6,023	\$	2,960	\$	0.491	-	\$	-	2017	3.05		
2018	\$	0.497	6,023	\$	2,991	\$	0.497	( <del>-</del>	\$	-	2018	3.09	101.0%	
2019	\$	0.469	6,023	\$	2,826	\$	0.469	-	\$	-	2019	2.92	94.5%	
2020	\$	0.458	6,023	\$	2,760	\$	0.458	-	\$	-	2020	2.85	97.7%	
2021	\$	0.462	6,023	\$	2,783	\$	0.462	-	\$	-	2021	2.87	100.8%	
2022	\$	0.468	6,023	\$	2,820	\$	0.468		\$	-	2022	2.91	101.3%	
2023	\$	0.478	6,023	\$	2,881	\$	0.478	-	\$	-	2023	2.97	102.2%	
2024	\$	0.489	6,023	\$	2,946	\$	0.489	2	\$	*	2024	3.04	102.2%	
2025	\$	0.500	6,023	\$	3,012	\$	0.500	-	\$	-	2025	3.11	102.3%	
2026	\$	0.510	6,023	\$	3,073	\$	0.510	-	\$	-				
2027	\$	0.520	6,023	\$	3,134	\$	0.520	-	\$	-			Deemed Escalation	
2028	\$	0.531	6,023	\$	3,197	\$	0.531	2	\$	-	Current A	tmos CGA	Rate After 2022	
2029	\$	0.541	6,023	\$	3,261	\$	0.541	-	\$	-	\$ 0.491		2%	
2030	\$	0.552	6,023	\$	3,326	\$	0.552	~	\$	₩.				
2031	\$	0.563	6,023	\$	3,392	\$	0.563	-	\$	n <b>-</b> n				
2032	\$	0.574	6,023	\$	3,460	\$	0.574	*	\$	*				
2033	\$	0.586	6,023	\$	3,529	\$	0.586	-	\$	-				
2034	\$	0.598	6,023	\$	3,600	\$	0.598	-	\$	-				
2035	\$	0.610	6,023	\$	3,672	\$	0.610	-	\$	-				
2036	\$	0.622	6,023	\$	3,745	\$	0.622	-	\$	*				
2037	\$	0.634	6,023	\$	3,820	\$	0.634	-	\$	-				
2038	\$	0.647	6,023	\$	3,897	\$	0.647	-	\$	-				
2039	\$	0.660	6,023	\$	3,975	\$	0.660	-	\$	-				
2040	\$	0.673	6,023	\$	4,054	\$	0.673	*	\$	=				
2041	\$	0.687	6,023	\$	4,135	\$	0.687	-	\$	-				
Total Co	mm	odity Sav	vings	\$	83,249				\$					
Discount	Rate	е			7.73%					7.73%				
Program					\$34,225					\$0				
(present	valu	e of comr	modity savir	ngs)										

<sup>\*</sup>Atmos GCA, escalated using NYMEX futures prices at Henry Hub

Daily Settlements for Henry Hub Natural Gas Futures (PRELIMINARY)Trade Date: 10/24/2017 http://www.cmegroup.com/trading/energy/natural-gas/natural-gas guotes settlements futures.html

TILLD.//VVVV	w.ciriegio	up.com/trac	ing/energy	//riaturai-ga	as/riaturai-g	as quotes	settlements fu	
		2 Just Observed		Estimated	Prior Day			
Month	Open	High	Low	Last	Change	Settle	Volume	Open
							Volume	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	- 0.002	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		-	_		(0.00.)	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	-	-		0.000	(0.001)	2.776		517
Nov-20					(0.001)	2.849	-	501
Dec-20					(0.001)	3.002	-	780
Jan-21	3.11	3.11	3.11	3.105	(0.003)		5	265
Feb-21						3.114		186
		-		-	(0.006)		-	
Mar-21		-	-	-	-0.006 -0.009	3.037	-	187
Apr-21		-	-	-		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		-	- 0.77	0.774	-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

Dec 24			T	г	0.000	2 020		100
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	<del></del>	-		-	-0.001	2.994		12
Dec-23			-		-0.001	3.149	-	1
Jan-24	-	-	-	-	-0.001	3.149	-	0
		-	-	-		3.212	-	
Feb-24		-	-	-	-0.001			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		-
Jul1-20					-0.001	0.020		-

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
Demand Side Management (DSM) Program
Participant Test

 $NPV_P = B_P - C_P$ 

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

NPV<sub>P</sub> = \$ 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<sub>t</sub> = Bill reductions in year t (not accounted for in participant cost test).

BI<sub>t</sub> = Bill increases in year t TC<sub>t</sub> = Tax credits in year t

 $INC_t$  = Incentives paid to the participant by the Utility

PC<sub>t</sub> = Participant costs in year t, which include

incremental captial costs

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

#### 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 <sub>t</sub>	$B_P$
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
V	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<sub>t</sub> = Incentives paid to the participant by the Utility

Atmos Energy Demand Side Management (DSM) Program Participant Test

BRt = Bill reductions in year t

			G-1	Re	sidential			
							(4)	
	(1)		(2)		(3)	(2	) + (3)	(1) x (4)
	Ccf	Pre	ojected		Demand	Cor	nbined	
t	Conserved	Ga	s Cost*		Charge	F	Rate	BR <sub>t</sub>
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

			-			(4)	
	(1)		(2)	(3)	(2	(3)	$(1) \times (4)$
	Ccf	Pr	ojected	Demand	Cor	nbined	
t	Conserved	Ga	s Cost*	Charge	F	Rate	$BR_t$
1	-	\$	0.491	\$ 0.1825	\$	0.67	\$ 18.
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	2	\$	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	\$ -
							\$ _

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

 <sup>(1)</sup> 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

Atm	os E	Energy				
Dem	and	I Side Management (DSM) Program				
Part	icipa	ant Test				
TC <sub>t</sub> = Tax credits in year t (presently no federal tax credits are available in 2014)						
			(1) Program	(2) Residential	(1) x (2)	
		A. High Efficiency Heating Savings	Participants	<b>Energy Credits</b>	TC <sub>t</sub>	
		B. High Efficiency Water Heating Savings				
		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 Ene	rgy
Demand Si	de Management (DSM) Program
Participant	Test

INC<sub>t</sub> = Incentives paid to the participant by the Utility, for t = 1

<b>Energy Savings by Customer Class</b>	INC <sub>t</sub>		
G-1 Residential Customers		\$	-
G-1 Commercial Customers			-
Т	otal	\$	-

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
Demand Side Management (DSM) Program
Participant Test

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

	t	(1) <b>BI</b> <sub>t</sub>	(2) <b>PC</b> <sub>t</sub>	(1) + (2) <b>C</b> <sub>P</sub>	
•	1	-	-	-	
	2	-	-	-	
	3	-	-	-	
	4	=	-	-	
	5	2	=	-	
	6	-	-	-	
	7	₩	-	-	
	8	-	-	-	
	9	¥	-	-	
	10	_	_		
		2		_	

7.730% Discount Rate

\$0 NPV

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

PC<sub>t</sub> = Participant costs in year t, which include incremental capital costs

Atmos Energy Demand Side Management (DSM) Program Participant Test

PC<sub>t</sub> = Participant costs for t = 1

	(1)		(2)		(1) x (2)
A. High Efficiency Heating Savings	Program Participants	Ir	ncremental Cost		PC <sub>t</sub>
	raiticipants			_	r O <sub>t</sub>
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	-				•
B. High Efficiency Water Heating Savings					
Tank W/H .6266 EF	-	\$	38	\$	-
Tank W/H .67 or > EF	-		347		_
Tankless W/H .82 - 90 EF	-		839		-
Total	-			\$	•
C. High Efficiency Commercial Kitchen Equipme	<u>nt</u>				
Gas Fryer	-	\$	468	\$	-
Gas Griddle	-		121		-
Gas Oven	-		119		-
Gas Steamer			2,103		-
Total	•			\$	-

IC = Incremental Costs for purchasing high-efficiency unit

Participant Test PC Page 17 of 27

<sup>(1)</sup> Based on budgeted participation levels in year one of the CEP.

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

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

$$B_{pa} = $34,225$$
 $C_{pa} = 167,084$ 
 $NPV_{pa} = $(132,859)$ 

Benefit-Cost Ratio

0.20

Conclusion:

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

Where:

NPV<sub>pa</sub> = 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

$$B_{pa} = \sum_{t=1}^{N} \underbrace{UAC_{t}}_{(1+d)^{t-1}}$$

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

UAC<sub>t</sub> = Utility avoided supply costs in year t PRC<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = 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 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 <sub>t</sub>
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

UACt scheduled per calculation performed for RIM test (1)

 $UAC_t =$ Utility avoided supply costs in year t

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

$$C_{pa} = \sum_{t=1}^{N} \frac{PRC_{t} + INC_{t} + UIC_{t}}{(1+d)^{t-1}}$$

	(1)	(2)	(3)	
t	PRC <sub>t</sub>	INC <sub>t</sub>	UIC <sub>t</sub>	C <sub>pa</sub>
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<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UICt = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC<sub>t</sub> which was calculated for the RIM Test
- (2) Incentives scheduled from INC<sub>t</sub> 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

Benefit-Cost Ratio

0.16

#### Conclusion:

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

Where:

NPV<sub>RIM</sub> = Net present value levels

 $B_{RIM}$  = Benefits to rate levels or customer bills

C<sub>RIM</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t

UICt = Utility increased supply costs in year t

RLt = Revenue loss from reduced sales in year t

PRC<sub>t</sub> = Program administrator costs in year t

INC<sub>t</sub> = 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 Demand Side Management (DSM) Program Ratepayer Impact Measure (RIM) Test

$$B_{RIM} \sum_{t=1}^{N} \underbrace{UAC_{t}}_{(1+d)}$$

t	UAC <sub>t</sub>
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<sub>t</sub> = Utility avoided supply costs in year t

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

UAC<sub>t</sub> = Utility avoided supply costs in year t

		(	G-1 Residentia	I			G-	1 Commerc	ial		
	Pr	ojected	Annual	(	Commodity	P	rojected	Annual	Con	nmodity	
t	Ga	as Cost*	Savings		Savings	G	as Cost*	Savings	Sa	avings	UAC <sub>t</sub>
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	18	\$	-	\$ 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 Cor	nmodity	y Savings		\$	83,249				\$	-	\$ 83,249

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

RIM Test UAC Page 23 of 27

<sup>(1)</sup> Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.

<sup>(2)</sup> Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

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

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

· t	(1) <b>UIC</b> ,	(2) RL <sub>t</sub>	(3) <b>PRC</b> <sub>t</sub>	(4) INC <sub>t</sub>	(1) + (2) C <sub>RIM</sub>
1	- 1010	4,060	180,000		184,060
2		4,090	100,000		4,090
3		3,925			3,925
4	_	3,859		_	3,859
5	_	3,882		_	3,882
6		3,919			3,919
6 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<sub>t</sub> = 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

RIM Test C

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} = $$  (132,859)

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<sub>TRC</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t

TC<sub>t</sub> = Tax credits in year t

UIC<sub>t</sub> = Utility increased supply costs in year t PRC<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

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

TRC Test Summary Page 25 of 27

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

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

	(1)	(2)	
t	UACt	TC <sub>t</sub>	B <sub>TRC</sub>
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

TRC Test B

## Atmos Energy

Demand Side Management (DSM) Program

**Total Resource Cost (TRC) Test** 

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

	(1)	(2)	(3)	
t	PRC <sub>t</sub>	PCN <sub>t</sub>	UIC <sub>t</sub>	C <sub>TRC</sub>
1	180,000	-	-	180,000
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
5	-	-	-	-
6	-	-	*	-
7	=	-	-	-
8	-	-	~	-
9	-	-	-	-
10	-	-	-	<u> </u>
	180,000	-	-	180,000

7.730% Discount Rate

\$167,084 NPV

PRC<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

UIC<sub>t</sub> = 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<sub>t</sub> from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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# **Program Summary**

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

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

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

1 # Kentucky Residential Clistomers 158 221	
<ol> <li># Kentucky Residential Customers 158,221</li> <li>Residential Sales Volumes (Ccf) 109,894,930</li> </ol>	
1a. # Kentucky Commercial Customers 17,416	
2a. Commercial Sales Volumes (Ccf) 48,854,530	
3. Estimated Participants Total Residential Comme	roial
	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 .6266 - 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
I) 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	
<ol> <li>Average water heating use (ccf) per customer</li> <li>148.00</li> </ol>	
7. Proposed Rebates	
Furnace AFUE 90 - \$ 250	
Furnace AFUE 94 - \$ 325	
Furnace AFUE 96 (\$ 400	
Boiler AFUE > 85 \$ 250	
Tank Water Heater \$ 200	
Tank Water Heater \$ 300	
Tankless/Condensi \$ 400	
Programmable The \$ 25	
Commercial Fryer E \$ 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 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 Variable Data Page 2 of 27

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

		Kentuc	ky
			Savings
Measure	Efficiency Level	Savings (CCF)	(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	0.8290 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

Deemed Savings Page 3 of 27

Atmos Energy Demand Side Management (DSM) Program

Billing Factor Calculation

Program Begins: Program Year End: Rate Effective:

May 1, 2018 December 31, 2018 May 1, 2018

DCRC = DSM Cost Recovery-Current

Program Costs		G-1 F	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%

DBA = DSM Balance Adjustment

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

(5,600) \$

(200)

#### DSMRC = DSM Cost Recovery Component

G-1 Residential

Estimated Residential Sales Estimated Residential Customers

DIA

109,894,930 Ccf 158,221

	Recovery Amount		Rate, per Ccf	Rat	e, per Mcf
DCRC	\$	37,350	\$ 0.0003	\$	0.0030
DLSA	\$	-	\$ -	\$	-
DIA	\$	(5,600)	\$ (0.0001)	\$	(0.0010)
DBA	\$ 	30,605	\$ 0.0003	\$	0.0028
OTAL 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 Demand Side Management (DSM) Program Schedule A - Current Year Participation Detail

Program Year End: December 31, 2018

	Program	CCF Conse	rvation		Re	bate	•	M	easure
G-1 Residential Efficiency Heating Savings	Participants	Per Participant	Total		mount		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	\$	-		
	Program	CCF Conse				bate			easure
G-1 Commercial Efficiency Heating Savings	Participants	Per Participant	Total	-	mount		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	\$	-		
	Program	CCF Conse	rvation		Re	bate	•	M	easure
G-1 Residential Water Heating Savings	Participants	Per Participant	Total	A	mount		Total	Life	Source
Tank Water Heater EF .6266	-	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	\$	-		
	Program	CCF Conse	rvation		Re	bate	)	M	easure
G-1 Commercial Water Heating Savings	Participants	Per Participant	Total	Α	mount		Total	Life	Source
Tank Water Heater EF .6266	-	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 -	\$	-		
	Program	CCF Conse	rvation		Re	bate		M	easure
G-1 Commercial Cooking Equipment Savings	Participants	Per Participant	Total	A	mount		Total	Life	Source
Fryer EnergyStar Rated		520.73	-	\$	500	\$	-	8	Energy St
Griddle EnergyStar Rated		115.72	-	\$	500	\$	-	12	Energy St
Oven EnergyStar Rated	_	216.97		\$	500	\$	_	10	NEEP
Steamer EnergyStar Rated	0	1.253.62		\$	500	\$		10	Energy St
Totals	-	NA NA	-		NA	\$	-	10	Lilorgy Of
	Program	CCF Conse	rvation		Re	bate		М	easure
Weatherization	Participants	Per Participant	Total	A	mount		Total	Life	Source
	-	100.3875	-	\$	3,000	\$	-	25	DEER

	Program	CCF Conse	rvation	Rebat	е
Totals by Customer Class	Participants	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 \$	-

Atmos Energy
Demand Side Management (DSM) Program
Annual Savings

### **SAVINGS**

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

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

			R	esidential		Commerci	al				
	Unit Cost		Unit Cost			Costs		Costs		Tot	tal 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

	FURNISHE		1					
Contractor	FURNACES		Ave	g. 80%	Avo	. 90%	In	crement
Location	Brand	<b>Unit Sizing</b>	000000	iciency		ciency	211	Cost
Bowling Green	York	2,000 sq. ft.	\$	1,950	\$	2,467	\$	5
Bowling Green	Amana	2,000 sq. ft.	\$	1,000	\$	1,570	\$	5
Bowling Green	Trane	2,000 sq. ft.	\$	1,450	\$	1,700	\$	2
Danville	Lennox	2,000 sq. ft.	\$	1,400	S	2.500	\$	1.1
Danville	Trane	2,000 sq. ft.	\$	1,600	\$	2,500	\$	9
Owensboro	York	2,000 sq. ft.	\$	725	\$	1,050	\$	3
)wensboro	Carrier	2,000 sq. ft.	\$	700	\$	1,250	\$	5
74461135010	Odition			nental Cost		1,200	\$	6
Contractor			A.,,	- 2004	Ave	0206	Tn	crement
Location	Brand	Unit Sizing		g. 80% iciency		. 92% ciency	In	Cost
anville	Lennox	2,000 sq. ft.	\$	1,400	\$	2,200	\$	8
Danville	Trane	2,000 sq. ft.	\$	1,600	\$	2,500	\$	9
Bowling Green	Amana	2,000 sq. ft.	\$	1,000	\$	2,026	\$	1,0
Sowling Green	York	2,000 sq. ft.	\$	1,950	\$	2,467	\$	5
		and the same and the same	\$					4
)wensboro	Heil	2,000 sq. ft.		750 700	\$	1,200	\$	
)wensboro	Carrier	2,000 sq. ft.	\$			1,300 ental Cost		7
		Ave	rage In	cremental				6
Contractor			Δ.,,	g. 80%	Ava	. 94%	Tn	crement
Location	Brand	<b>Unit Sizing</b>		iciency		ciency		Cost
anville	Trane	2,000 sq. ft.	\$	1,600	\$	2,500	\$	9
wensboro	Carrier	2,000 sq. ft.	\$	700	\$	1,380	\$	6
wensboro	York	2,000 sq. ft.	\$	725	\$	1,150	\$	4
Wellsboro	TOR	2,000 34. 11.	Ψ			ental Cost		6
			-					
Contractor Location	Brand	Unit Sizing		g. 80% iciency		. 96% ciency	In	crement Cost
anville	Lennox	2,000 sq. ft.	\$	1,400	\$	3.200	\$	1,8
anville	Trane	2,000 sq. ft.	\$	1,600	\$	3,600	\$	2,0
wensboro	York		\$	200000000000000000000000000000000000000	\$		\$	
		2,000 sq. ft.	\$	700		1,200		5
wensboro	Heil	2,000 sq. ft.	Ф	750 Average	\$ Increme	1,400 ental Cost	\$	1,2
No. of the last of	Boilers							
							_	
Contractor	Brand	Unit Sizina		g. 80%		. 85%	Inc	
Contractor Location wensboro	<b>Brand</b> A.O. Smith	Unit Sizing 2,000 sq. ft.		3. 80% iciency 8,150		. <b>85%</b> ciency 9,865	Inc	Cost
<b>Location</b> wensboro			Effi	8,150 7,950	\$ \$	9,865 9,400	\$	1,7 1,4
Location owensboro canville	A.O. Smith Locinar	2,000 sq. ft. 2,000 sq. ft.	Effi \$	8,150 7,950	\$ \$	9,865	\$	1,7 1,4
Location owensboro canville	A.O. Smith	2,000 sq. ft. 2,000 sq. ft.	\$ \$	8,150 7,950	\$ \$ Increme	9,865 9,400	\$ \$	1,7 1,4 1,5
Location wensboro anville  WATE  Contractor Location	A.O. Smith Locinar R HEATERS - TANA Brand	2,000 sq. ft. 2,000 sq. ft.	\$ \$ \$	8,150 7,950 Average	\$ \$ Increme	9,865 9,400 ental Cost	\$ \$ \$ Inc	1,7 1,4 1,5 crement Cost
Location wensboro anville  WATE  Contractor Location	A.O. Smith Locinar R HEATERS - TAN	2,000 sq. ft. 2,000 sq. ft. <b>K TYPE</b>	\$ \$ \$	8,150 7,950 Average	\$ \$ Increme	9,865 9,400 ental Cost	\$ \$	1,7 1,4 1,5 crement
Location wensboro anville  WATE  Contractor Location	A.O. Smith Locinar R HEATERS - TANA Brand	2,000 sq. ft. 2,000 sq. ft. <b>K TYPE</b>	\$ \$ \$	8,150 7,950 Average 3. 58% ciency	\$ \$ Increme	9,865 9,400 ental Cost	\$ \$ Inc	1,7 1,4 1,5 crement Cost
WATE  Contractor Location  011 ASHRAE W	A.O. Smith Locinar R HEATERS - TANA Brand	2,000 sq. ft. 2,000 sq. ft. <b>K TYPE</b>	S \$ \$ Avg	8,150 7,950 Average g. 58% ciency	\$ s lncreme Avg Effic	9,865 9,400 ental Cost . 62% ciency	\$ \$ Inc	1,7 1,4 1,5 crement Cost
Location Iwensboro Iwensbo	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference	2,000 sq. ft. 2,000 sq. ft. K TYPE Unit Sizing	S S Avg Effi	8,150 7,950 Average 3. 58% ciency	\$ \$ Increme Avg Efficience Avg	9,865 9,400 ental Cost . 62% ciency	\$ \$ Inc	1,7 1,4 1,5 crement Cost
Location wensboro anville  WATEI  Contractor Location 011 ASHRAE W  Contractor Location	A.O. Smith Locinar  R HEATERS - TANi  Brand  Vinter Conference  Brand	2,000 sq. ft. 2,000 sq. ft. KTYPE Unit Sizing Unit Sizing	Avg Effi	8,150 7,950 Average 3.58% ciency	\$ \$ Increme Avg Effice Avg Effice	9,865 9,400 ental Cost . 62% ciency	\$ \$ Inc \$	1,7 1,4 1,5 crement Cost
Location wensboro anville  WATE  Contractor Location 011 ASHRAE W  Contractor Location owes	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith	2,000 sq. ft. 2,000 sq. ft.  K TYPE Unit Sizing Unit Sizing 50 gallon	Avg Effi	8,150 7,950 Average g. 58% ciency Average g. 58% ciency 409	\$ \$ Increme Avg Effice Avg Effice	9,865 9,400 ental Cost . 62% ciency	\$ \$ \$ Inc	1,7 1,4 1,5 crement Cost
Location wensboro anville  WATEI Contractor Location 011 ASHRAE W  Contractor Location Dwes ome Depot	A.O. Smith Locinar  R HEATERS - TAN  Brand  Vinter Conference  Brand  A.O. Smith Rheem	2,000 sq. ft. 2,000 sq. ft. KTYPE Unit Sizing Unit Sizing 50 gallon 40 gallon	Avg Effi	8,150 7,950 Average 3.58% ciency Average i.58% ciency 409 400	\$ \$ Increme Avg Effice Avg Effice  Avg Effice	9,865 9,400 ental Cost 62% ental Cost 656 639	\$ \$ \$ Inc	Cost 1,7 1,4 1,5  crement Cost  Cost 2: 2:
Location wensboro anville  WATE  Contractor Location 011 ASHRAE W  Contractor Location owes ome Depot owes	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State	2,000 sq. ft. 2,000 sq. ft.  KTYPE  Unit Sizing  Unit Sizing  50 gallon 40 gallon 40 gallon	Avg Effi	8,150 7,950 Average 3,58% ciency Average 9,58% ciency 400 400 379	### STATES OF THE PROPERTY OF	9,865 9,400 ental Cost . 62% ciency	\$ \$ \$ Income \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 crement Cost  crement Cost 2- 2: 5:
Location wensboro anville  WATEL Contractor Location 011 ASHRAE W  Contractor Location owes ome Depot owes WATEL	A.O. Smith Locinar  R HEATERS - TANi  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANi	2,000 sq. ft. 2,000 sq. ft.  KTYPE  Unit Sizing  Unit Sizing  50 gallon 40 gallon 40 gallon	Avg Effi	8,150 7,950 Average 3,58% ciency Average 409 400 379 Average	### Avg Efficience  Avg Efficience  Avg Efficience  Avg Efficience  **S **S **Increme	9,865 9,400 ental Cost 62% ciency ental Cost 67% ciency 656 639 935 ntal Cost	\$ \$ \$ Inc	Cost 1,7 1,4 1,5 crement Cost  crement Cost 2: 5: 5: 3:4
Location wensboro anville  WATE Contractor Location D11 ASHRAE W  Contractor Location Dwes Ome Depot Dwes WATE Contractor	A.O. Smith Locinar  R HEATERS - TAN  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TAN  Brand	2,000 sq. ft. 2,000 sq. ft. K TYPE Unit Sizing Unit Sizing 50 gallon 40 gallon 40 gallon	Avg Effi	8,150 7,950 Average J. 58% ciency Average J. 58% ciency 409 400 379 Average	### Avg Efficience  Avg Efficience  Avg Efficience  **S **S **Increme  **Reference	9,865 9,400 ental Cost 62% ciency ental Cost 656 639 935 ental Cost 66f.	\$ \$ \$ Inc	Cost 1,7 1,4 1,5 crement Cost  Cost 2: 5: 5: 5: crement
Location wensboro anville  WATEL Contractor Location D11 ASHRAE W  Contractor Location Dwes Ome Depot Dwes WATEL Contractor Location Dwes Contractor Location Dwes Contractor Location	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison	2,000 sq. ft. 2,000 sq. ft. KTYPE Unit Sizing  Unit Sizing 50 gallon 40 gallon 40 gallon Unit Sizing Unit Sizing	Ave Effi	8,150 7,950 Average 3,58% ciency Average 409 400 379 Average Eff Tank	### STORM ST	9,865 9,400 ental Cost . 62% ciency ental Cost . 67% ciency 656 639 935 ental Cost /6 Eff. kless	\$ \$ Inc	Cost 1,7 1,4 1,5 crement Cost  Cost 2 2 5 3 crement Cost
Location wensboro anville  WATEI Contractor Location D11 ASHRAE W  Contractor Location D010 MATEI Contractor Location D010 MATEI Contractor Location D010 MATEI Contractor Location WATEI Contractor Location Wensboro	A.O. Smith Locinar  R HEATERS - TAN  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TAN  Brand	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  KTYPE  Unit Sizing  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 50 gallon 40 gallon 50 gallon 40 gallon 40 gallon 40 gallon	Avg Effi	8,150 7,950 Average 9,58% ciency  Average 400 379 Average Eff Tank ype 404	### STANDARD	9,865 9,400 ontal Cost . 62% ciency ontal Cost . 67% ciency 656 639 935 ontal Cost (6 Eff. kless 1,000	\$ \$ \$ Inc. \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 crement Cost  Cost 2- 2- 3- 3- crement Cost 5- 5- 5- 5- 5- 5- 5- 5- 5- 5- 5- 5- 5-
Contractor Location  Contractor Location  Contractor Location  Contractor Location  WATE  Contractor Location  WATE  Contractor Location  WATE  Contractor Location  wes  contractor Location  wes  contractor Location  wensboro aducah	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI Brand  Comparison Rinnai	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  KTYPE  Unit Sizing  50 gallon 40 gallon 40 gallon KLESS  Unit Sizing 180,000 Btu 199,000 Btu	Avg Effi	8,150 7,950 Average 3,58% ciency 409 400 379 Average Eff Tank type	### STATE OF THE PROPERTY OF T	9,865 9,400 Initial Cost 62% Ciency 656 639 935 Initial Cost 6 Eff. kless 1,000 1,136	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5  crement Cost  2- 2: 5: 3-  crement Cost  5: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7: 7:
Location wensboro anville  WATE Contractor Location D11 ASHRAE W  Contractor Location owes ome Depot owes  WATE Contractor Location wensboro aducah owling Green	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai Navian Rinnai	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 8KLESS  Unit Sizing 180,000 Btu 199,000 Btu 199,000 Btu	Avg Effi	8,150 7,950 Average J. 58% ciency 409 400 379 Average Eff Tank ype 404 405 406 407 409	### STATE OF THE PROPERTY OF T	9,865 9,400 ental Cost 62% ciency 656 639 935 ntal Cost (6 Eff. kless 1,000 1,100 1,210	\$ \$ \$ \$ Income \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 crement Cost  2: 2: 5: 5: 7: 8: 8: 8: 8: 8: 8: 8: 8: 8: 8: 8: 8: 8:
Location wensboro anville  WATEI Contractor Location 011 ASHRAE W  Contractor Location owes ome Depot owes  WATEI Contractor Location wensboro aducah owling Green owling Green	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai Navian Rinnai A.O. Smith	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 50 gallon 40 gallon 40 gallon 50 gallon 40 gallon 40 gallon 40 gallon 40 gallon 40 gallon 40 gallon 50 gallon 60 gallon 60 gallon 61 gallon 62 gallon 63 gallon 64 gallon 64 gallon 65 gallon 66 gallon 67 gallon 68 gallon 69 gallon 69 gallon 60	Avg Effi	8,150 7,950 Average J. 58% ciency 409 400 379 Average Eff Tank Ype 404 350 409 409	## STATE OF THE PROPERTY OF TH	9,865 9,400 ental Cost . 62% ciency ental Cost . 67% ciency 656 639 935 ental Cost kless 1,000 1,136 1,210 1,331	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 1,5 1,5 1,5 1,5 1,5 1,5 1,5 1,5 1,5
Location wensboro anville  WATEL Contractor Location D11 ASHRAE W  Contractor Location Dwes Depot Dwes  WATEL Contractor Location Wensboro aducah Dwelling Green Dwelling Green Wensboro	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai Navian Rinnai	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 50 gallon 80 gallon 80 gallon 80 gallon 180,000 Btu 199,000 Btu 199,000 Btu 199,000 Btu 199,000 Btu 199,000 Btu	Avg Effi	8,150 7,950 Average J. 58% ciency 409 400 379 Average Eff Tank ype 404 405 406 407 409	### STATE OF THE PROPERTY OF T	9,865 9,400 ental Cost . 62% ciency ental Cost . 67% ciency 656 639 935 ental Cost 1,000 1,136 1,210 1,331 1,150	\$ \$ \$ \$ Income \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 crement Cost  Cost 2 2 2 5 3 crement Cost 7 7 80 91 7 7
Location wensboro anville  WATE Contractor Location D11 ASHRAE W  Contractor Location owes ome Depot owes  WATE Contractor Location wensboro aducah owling Green wensboro aducah aducah	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai Navian Rinnai A.O. Smith Navian Rheem	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 50 gallon 50 gallon 50 gallon 60	Avg Effi	8,150 7,950 Average 3,58% ciency 409 400 379 Average Eff Tank ype 404 405 409 409 409 409 409	### STATE OF TAIL STATE OF TAI	9,865 9,400 ental Cost . 62% ciency ental Cost . 67% ciency 656 639 935 ental Cost kless 1,000 1,136 1,210 1,331	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 Crement Cost  2: 2: 3: Crement Cost  68 90 77: 1,2
Location Iwensboro anville  WATE  Contractor Location  O11 ASHRAE W  Contractor Location  Owes Ome Depot Owes  WATE  Contractor Location  wensboro aducah owling Green owling Green owling Green wensboro aducah COMME	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison Rinnai Navian Rinnai A.O. Smith Navian Rheem Rheem	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing  50 gallon 40 gallon 40 gallon 50 gallon 60	Avgeffi	8,150 7,950 Average 9,58% ciency 409 400 379 Average Eff Tank ype 404 409 409 409 409 409 409 409 409 409	### STATE OF TAIL STATE OF TAI	9,865 9,400 Intal Cost  62% Ciency  656 639 935 Intal Cost  6 Eff.  kless 1,000 1,336 1,210 1,331 1,150 1,300	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 Crement Cost  2: 2: 3: Crement Cost  68 90 77: 1,2
Location Invension Invension Invension Invension Inventor Location Inventor Location Invension Invension Inventor Location Inventor Lo	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai Navian Rinnai A.O. Smith Navian Rheem	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing  50 gallon 40 gallon 40 gallon 50 gallon 60	Avgeffi	8,150 7,950 Average 9,58% ciency 409 400 379 Average Eff Tank ype 404 409 409 409 409 409 409 409 409 409	### STATE OF TAIL STATE OF TAI	9,865 9,400 Intal Cost  62% Ciency  656 639 935 Intal Cost  6 Eff.  kless 1,000 1,336 1,210 1,331 1,150 1,300	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 crement Cost  Cost  2: 5: 3: crement Cost  7: 8: 8:
Location Invension of anville  WATE Contractor Location O11 ASHRAE W  Contractor Location Dives Ome Depot Dives Owes  WATE Contractor Location Wensboro aducah Dowling Green Wensboro aducah Commander Wensboro Contractor Location Wate Contractor Location Wate Contractor Location Wate Contractor Location Contractor Location Wate Contractor Location	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison Rinnai Navian Rinnai A.O. Smith Navian Rheem Rheem	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing  50 gallon 40 gallon 40 gallon 50 gallon 60	Avgeffi	8,150 7,950 Average 9,58% ciency 409 400 379 Average Eff Tank ype 404 409 409 409 409 409 409 409 409 409	### STATE OF TAILS AND TAI	9,865 9,400 Intal Cost  62% Ciency  656 639 935 Intal Cost  6 Eff.  kless 1,000 1,336 1,210 1,331 1,150 1,300	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,44 1,51  Crement Cost  2-2 2: 5: 3-4  Crement Cost  4-6  4-6  4-6  4-6  4-6  4-6  4-6  4-
Location Invension of anville  WATE Contractor Location O11 ASHRAE W  Contractor Location Invension of the second	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison Rinnai Navian Rinnai A.O. Smith Navian Rheem Rheem	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing  50 gallon 40 gallon 40 gallon 50 gallon 60	Avgeffi	8,150 7,950 Average 9,58% ciency 409 400 379 Average Eff Tank ype 404 409 409 409 409 409 409 409 409 409	### STATE OF TAILS AND TAI	9,865 9,400 Intal Cost  62% Ciency  656 639 935 Intal Cost  6 Eff.  kless 1,000 1,336 1,210 1,331 1,150 1,300	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5  Crement Cost  2: 2: 5: 3: Crement Cost  4: 4: 1: 4: 1: 1,7 1,8 1: 1,2 1: 1,
Location Iwensboro anville  WATEI Contractor Location  O11 ASHRAE W  Contractor Location  Owes Ome Depot Owes  WATEI Contractor Location Wensboro aducah Owling Green Owling G	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison Rinnai Navian Rinnai A.O. Smith Navian Rheem Rheem	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing  50 gallon 40 gallon 40 gallon 50 gallon 60	Avgeffi	8,150 7,950 Average 9,58% ciency 409 400 379 Average Eff Tank ype 404 409 409 409 409 409 409 409 409 409	### STATE OF TAILS AND TAI	9,865 9,400 Intal Cost  62% Ciency  656 639 935 Intal Cost  6 Eff.  kless 1,000 1,336 1,210 1,331 1,150 1,300	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Cost 1,7 1,4 1,5 1,5 Crement Cost 2: 5: 5: 5: 7: 7: 1,2: 8: 4: 11: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1
Location Invension Invension Invension Invension Inventor Location Inventor Location Invension Invension Inventor Location Invension Inventor Location Invension Inventor Location Invension Inventor Location Inventor Lo	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai Navian Rinnai A.O. Smith Navian Rheem  STANI  Remoder	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing  50 gallon 40 gallon 40 gallon 50 gallon 60	Avgeffi	8,150 8,150 Average 9,58% ciency  Average 1,58% ciency 409 400 379 Average  404 350 409 409 409 409 409 409 409 409 409 40	### Avg Efficience    Avg Efficience    Avg Efficience    \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	9,865 9,400 Intal Cost  62% Ciency  656 639 935 Intal Cost  6 Eff.  kless 1,000 1,336 1,210 1,331 1,150 1,300	\$ \$ Inc	Cost 1,7 1,4 1,5 crement Cost  Cost  2: 5: 3: crement Cost  4: 1: 2,10
Location Invension of anville  WATE Contractor Location O11 ASHRAE W  Contractor Location Dives Ome Depot Dives  WATE Contractor Location Wars Dives  WATE Contractor Location Wensboro aducah Divension Diven	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand Comparison Rinnai Navian Rinnai A.O. Smith Navian Rinnai A.O. Smith State	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 8KLESS  Unit Sizing 180,000 Btu 199,000 Btu 199,000 Btu 199,000 Btu 199,000 Btu 199,000 Btu 199,000 Btu	Avgeffi  Avgeffi  S S S S S S S S S S S S S S S S S S S	8,150 7,950 Average 3,58% ciency 409 400 379 Average  Eff Tank ype  404 350 409 409 409 409 409 409 409 409 409 40	## Avg Efficient    Avg Efficient    Avg Efficient    **S     **S     **S     **S     **S     **Tan    **S     **S     **S     **Danier	9,865 9,400 Intal Cost  62% Ciency  656 639 935 Intal Cost  6 Eff. I,000 1,136 1,210 1,330 I,150 1,300 Intal Cost	\$\$\$ \$ Inc \$\$\$\$ Inc \$\$\$\$\$ \$ \$\$\$\$\$\$\$\$\$\$\$\$\$	Cost 1,7 1,4 1,5 1,5 1,5 1,5 1,5 1,5 1,5 1,5 1,5 1,5
Location Invension Invension Invension Invension Inventor Location Inventor Location Invension Invension Inventor Location Invension Inventor Location Invension Inventor Location Invension Inventor Location Inventor Lo	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai Navian Rinnai A.O. Smith Navian Rheem  STANI  Remoder	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing  50 gallon 40 gallon 40 gallon 50 gallon 60	Avgeffi  Avgeffi  S  S  S  S  S  S  S  S  S  S  S  S  S	8,150 8,150 Average 9,58% ciency  Average 1,58% ciency 409 400 379 Average  404 350 409 409 409 409 409 409 409 409 409 40	## STATE OF THE PROGRAM STATE	9,865 9,400 Intal Cost 62% Intal Cost 66% Intal Cost 67% Intal Cost 656 639 935 Intal Cost 1,000 1,136 1,210 1,330 1,1350 1,300 Intal Cost	\$\$\$ \$ Inc \$\$\$\$ Inc \$\$\$\$\$ \$ \$\$\$\$\$\$\$\$\$\$\$\$\$	Cost 1,7 1,44 1,56  Crement Cost  22 23 34  Crement Cost  46 12 11 2,111 2,111
Location Invension of anville  WATE Contractor Location 011 ASHRAE W  Contractor Location Dowes Ome Depot Dowes  WATE Contractor Location Wensboro aducah Owling Green Owling Green Wensboro aducah COMME Siken from Savings Ca as Fryer as Griddle as Oven as Steamer  Contractor Location Owe's	A.O. Smith Locinar  R HEATERS - TANI  Brand  Winter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai A.O. Smith Navian Rinnai A.O. Smith Navian Rinnai A.O. Smith Savian Rinnai A.O. Smith Navian Rinnai A.O. Smith Rinnai A.O. Smith Rinnai A.O. Smith Rinnai A.O	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 80 gallon 180,000 Btu 199,000 Btu	AVSEFFI  AVSEFFI  S  S  S  S  S  S  S  S  S  S  S  S  S	8,150 8,150 Average 3,58% ciency  Average 409 400 379 Average 404 350 409 409 409 380 Average    404 409 409 409 409 409 409 409 409 40	### STATE OF THE PROPERTY INCREMENTS INCREMENTS   STATE OF THE PROPERTY   STAT	9,865 9,400 Intal Cost  62% Intal Cost  67% Intal Cost  656 639 935 Intal Cost  1,000 1,136 1,210 1,330 1,150 1,300 Intal Cost  Intal Cost  Intal Cost  Intal Cost  660  Intal Cost	\$\$\$\$ \$ Inc \$\$\$\$\$ \$ \$	Cost 1,7 1,44 1,55 1,55 1,55 1,55 1,55 1,55 1,55
Location Invension of anville  WATE Contractor Location O11 ASHRAE W  Contractor Location Dives Owes  WATE Contractor Location Dives Owes  WATE Contractor Location Office Owes  WATE Contractor Location Owensboro Educah Divension Owensboro Educah Divension Owensboro Educah Divension Owensboro Educah Divension Owensboro Educah Owensboro Educah Contractor Location Owensboro Divension Ow	A.O. Smith Locinar  R HEATERS - TANI  Brand  Vinter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand Comparison Rinnai Navian Rinnai A.O. Smith Navian Rinnai A.O. Smith State  R HEATERS - TANI  Brand Comparison  Finnai Rinnai A.O. Smith Rheem State  R HEATERS - TANI Brand Comparison Rinnai A.O. Smith Navian Rinnai Rinnai A.O. Smith Romani Rinnai A.O. Smith Romani Rinnai Romani Rinnai A.O. Smith Romani Rinnai Romani Rinnai A.O. Smith Romani Rinnai Romani Rinnai Romani Roman	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft. K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 8KLESS  Unit Sizing 180,000 Btu 199,000 Btu	Avgeffii  Avgeffii  S \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	150   150	## STATE OF TABLE OF	9,865 9,400 ental Cost 62% ciency 656 639 935 ental Cost 1,136 1,210 1,330 1,150 1,300 ental Cost ental Cost 668	\$\$\$\$ Inc \$\$\$\$\$ \$	Cost 1,7' 1,44 1,51 1,51 1,51 1,51 1,51 1,51 1,51
Location Invension of Americal Contractor Location O11 ASHRAE W  Contractor Location Owes Owes Owes Owes  WATE Contractor Location Warse Contractor Location Wensboro aducah owling Green wensboro aducah owling Green wensboro aducah COMME Invention Savings Ca as Fryer as Griddle as Oven as Steamer	A.O. Smith Locinar  R HEATERS - TANI  Brand  Winter Conference  Brand  A.O. Smith Rheem State  R HEATERS - TANI  Brand  Comparison  Rinnai A.O. Smith Navian Rinnai A.O. Smith Navian Rinnai A.O. Smith Savian Rinnai A.O. Smith Navian Rinnai A.O. Smith Rinnai A.O. Smith Rinnai A.O. Smith Rinnai A.O	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  K TYPE  Unit Sizing 50 gallon 40 gallon 40 gallon 40 gallon 80 gallon 180,000 Btu 199,000 Btu	AVSEFFI  AVSEFFI  S  S  S  S  S  S  S  S  S  S  S  S  S	8,150 8,150 Average 3,58% ciency  Average 409 400 379 Average 404 350 409 409 409 380 Average    404 409 409 409 409 409 409 409 409 40	### STATE OF THE PROPERTY INCREMENTS INCREMENTS   STATE OF THE PROPERTY   STAT	9,865 9,400 Intal Cost  62% Intal Cost  67% Intal Cost  656 639 935 Intal Cost  1,000 1,136 1,210 1,330 1,150 1,300 Intal Cost  Intal Cost  Intal Cost  Intal Cost  660  Intal Cost	\$\$\$\$ \$ Inc \$\$\$\$\$ \$ \$	1,7' 1,4' 1,58 crement. Cost  24 23 55 34 crement. Cost  46 12 11 2,10 crementa

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											
A. High Efficiency Appliances	0	0	0	0	-	0	0	0			-
B. Weatherization Program	0	0	0	0	0	0	0	0			
Total Participants	0	0	0	0	0	0	0	0			-
Total Conservation in Ccf											
A. High Efficiency Appliance Savings	0	0	0	0	0	0	0	0			_
B. Weatherization Program	0	0	0	0	0	0	0	0			
Total Ccf Savings	0	0	0	0	0	0	0	0			-
Total Lost Sales	\$ -	\$ - :	\$ - 5	5 - 5	- \$	- \$	- \$	-			\$ -

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

Program Year End: December 31, 2018

**Current Year Conservation (Ccf)** 

		(	G-1 Resider	ntial		1	G	-1 Comme	rcial		NYMEX Futures Prices			
	Pr	ojected	Annual	Con	nmodity	Pr	ojected	Annual	Cor	nmodity		Average		
Year	Ga	s Cost*	Savings	S	avings	Ga	s Cost*	Savings	S	avings	Year	Cost	Escalation	
2017	\$	0.491	-	\$	-	\$	0.491	-	\$	-	2017	3.05		
2018	\$	0.497	-	\$	-	\$	0.497	-	\$	-	2018	3.09	101.0%	
2019	\$	0.469	-	\$	~	\$	0.469	-	\$	-	2019	2.92	94.5%	
2020	\$	0.458	-	\$	-	\$	0.458	-	\$	-	2020	2.85	97.7%	
2021	\$	0.462	-	\$	-	\$	0.462	-	\$	-	2021	2.87	100.8%	
2022	\$	0.468	-	\$	-	\$	0.468	1-1	\$	-	2022	2.91	101.3%	
2023	\$	0.478	+	\$	-	\$	0.478	-	\$	-	2023	2.97	102.2%	
2024	\$	0.489	-	\$	8	\$	0.489	-	\$	-	2024	3.04	102.2%	
2025	\$	0.500	-	\$	-	\$	0.500	-	\$	-	2025	3.11	102.3%	
2026	\$	0.510	-	\$	-	\$	0.510	-	\$	-				
2027	\$	0.520	-	\$	-	\$	0.520	-	\$	-			Deemed Escalation	
2028	\$	0.531	-	\$	-	\$	0.531	-	\$	-	Current A	tmos CGA	Rate After 2022	
2029	\$	0.541	-	\$	-	\$	0.541	-	\$	-	\$ 0.491		2%	
2030	\$	0.552	-	\$	-	\$	0.552	-	\$	-				
2031	\$	0.563	-	\$	-	\$	0.563	-	\$	-				
2032	\$	0.574	-	\$	-	\$	0.574	-	\$	-				
2033	\$	0.586	-	\$	-	\$	0.586	-	\$	-				
2034	\$	0.598	-	\$	-	\$	0.598	-	\$	-				
2035	\$	0.610	-	\$	*	\$	0.610	-	\$	-				
2036	\$	0.622	-	\$	-	\$	0.622	-	\$	-				
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 Co	mm	odity Sav	rings	\$	-				\$	-				
Discount	Rate	Э			7.73%					7.73%				
100	Program Benefits \$0							\$0						
(present	value	e of comr	nodity savir	igs)										

<sup>\*</sup>Atmos GCA, escalated using NYMEX futures prices at Henry Hub

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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

							settiernents it	Prior Day
Month	Open	High	Low	Last	Change	Settle	Estimated	Open
WOITE	Open	iligii	LOW	Last	Onlange	Octilo	Volume	Interest
								merese
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	(0.002)	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	(0.002)	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	- 0.002	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	-	-	-	-	(0.00.)	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	- 1	-	-	-	-0.009	2.803	-	73
Nov-21	-	-	-	-	-0.009	2.877	-	72

Dec-21		- 1		-	-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
	4.22	4 22	4.22		-0.001	2.750	0	20
May-22	4.22	4.22				2.775		14
Jun-22					-0.001		-	
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 Dec-24			-	-	-0.001	3.063	-	0
			-	-	-0.001	3.218	-	
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	-	-
IVIUY ZOI		The second secon						

					0.004	2.000		
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
Demand Side Management (DSM) Program
Participant Test

 $NPV_P = B_P - C_P$ 

$$B_{P} = \$ - C_{P} = - \frac{1}{NPV_{P}} = \$ - \frac{1}{NPV_{P}} = \frac{$$

Benefit-Cost Ratio

#DIV/0!

#### Conclusion:

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

Where:

NPV<sub>P</sub> = Net present value to all participants
 B<sub>P</sub> = NPV of benefit to all participants
 C<sub>P</sub> = 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<sub>t</sub> = Bill reductions in year t (not accounted for in participant cost test).

BI<sub>t</sub> = Bill increases in year t TC<sub>t</sub> = Tax credits in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

PC<sub>t</sub> = Participant costs in year t, which include

incremental captial costs

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

# **Atmos Energy**

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

$$B_{P} = \sum_{t=1}^{\infty} \frac{BR_{t} + TC_{t} + INC_{t}}{(1+d)^{t-1}}$$

t	$BR_t$	TC <sub>t</sub>	INC <sub>t</sub>	$B_P$
1	-	-	-	-
2	-	-	-	-
3	-	-	-	-
4	-	-	-	-
4 5 6	-	-	-	-
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<sub>t</sub> Bill reductions in year t  $TC_t$ Tax credits in year t =

 $INC_t$ = Incentives paid to the participant by the Utility Atmos Energy Demand Side Management (DSM) Program Participant Test

#### BR<sub>t</sub> = Bill reductions in year t

	G-1 Residential							
							(4)	
	(1)		(2)		(3)	(	(2) + (3)	$(1) \times (4)$
	Ccf	Pro	ojected		Demand	Co	mbined	
t	Conserved	Ga	s Cost*		Charge		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	1-
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	-
							2	

G-1	Commer	cia
-		

						(4)	
	(1)		(2)	(3)	(2	) + (3)	$(1) \times (4)$
	Ccf	Pr	ojected	Demand	Cor	nbined	
t	Conserved	Ga	s Cost*	Charge	F	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	1.0	\$	0.520	\$ 0.1825	\$	0.70	\$ -
12	1.00	\$	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	( <b>a</b>	\$	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	\$ 1-1
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.

Deman	Energy Id Side Management (DSM) Program pant Test			
TC <sub>t</sub> =	Tax credits in year t (presently no federal tax	credits are available	in 2014)	
	A. High Efficiency Heating Savings	(1) Program Participants	(2) Residential Energy Credits	(1) × (2) TC <sub>t</sub>
	B. High Efficiency Water Heating Savings	4		
	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	
<b>Demand Side Management (DSM)</b>	Program
Participant Test	

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

Energy Savings by Customer Class	1	NC <sub>t</sub>
G-1 Residential Customers	\$	_
G-1 Commercial Customers		-
Total	\$	-

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
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 <sub>t</sub>	(2) <b>PC</b> <sub>t</sub>	(1) + (2) <b>C</b> <sub>P</sub>
1	-	-	<del>-</del>
2	-	-	-
3	-	-	-
4	*	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9		-	-
10	-	_	_
_	_	_	_

7.730% Discount Rate

\$0 NPV

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

PC<sub>t</sub> = Participant costs in year t, which include incremental capital costs

Atmos Energy Demand Side Management (DSM) Program Participant Test

PC<sub>t</sub> = Participant costs for t = 1

	(1)		(2)	(1) x (2)
A. High Efficiency Heating Savings	Program Participants	ın	cremental Cost	$PC_t$
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				 -
B. High Efficiency Water Heating Savings				
Tank W/H .6266 EF	-	\$	38	\$ -
Tank W/H .67 or > EF	-		347	-
Tankless W/H .82 - 90 EF	-		839	-
Total	-			\$ •
C. High Efficiency Commercial Kitchen Equipmen	nt			
Gas Fryer		\$	468	\$ -
Gas Griddle	-		121	-
Gas Oven	-		119	-
Gas Steamer	-		2,103	₩.
Total	-			\$

IC = Incremental Costs for purchasing high-efficiency unit

<sup>(1)</sup> 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} = $$  (36,202)

#### Benefit-Cost Ratio

#### Conclusion:

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

Where:

NPV<sub>pa</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t PRC<sub>t</sub> = Program Administrator Costs in year t

 $\mathsf{INC}_\mathsf{t}$  = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = 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 Demand Side Management (DSM) Program Program Administrator Cost Test

$$B_{pa} = \sum_{t=1}^{N} \underbrace{UAC_{t}}_{(1+d)^{t-1}}$$

	(1)		
t	UAC <sub>t</sub>		
1	\$	-	
2 3 4 5	\$		
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<sub>t</sub> scheduled per calculation performed for RIM test

UAC<sub>t</sub> = Utility avoided supply costs in year t

### **Atmos Energy**

Demand Side Management (DSM) Program

**Program Administrator Cost Test** 

$$C_{pa} = \sum_{t=1}^{N} \frac{PRC_{t} + INC_{t} + UIC_{t}}{(1+d)^{t-1}}$$

	(1)	(2)	(3)	
t	PRC <sub>t</sub>	INC <sub>t</sub>	UIC <sub>t</sub>	C <sub>pa</sub>
1	39,000	-	-	39,000
2	-		-	•
3	-	-	-	-
4	-	~	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	¥.
9	-	-	<u> </u>	-
10	-	-	-	-
	39,000	-	-	39,000

7.730% Discount Rate

\$36,202 NPV

PRC<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC<sub>t</sub> which was calculated for the RIM Test
- (2) Incentives scheduled from INC<sub>t</sub> 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

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

Benefit-Cost Ratio

#### Conclusion:

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

Where:

NPV<sub>RIM</sub> = Net present value levels

B<sub>RIM</sub> = Benefits to rate levels or customer bills

C<sub>RIM</sub> = Costs to rate levels or customer bills

$$B_{RIM} \sum_{t=1}^{N} \underbrace{UAC_{t}}_{(1+d)^{t-1}}$$

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

UAC<sub>t</sub> = Utility avoided supply costs in year t

UIC<sub>t</sub> = Utility increased supply costs in year t

RLt = Revenue loss from reduced sales in year t

PRC<sub>t</sub> = Program administrator costs in year t

INC<sub>t</sub> = 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
Demand Side Management (DSM) Program
Ratepayer Impact Measure (RIM) Test

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

t	UACt
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<sub>t</sub> = Utility avoided supply costs in year t

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

UAC<sub>t</sub> = Utility avoided supply costs in year t

			G-1 Residentia	al			G-	-1 Commerc	ial		
	Pr	ojected	Annual	(	Commodity	Pr	ojected	Annual	Com	modity	
t	Ga	s Cost*	Savings		Savings	Ga	s Cost*	Savings	Sa	vings	JAC <sub>t</sub>
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	o <b>≠</b> 0	\$	-	\$ -
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 Cor	nmodity	Savings		\$	•				\$	-	\$ -

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

<sup>(1)</sup> Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.

<sup>(2)</sup> Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

## Atmos Energy

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

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

2	(1) UIC <sub>t</sub>	(2) RL <sub>t</sub>	(3) PRC <sub>t</sub>	(4) INC <sub>t</sub>	(1) + (2) C <sub>RIM</sub>
t	UICt	RL <sub>t</sub>	PRCt	INC <sub>t</sub>	C <sub>RIM</sub>
1	-	-	39,000	-	39,000
2	-	-		-	-
	-	-		-	-
4	-	-		-	-
5	-	-		-	-
6	-	-		-	-
7	-	-		-	-
8	-	-		-	-
9	-			-	-
10	-	-		-	7 - 4
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

 $\begin{array}{lll} \text{UIC}_t & = & \text{Utility increased supply costs in year t} \\ \text{RL}_t & = & \text{Revenue loss from reduced sales in year t} \\ \text{PRC}_t & = & \text{Program administrator costs in year t} \\ \end{array}$ 

INC<sub>t</sub> = 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
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<sub>TRC</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t

TC<sub>t</sub> = Tax credits in year t

UIC<sub>t</sub> = Utility increased supply costs in year t PRC<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

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

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

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

	(1) UAC <sub>t</sub>	(2) TC <sub>t</sub>	
t	 UAC <sub>t</sub>	TC <sub>t</sub>	B <sub>TRC</sub>
1	\$ -	-	\$ -
2	-	-	-
3	-	-	-
4 5	-	-	-
5	-	-	-
6 7	-	-	-
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**

Demand Side Management (DSM) Program

**Total Resource Cost (TRC) Test** 

$$C_{TRC} = \sum_{t=1}^{N} \frac{PRC_{t} + PCN_{t} + UIC_{t}}{(1+d)^{t-1}}$$

	(1)	(2)	(3)	
t	PRC <sub>t</sub>	PCN <sub>t</sub>	UICt	C <sub>TRC</sub>
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<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

UIC<sub>t</sub> = 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<sub>t</sub> from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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# **Program Summary**

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

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

Summary

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

b) Furnace AFUE 94 - 95 c) Furnace AFUE 96 or > 350 350 0 d) Boiler AFUE 96 or > 350 350 0 d) Boiler AFUE 85 - 89 - 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 0 d) Boiler AFUE 85 - 89 - 0 0 0 0 0 d) Boiler AFUE 97 - 50 50 50 0 0 d) Boiler AFUE 90 - 5 50 50 0 0 0 d) Boiler AFUE 90 - 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1. 2. 1a. 2a. 3		# Kentucky Residential Customers Residential Sales Volumes (Ccf) # Kentucky Commercial Customers Commercial Sales Volumes (Ccf) Estimated Participants	158,221 109,894,930 17,416 48,854,530 Total	Residential	Commercial	_
Second   Subject   Subje		a)	Furnace AFUE 90 - 93	225	225		0
Diller AFUE 85 -89   - 0 0 0		b)					
f) Tank Water Heater EF. 6266		c)	Furnace AFUE 96 or >	350	350		
Section   Sect		d)		-			
Tankless/Condensing Water Heater EF > .82		f)	Tank Water Heater EF .6266	330	330		
Recommendation   Reco		g)	Tank Water Heater EF .67 or >	50	50		0
Note		h)	Tankless/Condensing Water Heater EF >.82	275	275		0
Name		k)	Programmable Thermostat (manual)	300	300		0
m) Commercial Fryer - 0 0 0 0 0 0 0 Commercial Griddle - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			Weatherization	-	-		0
n) Commercial Griddle o) Commercial Oven p) Commercial Oven 4. Atmos Distribution Charge 5. Average Heat use (ccf) per customer 6. Average water heating use (ccf) per customer 7. Proposed Rebates  Furnace AFUE 90 - \$ 250 Furnace AFUE 94 - \$ 325 Furnace AFUE 96 (\$ 400 Boiler AFUE > 85 \$ 250 Tank Water Heater \$ 200 Tank Water Heater \$ 200 Tank Water Heater \$ 300 Tankless/Condensi \$ 400 Programmable The \$ 25 Commercial Griddle \$ 500 Commercial Griddle \$ 500 Commercial Griddle \$ 500 Commercial Oven i \$ 500 Commercial Oven i \$ 500 Sourcemental Cost of 90-93 AFUE furnace \$ 668 Incremental Cost of 98-95 AFUE furnace \$ 668 Incremental Cost of 96 or > AFUE furnace \$ 668 Incremental Cost of 96 or > AFUE furnace \$ 668 Incremental Cost of 96 or > AFUE furnace \$ 668 Incremental Cost of 97-95 AFUE furnace \$ 668 Incremental Cost of 67 EF tank W/H \$ 38 Incremental Cost of .67 EF tank W/H \$ 38 Incremental Cost of .67 EF tank W/H \$ 38 Incremental Cost of .68-90 EF tankless W/H \$ 839 Incremental Cost of .69 EF tank W/H \$ 389 Incremental Cost of .69 EF tank W/H \$ 389 Incremental Cost of .63 EF tank W/H \$ 839 Incremental Cost			Commercial Fryer	-	0		0
o) Commercial Oven p) Commercial Steamer - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			Commercial Griddle	-	0		0
## Atmos Distribution Charge \$ 0.183   Average Heat use (ccf) per customer		-	Commercial Oven	-	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 \ \$ 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 Griddle \$ 500 Commercial Steam \$ 500 Solution Pro \$ 3,000 9. Incremental Cost of 90-93 AFUE furnace \$ 668 Incremental Cost of 96 or > AFUE furnace \$ 1,238 Incremental Cost of 96 or > AFUE furnace \$ 1,238 Incremental Cost of 85-89 AFUE boiler \$ 1,583 Incremental Cost of .67 EF tank W/H \$ 38 Incremental Cost of .82 -90 EF tankless W/H \$ 839 Incremental Cost for Gas Fryer \$ 468 Incremental Cost for Gas Griddle \$ 119 Incremental Cost for Gas Griddle \$ 119 Incremental Cost for Gas Griddle \$ 121 Incremental Cost for Gas Oven \$ 119 Incremental Cost for Gas Steamer \$ 2,103			Commercial Steamer	-	0		0
6. Average water heating use (ccf) per customer 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 t \$ 500  Commercial Griddle \$ 500  Commercial Griddle \$ 500  Commercial Steam \$ 500  Commercial Steam \$ 500  Solution 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 96 AFUE boiler \$ 1,583  Incremental Cost of 62 EF tank W/H \$ 38  Incremental Cost of .82-90 EF tankless W/H \$ 38  Incremental Cost of .82-90 EF tankless W/H \$ 839  Incremental Cost for Gas Griddle \$ 121  Incremental Cost for Gas Griddle \$ 119  Incremental Cost for Gas Steamer \$ 2,103	4.		Atmos Distribution Charge	\$ 0.183			
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 f \$ 500 Commercial Griddle \$ 500 Commercial Oven f \$ 500 Commercial Steam \$ 500 Commercial Steam \$ 500 South Commercial Steam \$ 500 Commercial Steam \$ 500 Commercial Oven f \$ 500 Commercial Steam \$ 500 Commercial Steam \$ 500 South Commercial Ste	5.		Average Heat use (ccf) per customer	361.00			
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 Commercial Steam \$ 500 Son	6.		Average water heating use (ccf) per customer	148.00			
Furnace AFUE 94 - \$ 325 Furnace AFUE 96 ( \$ 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 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 62 EF tank W/H \$ 38 Incremental Cost of .62 EF tank W/H \$ 38 Incremental Cost of .62 F tank W/H \$ 38 Incremental Cost of .62 F tank W/H \$ 38 Incremental Cost of .63 EF tank W/H \$ 347 Incremental Cost of .62 EF tank W/H \$ 347 Incremental Cost of .63 EF tank W/H \$ 347 Incremental Cost of .64 EF tank W/H \$ 347 Incremental Cost of .65 EF tank W/H \$ 347 Incremental Cost of .65 EF tank W/H \$ 347 Incremental Cost of .65 EF tank W/H \$	7.		Proposed Rebates				
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     Commercial Steam   \$ 500     Commercial Steam   \$ 500     Sample	_		Furnace AFUE 90 -	\$ 250			
Boiler AFUE > 85			Furnace AFUE 94 -	\$ 325			
Tank Water Heater Tank Water Heater Tank Water Heater Tankless/Condensi Programmable The Commercial Fryer I Sou Commercial Griddle Commercial Griddle Commercial Steam Sou Restriction Pro Sou Sou Sou Sou Sou Sou Sou Sou Sou So			Furnace AFUE 96 c	\$ 400			
Tank Water Heater			Boiler AFUE > 85	\$ 250			
Tankless/Condensi			Tank Water Heater	\$ 200			
Programmable The   25			Tank Water Heater	\$ 300			
Commercial Fryer   \$ 500			Tankless/Condensi	\$ 400			
Commercial Griddle   500			Programmable The	\$ 25			
Commercial Oven   \$ 500			Commercial Fryer I	\$ 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 .8290 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			Commercial Griddle	\$ 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 .8290 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			Commercial Oven I	\$ 500			
9. Incremental Cost of 90-93 AFUE furnace \$ 654 Incremental Cost of 94-95 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 .87 EF tank W/H \$ 347 Incremental Cost of .8290 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			Commercial Steam	\$ 500			
Incremental Cost of 94-95 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 .8290 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	8.		Weatherization Pro	\$ 3,000			
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 .8290 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	9.		Incremental Cost of 90-93 AFUE furnace	\$ 654			
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 .8290 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			Incremental Cost of 94-95 AFUE furnace	\$ 668			
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 .8290 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			Incremental Cost of 96 or > AFUE furnace	\$ 1,238			
Incremental Cost of .62 EF tank W/H \$ 38 Incremental Cost of .67 EF tank W/H \$ 347 Incremental Cost of .8290 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			Incremental Cost of 85-89 AFUE boiler	\$ 1,583			
Incremental Cost of .67 EF tank W/H \$ 347 Incremental Cost of .8290 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			Incremental Cost of Programmable Thermostat	\$ 39			
Incremental Cost of .8290 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			Incremental Cost of .62 EF tank W/H	\$ 38			
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			Incremental Cost of .67 EF tank W/H	\$ 347			
Incremental Cost for Gas Griddle \$ 121 Incremental Cost for Gas Oven \$ 119 Incremental Cost for Gas Steamer \$ 2,103			Incremental Cost of .8290 EF tankless W/H	\$ 839			
Incremental Cost for Gas Oven \$ 119 Incremental Cost for Gas Steamer \$ 2,103			Incremental Cost for Gas Fryer	\$ 468			
Incremental Cost for Gas Steamer \$ 2,103			Incremental Cost for Gas Griddle	\$ 121			
			Incremental Cost for Gas Oven	\$ 119			
10. Discount Rate 7.73%			Incremental Cost for Gas Steamer	\$ 2,103			
	10. E	Discoun	t Rate	7.73%	************		_

Atmos Variable Data Page 2 of 27

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

		Kentucky			
			Savings		
Measure	Efficiency Level	Savings (CCF)	(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	0.8290 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

Deemed Savings Page 3 of 27

Atmos Energy

Demand Side Management (DSM) Program

Billing Factor Calculation

Program Begins: Program Year End: Rate Effective:

May 1, 2018 December 31, 2018

May 1, 2018

DCRC = DSM	Cost Recove	ry-Current
------------	-------------	------------

Program Costs		G-1	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	G-1 Residential	\$	518,266	G-1 Commercial	\$		
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 F	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	S	

			-	
DBA =	DSM	Balance	Adi	ustment

nent							
	G-1 Res	sidential				G-1 Commercial	
		Estimated	Balancing			Estimated	Balancing
	Under/(Over) Recovery	Residential Sales	Adjustment	Und	der/(Over) Recovery	Commercial Sales	Adjustment
\$	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	F	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

G-1 Commercial

Estimated Commercial Sales Estimated Commercial Customers 48,854,530 Ccf 17,416

3.74

	Recovery Amount	Ra	te, 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 Demand Side Management (DSM) Program Schedule A - Current Year Participation Detail

G-1 Commercial Totals

Program Year End: December 31, 2018

	Program	CCF Conse				bate		leasure	
G-1 Residential Efficiency Heating Savings	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		
	Program	CCF Conse	rvation		Re	bate	9	M	leasure
G-1 Commercial Efficiency Heating Savings	Participants	Per Participant	Total	_	mount		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 >	¥1	135.00		\$	400	\$	-	18	DEER
Boiler AFUE >85	*	42.33	-	\$	250	\$	-	18	DEER
Programmable Thermostat		60.32	-	\$	25	\$	-	15	DEER
Totals	-	NA	-		NA	\$	-		
	Program	CCF Conse	rvation		Re	bate	9	M	leasure
G-1 Residential Water Heating Savings	Participants	Per Participant	Total	-	mount	_	Total	Life	Source
Tank Water Heater EF .6266	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		
	Program	CCF Conse	rvation		Re	bate	9	M	easure
G-1 Commercial Water Heating Savings	Participants	Per Participant	Total	-	mount		Total	Life	Source
Tank Water Heater EF .6266	-	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	\$	-		
	Program	CCF Conse	rvation		Re	bate	)	M	easure
G-1 Commercial Cooking Equipment Savings	Participants	Per Participant	Total	_	mount		Total	Life	Source
Fryer EnergyStar Rated	-	520.73		\$	500	\$	-	8	Energy Sta
Griddle EnergyStar Rated		115.72	_	\$	500	\$	-	12	Energy Sta
Oven EnergyStar Rated		216.97		\$	500	\$	_	10	NEEP
Steamer EnergyStar Rated	0	1,253.62		\$	500	\$	_	10	Energy Sta
Totals		NA			NA	\$	-		Energy Old
	Program	CCF Conse	rvation		Pe	bate		M	easure
Weatherization	Participants	Per Participant	Total		mount		Total	Life	Source
	-	100.3875	-	\$	3,000	\$	-	25	DEER
						\$			
Education Program						Ф	-		
Education Program	Program	CCF Conse	rvation		Rei	Φ bate			
otals by Customer Class	Program Participants	CCF Conse Per Participant	Total	A	Rei mount		Total		
Education Program  Totals by Customer Class  G-1 Residential Totals  G-1 Commercial Totals	Participants				mount es see above	bate			

Varies see above

Varies see above \$

Schedule A

Atmos Energy Demand Side Management (DSM) Program Annual Savings

## **SAVINGS**

				G-1	G-1 Comm.				
	G-1 Res.	G-1 Comm.	G-1 Res.	Comm.	Cooking	Weather-		Comm.	
Year	Heating	Heating	Water	Water	Equipment	ization	Res. Total	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	-	-	-	-	-	-	-	-	-

Annual Savings Page 6 of 27

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

	Ur	nit Cost	R	esidential Costs	 mercial costs	Т	otal Cost
Estimated Rebates				1,655	0	Sept.	
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

Contractor Location Bowling Green Bowling Green Bowling Green Bowling Green Danville Contractor Location Danville Contractor Location Danville Contractor Location Danville Contractor Location Danville Contractor Danville Contractor Contractor Contractor Location Danville Contractor Contractor Contractor Contractor Contractor Contractor Contractor Contractor Location Danville Contractor Location Danville Contractor Location Danville Lenno	d Unit Sizing 2,000 sq. ft.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,950 1,000 1,450 1,400 1,600 725 700 ntal Cost 80% ency 1,400 1,000 1,950 750 700 Average I	\$ 1, \$ 1, \$ 2 \$ 2 \$ 1 \$ 1 Avg. 92 Efficien \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	467 570 700 2,500 2,500 ,050 ,250 % <b>cy</b> 2,200 2,500 2,600 2,600 2,600 2,600 2,600	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	7 cost 51 577 255 1,100 900 32 555 600 cost Cost Cost Cost 800 800 800 800 800 800 800 800 800 80
Location   Brand	2,000 sq. ft.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,950 1,950 1,450 1,400 1,400 1,600 725 700 ntal Cost 80% ency 1,400 1,600 1,950 750 700 Average I	\$ 2, \$ 1, \$ 2, \$ 2, \$ 1 \$ 1 \$ 1 \$ 1 \$ 1 \$ 1 \$ 1 \$ 1 \$ 1 \$	467 570 700 2,500 2,500 ,050 ,250 % <b>cy</b> 2,200 2,500 2,600 2,600 2,600 2,600 2,600	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	51 57 25 1,10 90 32 55 60 rementa
Sowling Green	2,000 sq. ft.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ e Incremer  Avg.  Effici  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,950 1,000 1,450 1,400 1,600 725 700 ntal Cost 80% ency 1,400 1,000 1,950 750 700 Average I	\$ 2, \$ 1, \$ 2, \$ 2 \$ 1 \$ 1 Avg. 92 Efficien \$ 2 \$ 2 \$ 2 \$ 1 1	467 570 700 ,500 ,500 ,050 ,250 % <b>cy</b> ,200 ,026 ,467	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	51 57 25 1,10 90 32 55 60 rementa
Bowling Green Aman Bowling Green Trans Canville Lenno Canville Trans Cowensboro Carrie Contractor Location Brans Bowling Green Aman Bowling Green	a 2,000 sq. ft. Average  d Unit Sizing  ix 2,000 sq. ft. 4v	\$ \$ \$ \$ \$ \$ \$ \$ e Incremer  Avg.  Avg.  Avg.	1,000 1,450 1,400 1,600 725 700 ntal Cost 80% ency 1,400 1,600 1,000 1,950 750 700 Average I	\$ 1, \$ 1, \$ 2 \$ 2 \$ 1 \$ 1 Avg. 92 Efficien \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	570 700 ,500 ,500 ,050 ,250 <b>%</b> <b>cy</b> ,200 ,026 ,467	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	577 255 1,100 900 322 555 600 rementa
Bowling Green Trans Danville Lenno Danville Trans Dwensboro York Dwensboro Carrie  Contractor Location Brans Danville Lenno Danville Lenno Danville Trans Bowling Green Anana Dowensboro Heil Dwensboro Carrie  Contractor Location Brans Dwensboro Trans Dowensboro Carrie  Contractor Location Brans Dwensboro Carrie  Contractor Location Brans Dwensboro Carrie  Contractor Location Brans Dwensboro Trans Dowensboro Trans Contractor Location Brans Dwensboro Trans Dowensboro Trans Dowensb	2,000 sq. ft. Average  d Unit Sizing  12,000 sq. ft. 2,000 sq. ft. 4v	\$ \$ \$ \$ \$ \$ e Incremer  Avg.  Avg.  Avg.	1,450 1,400 1,600 725 700 ntal Cost 80% ency 1,400 1,000 1,950 750 700 Average I	\$ 1, \$ 2 \$ 2 \$ 1 \$ 1 Avg. 92 Efficien \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	700 2,500 2,500 ,050 ,250 <b>%</b> <b>cy</b> 2,200 2,500 ,026 2,467	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	25 1,10 90 32 55 60 rementa
Contractor Location Denville Contractor Location Denville Contractor Location Denville Conville Contractor Location Conville Conv	2,000 sq. ft.   2,000 sq. ft	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,400 1,600 725 700 ntal Cost 80% ency 1,400 1,600 1,950 750 700 Average I	\$ 2 \$ 1 \$ 1 Avg. 92 Efficien \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	,500 ,500 ,050 ,250 <b>%</b> <b>Cy</b> ,200 ,500 ,026 ,467	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,10 90 32 55 60 rementa
Contractor Location Brand Bowensboro Contractor Location Brand Bowling Green Bowling Green Bowensboro Contractor Location Brand Bowling Green Contractor Contractor Location Contractor Location Contractor Location Contractor Location Contractor Location Contractor Location Contractor Contractor Location Contractor Contractor Location Contractor Contractor Location Contractor Location	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft.  Averagi	s s e Incremer  Avg. Effici  s s s s s s s s s s s s s s s s s s s	1,600 725 700 ntal Cost 80% ency 1,400 1,600 1,950 750 700 Average I	\$ 2 \$ 1 \$ 1 Avg. 92 Efficien: \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	,500 ,050 ,250 <b>%</b> <b>cy</b> ,200 ,500 ,026 ,467	\$ \$ \$ \$ Inci	90 32 55 60 rementa Cost
Contractor Location Brand Bowensboro Contractor Location Conville Contractor Bowling Green Cowensboro Covensboro Contractor Location Conville Trane Contractor Contractor Location Conville Trane Contractor Contractor Location Conville Contractor Contract	2,000 sq. ft. 2,000 sq. ft.  Average  d Unit Sizing  xx 2,000 sq. ft. Average  d Unit Sizing 2,000 sq. ft. 4v	\$ se Incremer  Avg. Effici \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	725 700 ntal Cost 80% (ency 1,400 1,000 1,950 750 700 Average emental	Avg. 92 Efficien \$ 2 \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	,050 ,250 % cy ,200 ,500 ,026 ,467	\$ \$ Inci	32 55 60 rementa Cost
Contractor Location Danville Danville Danville Danville Danville Danville Danville Danville Danville Trane Danville Danville Contractor Location Danville Danville Contractor Location Danville Danville Trane Danville Trane Contractor Location Danville Danville Trane Danville Trane Contractor Location Danville Trane Danville Da	d Unit Sizing  2,000 sq. ft.  Average  2,000 sq. ft.  Av  d Unit Sizing  2,000 sq. ft.  2,000 sq. ft.  2,000 sq. ft.	Se Increment  Avg.  Effici  S S S S S Average Incre	700 ntal Cost 80% ency 1,400 1,600 1,000 1,950 750 700 Average lemental	Avg. 92 Efficien: \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	,250 % Cy ,200 ,500 ,026 ,467	\$ Inc. \$ \$	55 60 rementa Cost
Contractor Location Brand Danville Lenno Danville Trane Bowling Green Aman Bowling Green Heil Dwensboro Heil Dwensboro Carrie  Contractor Location Brand Dwensboro Carrie  Contractor Carrie  Contractor Contractor Contractor Convensboro Carrie  Contractor Contractor Location Brand	Average  d Unit Sizing  x 2,000 sq. ft. Av  d Unit Sizing 2,000 sq. ft. 2,000 sq. ft.	Avg. Effici \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	80% ency 1,400 1,600 1,000 1,950 750 700 Average emental	Avg. 92 Efficien \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	% cy ,200 ,500 ,026	\$ Inci	60 rementa Cost
Location Brand Danville Lenno Danville Lenno Danville Trane Bowling Green Aman Downsboro Heil Dwensboro Carrie  Contractor Location Brand Dwensboro Carrie  Contractor Location Carrie  Contractor Location Brand Danville Trane Dwensboro Carrie  Contractor Location Brand Danville Trane Contractor Location Brand Danville Trane Dwensboro Carrie  Contractor Location Brand	d Unit Sizing  2,000 sq. ft. Av  d Unit Sizing 2,000 sq. ft. 2,000 sq. ft.	Avg. Effici	80% ency 1,400 1,600 1,000 1,950 750 700 Average I	Avg. 92 Efficien \$ 2 \$ 2 \$ 1 \$ 1 Incremental	,200 ,500 ,026 ,467	Inci	rementa Cost
Location Brand Danville Lenno Danville Trane Bowling Green Aman Downsboro Heil Dwensboro Carrie  Contractor Location Brand Dwensboro Carrie  Contractor Location Aman Danville Trane Downsboro Carrie  Contractor Location Brand Downsboro Carrie  Contractor Location Brand Downsboro Carrie  Contractor Location Brand Downsboro Market Brand Downsboro Market Brand Downsboro Brand Downsbo	2,000 sq. ft.	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	1,400 1,600 1,000 1,950 750 700 Average I	\$ 2 \$ 2 \$ 2 \$ 1 \$ 1 Incremental	,200 ,500 ,026 ,467	\$	Cost
Danville	2,000 sq. ft.	\$ \$ \$ \$ \$ verage Increase	1,400 1,600 1,000 1,950 750 700 Average I	\$ 2 \$ 2 \$ 2 \$ 2 \$ 1 \$ 1	,200 ,500 ,026 ,467	\$	
Danville         Trane           Bowling Green         Amang           Bowling Green         York           Dwensboro         Heil           Dwensboro         Carrie           Contractor         Location           Danville         Trane           Dwensboro         Carrie           Owensboro         York           Contractor         York           Contractor         Location           Brane         Brane           Contractor         Location           Brane         Brane	2,000 sq. ft. 4  Av  d Unit Sizing 2,000 sq. ft. 1,000 sq. ft. 2,000 sq. ft.	\$ \$ \$ \$ verage Increase	1,600 1,000 1,950 750 700 Average I	\$ 2 \$ 2 \$ 2 \$ 1 \$ 1	,500 ,026 ,467	\$	80
Aman	a 2,000 sq. ft.  Av  d Unit Sizing 2,000 sq. ft. 1,000 sq. ft. 2,000 sq. ft.	\$ \$ \$ verage Incre Avg.	1,000 1,950 750 700 Average I	\$ 2 \$ 2 \$ 1 \$ 1	,026 ,467		
York	2,000 sq. ft. 2,000 sq. ft. 2,000 sq. ft. Av  d Unit Sizing 2,000 sq. ft. 2,000 sq. ft.	\$ \$ verage Incre Avg.	1,950 750 700 Average I emental	\$ 2 \$ 1 \$ 1 Incremental	,467		90
Contractor Location Divensboro  Contractor Location Danville Divensboro Carrie Divensboro Carrie Contractor Location Divensboro Carrie Contractor Location Contractor Location Contractor Location Carrie Contractor Location Carrie Contractor Location Carrie Carrie Contractor Location Carrie	2,000 sq. ft. 2,000 sq. ft.  Av  d Unit Sizing 2,000 sq. ft. 1,000 sq. ft. 2,000 sq. ft. 1,000 sq. ft.	\$ serage Incre Avg.	750 700 Average I emental	\$ 1 \$ 1 Incremental		\$	1,02
Contractor Divensboro  Contractor Location Danville Divensboro Carrie  Contractor Location Danville Divensboro Carrie Contractor Location Divensboro Carrie Divensboro Divensbor	2,000 sq. ft. 2,000 sq. ft.  Av  d Unit Sizing 2,000 sq. ft. 1,000 sq. ft. 2,000 sq. ft. 1,000 sq. ft.	\$ serage Incre Avg.	750 700 Average I emental	\$ 1 \$ 1 Incremental		\$	51
Contractor Location Danville Dwensboro Carrie Contractor Location Carrie Contractor Contractor Location Carrie Contractor Contractor Location Carrie	2,000 sq. ft.  Av  d Unit Sizing 2,000 sq. ft. 1,2,000 sq. ft. 2,000 sq. ft.	yerage Incre Avg.	700 Average I emental	\$ 1	,200	\$	45
Contractor Location Brand Danville Trans Description D	Av  d Unit Sizing 2,000 sq. ft. 1,000 sq. ft.	verage Incre Avg.	emental (	Incremental	,300	\$	60
Location Brand Danville Trane Dwensboro Carrie Dwensboro York  Contractor Location Brand	d Unit Sizing 2,000 sq. ft. 1,000 sq. ft.	Avg.		Cost 90-92 A			71
Location Brand Danville Trane Dwensboro Carrie Dwensboro York  Contractor Location Brand	2,000 sq. ft. 2,000 sq. ft.				AFUE	\$	65
Location Brand Danville Trane Dwensboro Carrie Dwensboro York  Contractor Location Brand	2,000 sq. ft. 2,000 sq. ft.		0001	04	٥,		
Danville	2,000 sq. ft. 2,000 sq. ft.			Avg. 94 Efficien			rement
Owensboro Carrie Owensboro York  Contractor Location Brane	2,000 sq. ft.	\$	1,600		,500	\$	Cost 90
Contractor Location Brane							
Contractor Location Brane	2,000 sq. π.	\$	700		,380	\$	68
Location Brand		\$	725	\$ 1	,150	\$	66
Location Brand		,	Average	ncremental	Cost	Þ	00
		Avg.	80%	Avg. 96	%	Inc	rement
Danville Lenno	d Unit Sizing	Effici	ency	Efficien	су		Cost
	x 2,000 sq. ft.	\$	1,400	\$ 3	,200	\$	1,80
Danville Trane	2,000 sq. ft.	\$	1,600	\$ 3	,600	\$	2,00
)wensboro York	2,000 sq. ft.	\$	700	\$ 1	,200	\$	50
wensboro Heil	2,000 sq. ft.	\$	750		400	\$	65
				ncremental			1,23
Location Branco Owensboro A.O. Sm		Effici-	<b>ency</b> 8,150	\$ 9	<b>cy</b> ,865	\$	<b>Cost</b> 1,71
Danville Locina	to the second se	\$	7,950		400	\$	1,45
			Average I	ncremental	Cost	\$	1,58
WATER HEATERS -	TANK TYPE					_	
Contractor	l linit Cinin	Avg.		Avg. 62			rementa
Location Brance O11 ASHRAE Winter Confere		Effici	епсу	Efficience	су	\$	Cost
OTT ASTINAL WITHER COTTER	lice					Φ	,
The state of the s			Average I	ncremental	Cost	\$	3
Contractor		Avg.		Avg. 67			rementa
Location Brand				Efficienc			Cost
owes A.O. Sm		\$	409	\$	656	\$	24
ome Depot Rheen	n 40 gallon	\$	400	\$	639	\$	23
owes State	40 gallon	\$	379			\$	55
WATER HEATERS	744W POP	<b>,</b>	lverage l	ncremental	Cost	\$	34
WATER HEATERS - Contractor Brand		58% Ef	# Tank	82% Ef		Tne	.omont
Location Compari		Typ		Tankles			rementa Cost
wensboro Rinnai		\$	404			\$	59
aducah Naviar		\$	350			\$	78
owling Green Rinnai		\$	409			\$	80
owling Green A.O. Sm		\$	409			\$	92
wensboro Naviar		\$	429	200		\$	72
aducah Rheen		\$	390	175		\$	1,21
Alleen Kileen	, 133,000 Ett			ncremental (			83
COMMERCIAL GAS I		8				\$	46
ken from Savings Calculator for Energy						\$	12
aken from Savings Calculator for Energy as Fryer						\$	11
iken from Savings Calculator for Energy as Fryer as Griddle						\$	2,10
aken from Savings Calculator for Energy as Fryer as Griddle as Oven		A	verage l	ncremental (	Cost	\$	70
eken from Savings Calculator for Energy as Fryer as Griddle as Oven as Steamer		-					
eken from Savings Calculator for Energy as Fryer as Griddle as Oven as Steamer			7-	les.	James		
sken from Savings Calculator for Energy as Fryer as Griddle as Oven as Steamer  THERMOST  Contractor Brand	Model	Non		Programm	abl		
aken from Savings Calculator for Energy as Fryer as Griddle as Oven as Steamer  THERMOST  Contractor Location  Comparis	Model son Number	Nor Program	nmable	e			Cost
aken from Savings Calculator for Energylas Fryer las Griddle las Oven las Steamer  THERMOST  Contractor Location Comparis owe's Honeywell	Model Son Number RTH6350D1000	Nor Program	mable 40	<b>e</b>	60	\$	2
eken from Savings Calculator for Energylas Fryer as Griddle as Oven as Steamer  THERMOST  Contractor Location Dwe's Honeywell Lux  Honeywell Lux	Model Number RTH6350D1000 TX9600TS	Non Program	40 40	<b>e</b> \$ \$	60 68	\$	2 2 2
eken from Savings Calculator for Energylas Fryer as Griddle as Oven as Steamer  THERMOST  Contractor Location Comparis owe's Honeywell	Model Son Number RTH6350D1000	Noi Program	mable 40	<b>e</b>	60 68 99	\$	Cost 2

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											
A. High Efficiency Appliances	0	0	0	0	-	0	0	0			-
B. Weatherization Program	0	0	0	0	0	0	0	0			-
Total Participants	0	0	0	0	0	0	0	0			•
Total Conservation in Ccf											
A. High Efficiency Appliance Savings	0	0	0	0	0	0	0	0			-
B. Weatherization Program	0	0	0	0	0	0	0	0			-
Total Ccf Savings	0	0	0	0	0	0	0	0			-
Total Lost Sales	\$ -	\$ - :	\$ - 9	\$ - 9	5 - 5	5 - \$	s - \$				\$ -

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

Program Year End: December 31, 2018

**Current Year Conservation (Ccf)** 

	G-1 Residential					ıl		G	-1 Comme	rcial		N	YMEX Fut	ures Prices
		Pre	ojected	Annual	С	ommodity	Pr	ojected	Annual	Cor	nmodity		Average	
Ye	ar	Ga	s Cost*	Savings		Savings	Ga	s Cost*	Savings	S	avings	Year	Cost	Escalation
20	17	\$	0.491	134,950	\$	66,325	\$	0.491	-	\$	-	2017	3.05	
20	18	\$	0.497	134,950	\$	67,008	\$	0.497	-	\$	-	2018	3.09	101.0%
20	19	\$	0.469	134,950	\$	63,316	\$	0.469	-	\$	-	2019	2.92	94.5%
20	20	\$	0.458	134,950	\$	61,843	\$	0.458	-	\$	-	2020	2.85	97.7%
20	21	\$	0.462	134,950	\$	62,350	\$	0.462	-	\$	-	2021	2.87	100.8%
20	22	\$	0.468	134,950	\$	63,173	\$	0.468	-	\$	-	2022	2.91	101.3%
202	23	\$	0.478	134,950	\$	64,556	\$	0.478	-	\$	-	2023	2.97	102.2%
20	24	\$	0.489	134,950	\$	65,994	\$	0.489	-	\$	-	2024	3.04	102.2%
202	25	\$	0.500	134,950	\$	67,491	\$	0.500	-	\$	-	2025	3.11	102.3%
20	26	\$	0.510	134,950	\$	68,841	\$	0.510	-	\$	-			
202	27	\$	0.520	134,950	\$	70,217	\$	0.520	-	\$	-			Deemed Escalation
202	28	\$	0.531	134,950	\$	71,622	\$	0.531	-	\$	-	Current A	tmos CGA	Rate After 2022
202	29	\$	0.541	134,950	\$	73,054	\$	0.541	-	\$	-	\$ 0.491		2%
203	30	\$	0.552	127,326	\$	70,306	\$	0.552	-	\$	-			
203	31	\$	0.563	127,326	\$	71,712	\$	0.563	-	\$	-			
203	32	\$	0.574	109,231	\$	62,750	\$	0.574	-	\$	-			
203	33	\$	0.586	109,231	\$	64,005	\$	0.586	-	\$	-			
203	34	\$	0.598	109,231	\$	65,286	\$	0.598	-	\$	-			
203	35	\$	0.610	22,011	\$	13,418	\$	0.610	-	\$	-			
203	36	\$	0.622	22,011	\$	13,687	\$	0.622	-	\$	-			
203	37	\$	0.634	-	\$	-	\$	0.634	-	\$	-			
203	38	\$	0.647	*	\$	-	\$	0.647	-	\$	-			
203	39	\$	0.660	-	\$	*	\$	0.660	-	\$	-			
204	10	\$	0.673		\$	-	\$	0.673	-	\$	-			
204	11	\$	0.687	-	\$	-	\$	0.687	-	\$	-			
Total	Con	nmo	odity Sav	rings	\$	1,226,954				\$	•			
Disco	unt I	Rate	Э			7.73%					7.73%			
Prog	ram	Ber	nefits			\$638,005					\$0			

<sup>\*</sup>Atmos GCA, escalated using NYMEX futures prices at Henry Hub

(present value of commodity savings)

Schedule C Page 10 of 27

Daily Settlements for Henry Hub Natural Gas Futures (PRELIMINARY)Trade Date: 10/24/2017 <a href="http://www.cmegroup.com/trading/energy/natural-gas/na

	w.omogro	Tup.oom/intrac	allig/offorg)	matarar g	T	do quotoc	settlements tu	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN
							Estimated	Prior Day
Month	Open	High	Low	Last	Change	Settle	Volume	Open
							Volume	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	(0.003)	2.964	10,912	77,441
Jun-18	2.990	2.997	2.978	2.991			805	32,520
					(0.002)	2.992		
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		0.000	(0.001)	2.776		517
Nov-20			-				-	
Dec-20		-	-		(0.001)	2.849	-	501
	2 44	2 4 4	2 4 4	2 405	(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

Dec-21				_	-0.009	3.030	0	100
Jan-22		-	-	-	0.000	3.142		18
Feb-22					-0.001	3.119		22
		-	-		-0.001	3.063	-	19
Mar-22		-					-	19
Apr-22	4.00	4.00	4.00		-0.001	2.768	-	
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	-	-	1	-	-0.001	3.149		1
Jan-24	-	-	-	-	-0.001	3.272	-	0
Feb-24	-	-		-	-0.001	3.246		0
Mar-24	-	-	1	-	-0.001	3.184	-	0
Apr-24	-	-	1	-	-0.001	2.892	ı	0
May-24	-	-	-	-	-0.001	2.874	-	2
Jun-24	-	-	•	1	-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	-	-

Jul-26				-	-0.001	3.063		-
Aug-26		<del></del>	<del></del>	-	-0.001	3.101		-
Sep-26				<del>-</del>	-0.001	3.111		-
Oct-26				-	-0.001	3.156	-	
Nov-26					-0.001	3.232		_
Dec-26				<u> </u>	-0.001	3.389		-
Jan-27			-	-	-0.001	3.524		-
Feb-27				-	-0.001	3.489		-
Mar-27			-	-	-0.001	3.414		-
Apr-27		<del></del>	<del>-</del>	-	-0.001	3.099		-
May-27				-	-0.001	3.074		-
Jun-27					-0.001	3.099		
			-	-	-0.001	3.128		-
Jul-27		-		-		3.126		-
Aug-27		-	-	-	-0.001 -0.001	3.166	-	-
Sep-27			-			3.106		-
Oct-27	-		-	-	-0.001	3.282	-	-
Nov-27		-	-	-	-0.001		-	-
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	-	-	-	1	-0.001	3.333	-	
Sep-29	-	-	-		-0.001	3.348	-	
Oct-29	-	-	-		-0.001	3.403		
Nov-29	-	-	-	-	-0.001	3.481	-	-

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<sub>P</sub> = Net present value to all participants
 B<sub>P</sub> = NPV of benefit to all participants
 C<sub>P</sub> = 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<sub>t</sub> = Bill reductions in year t (not accounted for in participant cost test).

Bl<sub>t</sub> = Bill increases in year t TC<sub>t</sub> = Tax credits in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility
 PC<sub>t</sub> = Participant costs in year t, which include

incremental captial costs

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

# 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 <sub>t</sub>	INC <sub>t</sub>	B <sub>P</sub>
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<sub>t</sub> = Bill reductions in year t
TC<sub>t</sub> = Tax credits in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

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		$(1) \times (4)$ $BR_t$
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									
							(4)		
	(1)		(2)		(3)	(2) + (3)			(1) x (4)
	Ccf	Pr	ojected		Demand	Combined			5.7
t	Conserved	Ga	s Cost*		Charge	F	Rate		BR <sub>t</sub>
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	14	\$	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.

Dema	s Energy nd Side Management (DSM) Program ipant Test			
ГС <sub>t</sub>	= Tax credits in year t (presently no federa	al tax credits are available	in 2014)	
	A. High Efficiency Heating Savings	(1) Program Participants	(2) Residential Energy Credits	(1) x (2) TC <sub>t</sub>
	B. High Efficiency Water Heating Saving	<u>qs</u>		
	To	otal -		\$ -

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 Demand Side Management (DSM) Program Participant Test

INC<sub>t</sub> = Incentives paid to the participant by the Utility, for t = 1

Energy Savings by Customer Class	INCt		
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
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 <sub>t</sub>	(2) <b>PC</b> <sub>t</sub>	(1) + (2) <b>C</b> <sub>P</sub>
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

Bl<sub>t</sub> = Bill increases in year t (not accounted for in participant cost test).

PC<sub>t</sub> = Participant costs in year t, which include incremental capital costs

Atmos Energy Demand Side Management (DSM) Program Participant Test

PC<sub>t</sub> = Participant costs for t = 1

	(1)	(2)	(1) x (2)
A. High Efficiency Heating Savings	Program Participants	 ncremental Cost	$PC_t$
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
B. High Efficiency Water Heating Savings			
Tank W/H .6266 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
C. High Efficiency Commercial Kitchen Equipme	ent -		
Gas Fryer	-	\$ 468	\$ -
Gas Griddle	-	121	-
Gas Oven	-	119	-
Gas Steamer	-	2,103	-
Total		*	\$ -

IC = Incremental Costs for purchasing high-efficiency unit

<sup>(1)</sup> 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<sub>t</sub> = Utility avoided supply costs in year t PRC<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = 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 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 <sub>t</sub>
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

(1) UACt scheduled per calculation performed for RIM test

UAC<sub>t</sub> = Utility avoided supply costs in year t

## **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 <sub>t</sub>	(2) INC <sub>t</sub>	(3) UIC <sub>t</sub>	C <sub>pa</sub>
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<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC<sub>t</sub> which was calculated for the RIM Test
- (2) Incentives scheduled from INC<sub>t</sub> 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

$$B_{RIM} = $ 638,005$$
 $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<sub>RIM</sub> = Net present value levels

 $B_{RIM}$  = Benefits to rate levels or customer bills  $C_{RIM}$  = Costs to rate levels or customer bills

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

$$C_{RIM} \sum_{t=1}^{N} \frac{UIC_{t} + RL_{t} + PRC_{t} + INC_{t}}{(1+d)^{t-1}}$$

 $\begin{array}{lll} \text{UAC}_t & = & \text{Utility avoided supply costs in year t} \\ \text{UIC}_t & = & \text{Utility increased supply costs in year t} \\ \text{RL}_t & = & \text{Revenue loss from reduced sales in year t} \end{array}$ 

PRC<sub>t</sub> = Program administrator costs in year t

INC<sub>t</sub> = 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 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 <sub>t</sub>
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<sub>t</sub> = Utility avoided supply costs in year t

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

UAC<sub>t</sub> = Utility avoided supply costs in year t

	G-1 Residential				G-1 Commercial						
	Pr	ojected	Annual	C	ommodity	Pi	rojected	<b>Annual</b>	Com	modity	
t	Ga	as Cost*	Savings		Savings	Ga	as Cost*	Savings	Sa	vings	UAC <sub>t</sub>
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 Con	nmodit	y Savings		\$	1,226,954				\$	•	\$ 1,226,954

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

RIM Test UAC Page 23 of 27

<sup>(1)</sup> Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.

<sup>(2)</sup> Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

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

$$C_{RIM}$$
  $\Sigma$   $UIC_t + RL_t + PRC_t + INC_t$ 

t	(1) UIC <sub>t</sub>	(2) RL <sub>t</sub>	(3) PRC <sub>t</sub>	(4) INC <sub>t</sub>	(1) + (2) C <sub>RIM</sub>
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
8 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	-	-		,4	-
23		-		-	-
24	-	=		-	-
25	-	-		-	-
		1,661,437	82,891	435,375	2,179,703

7.730% Discount Rate

\$1,351,245 NPV

 $\begin{array}{lll} \text{UIC}_t & = & \text{Utility increased supply costs in year t} \\ \text{RL}_t & = & \text{Revenue loss from reduced sales in year t} \\ \text{PRC}_t & = & \text{Program administrator costs in year t} \end{array}$ 

INC<sub>t</sub> = 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 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<sub>t</sub> = Utility avoided supply costs in year t

TC<sub>t</sub> = Tax credits in year t

UIC<sub>t</sub> = Utility increased supply costs in year t PRC<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

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

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

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

	(1)		(2)			
t		UAC <sub>t</sub>	ŤĆ <sub>t</sub>	B <sub>TRC</sub>		
1	\$	66,325	-	\$ 66,325		
2		67,008	-	67,008		
2		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<sub>t</sub> = Tax Credits in year t

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

TRC Test B

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 <sub>t</sub>	(2) <b>PCN</b> <sub>t</sub>	(3) UIC <sub>t</sub>	$C_{TRC}$
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<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

UIC<sub>t</sub> = 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<sub>t</sub> from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

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## Program Summary

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

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

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

1. 2. 1a. 2a. 3.	Residentia # Kentucky C	Residential Customers I Sales Volumes (Ccf) ommercial Customers I Sales Volumes (Ccf) pants		158,221 109,894,930 17,416 48,854,530 <b>Total</b>	Residential	Commercial
-		urnace AFUE 90 - 93		10		0 10
		Furnace AFUE 94 - 95		10		0 10
	,	Furnace AFUE 96 or >		20		0 20
	d)	Boiler AFUE 85 -89		5		0 5
		er Heater EF .6266		5		0 5
	,	ter Heater EF .67 or >		5		0 5
	h) Tankless/Condensing			10		0 10
	,	Thermostat (manual)		10		0 10
	I)	Weatherization		-	_	0
	m)	Commercial Fryer		5		0 5
	n)	Commercial Griddle		5		0 5
	0)	Commercial Oven		5		0 5
	p)	Commercial Steamer		5		0 5
4.		os Distribution Charge	\$	0.183		0 3
5.		use (ccf) per customer	Ψ	361.00		
6.	Average water heating u			148.00		
7.	-	ed Rebates		140.00		
' · -	110000	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 E		500		
		Commercial Griddle		500		
		Commercial Oven I		500		
		Commercial Steam		500		
8.		Weatherization Pro	3	3,000		
9.	Incremental Cost of			654		
•		f 94-95 AFUE furnace	\$	668		
		96 or > AFUE furnace	\$	1,238		
		of 85-89 AFUE boiler	\$	1,583		
	Incremental Cost of Progr		\$	39		
		st of .62 EF tank W/H	\$	38		
		st of .67 EF tank W/H	\$	347		
	Incremental Cost of .82		\$	839		
		tal Cost for Gas Fryer	\$	468		
		Cost for Gas Griddle	\$	121		
		tal Cost for Gas Oven	\$	119		
		Cost for Gas Steamer		2,103		
10. [	Discount Rate			7.73%		

Atmos Variable Data Page 2 of 27

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

		Kentucky				
			Savings			
Measure	Efficiency Level	Savings (CCF)	(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	0.8290 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

Deemed Savings Page 3 of 27

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

Program Begins: Program Year End: Rate Effective:

May 1, 2018 December 31, 2018 May 1, 2018

DCRC = DSM	Cost Re	covery-Current
------------	---------	----------------

Program Costs		G-1 Re	esidential	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 Resi	dential	G-1 Co	mmercial
Program Benefits (Schedule C)	\$	-	\$	66,230
Less: Program Costs	\$	-	\$	(66,077)
Net Resource Savings	\$	•	\$	153
Incentive Percentage		15%	6	15%
DIA	\$		\$	-

DBA = DSM Balance Adjustment

unent							
	G-1 Res	sidential				G-1 Commercial	
		Estimated	Balancing			Estimated	Balancing
	Under/(Over) Recovery	Residential Sales	Adjustment	Ur	nder/(Over) Recovery	Commercial Sales	Adjustment
\$	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

Estimated Residential Customers

109,894,930 Ccf 158,221

		Recovery Amount			Rate, per Ccf	Rate, per Mcf		
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

Estimated Commercial Sales Estimated Commercial Customers 48,854,530 Ccf 17,416

	Recovery Amount	Rate, per Ccf	Rat	e, per Mcf
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 Demand Side Management (DSM) Program Schedule A - Current Year Participation Detail

G-1 Commercial Totals

Program

	Program	CCF Conse	rvation		Re	bate	9	N	leasure
G-1 Residential Efficiency Heating Savings	Participants	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	\$	-		
	Program	CCF Conse	ervation		Re	bate	•	M	leasure
G-1 Commercial Efficiency Heating Savings	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		
	Program	CCF Conse	rvation		Re	bate	•	M	leasure
G-1 Residential Water Heating Savings	<b>Participants</b>	Per Participant	Total		Amount		Total	Life	Source
Tank Water Heater EF .6266	-	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	\$			
	Program	CCF Conse	rvation	Territor eviden	Re	bate	)	M	easure
G-1 Commercial Water Heating Savings	Participants	Per Participant	Total		Amount		Total	Life	Source
Tank Water Heater EF .6266	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		
	Program	CCF Conse	rvation		Re	bate		М	easure
G-1 Commercial Cooking Equipment Savings		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 Sta
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 Sta
Totals	20	NA	10,535		NA	\$	10,000		
	Program	CCF Conse	rvation		Re	bate	1	М	easure
Weatherization	Participants	Per Participant	Total	-	Mount		Total	Life	Source
	-	100.3875	-	\$	3,000	\$	-	25	DEER
Education Program						\$	-		
	Program	CCF Conse	rvation		Re	bate			
otals by Customer Class	Participants	Per Participant	Total	-	mount		Total		
G-1 Residential Totals		Varies see above			es see above	\$			
G-1 Residential Totals									

95 Varies see above

17,443 Varies see above \$

Atmos Energy Demand Side Management (DSM) Program Annual Savings

**SAVINGS** 

		l		G-1	G-1 Comm.	l			l
	G-1 Res.	G-1 Comm.	G-1 Res.		Cooking	Weather-		Comm.	
Year	Heating	Heating	Water	Water	Equipment	ization	Res. 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	-	- 1	17,443	17,443
4	-	5,836	-	1,071	10,535	-	-	17,443	17,443
5	-	5,836	-	1,071	10,535	-	- 1	17,443	17,443
6	-	5,836	-	1,071	10,535	-	- 1	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	-	- 1	14,839	14,839
10	-	5,836	-	1,071	7,932	-	- 1	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	-	- 1	-	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	-	-	-	-	-	-	-		-

Annual Savings Page 6 of 27

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

	Ur	nit Cost	R	Residential Costs	Co	ommercial Costs	T	otal 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	ME ROUNDEN	ı				
Contractor Location	Brand	Unit Sizing	Avg. 80% Efficiency		g. 90% ficiency	Inc	remental 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	Incre	nental Cost		\$	602
Contractor	Brand	Unit Sizina		g. 80%	g. 92%	Inc	remental

Contractor Location	Brand	Unit Sizing	g. 80% ficiency	0.36724	g. 92% iciency	10000	emental 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	Increm	ental Cost	•	716

Average Incremental Cost \$ 716
Average Incremental Cost 90-92 AFUE \$ 654

Contractor Location	Brand	Unit Sizing	g. 80% ficiency		g. 94% iciency	Inc	remental 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	Increm	ental Cost	\$	668

Contractor Location	Brand	Unit Sizing		vg. 80% fficiency	A17.74.1	g. 96% iciency	Inc	remental 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	Increm	ental 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	Increm	ental Cost	\$	1,583	

WATER H	EATERS - TAN	K TYPE				
Contractor Location	Brand	Unit Sizing	Avg. 58% Efficiency	Avg. 62% Efficiency	Increr	nental st
2011 ACUDAE Wint	or Conformed				œ.	20

Average Incremental Cost \$ 38

Contractor Location	Brand	Unit Sizing	vg. 58% fficiency		g. 67% iciency	Inc	remental Cost
Lowes	A.O. Smith	50 gallon	\$ 409	\$	656	\$	247
Home Depot	Rheem	40 gallon	\$ 400	\$	639	\$	239
Lowes	State	40 gallon	\$ 379	\$	935	\$	556
			Average	Increm	ental Cost	\$	347

WATER	HEATERS - TANI							
Contractor Location	Brand Comparison	Unit Sizing	58% Eff Tank Type			82% Eff. Tankless	Incrementa 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
				Augrage	Ina	romontal Cost	•	920

	Average incremental Cost	Þ	039
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

Gas Glearner							Ψ	2,100
	THERMOSTATS		1	Average	Increment	tal Cost	\$	703
Contractor Location	Brand Comparison	Model Number	Prog	Non- grammable	Program e	nmabl		remental 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	Increment	tal Cost	\$	39

Equipment Cost Page 8 of 27

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											
A. High Efficiency Appliances	0	0	0	0	-	0	0	0			-
B. Weatherization Program	0	0	0	0	0	0	0	0			-
Total Participants	0	0	0	0	0	0	0	0			-
Total Conservation in Ccf											
A. High Efficiency Appliance Savings	0	0	0	0	0	0	0	0			-
B. Weatherization Program	0	0	0	0	0	0	0	0			
Total Ccf Savings	0	0	0	0	0	0	0	0			-
Total Lost Sales	\$ -	\$ - :	\$ -	\$ - \$	- \$	- \$	- 5	-			\$ -

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

Program Year End: December 31, 2018

**Current Year Conservation (Ccf)** 

	G-1 Residential					G	-1 Comme	rcia	al	NYMEX Futures Prices			
	Pr	ojected	Annual	Co	mmodity	Pr	ojected	Annual	Co	mmodity		Average	
Year	Ga	s Cost*	Savings	5	Savings	Ga	s Cost*	Savings	9	Savings	Year	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			Deemed Escalation
2028	\$	0.531	-	\$	-	\$	0.531	7,486	\$	3,973	Current A	tmos CGA	Rate After 2022
2029	\$	0.541	-	\$	-	\$	0.541	6,907	\$	3,739	\$ 0.491		2%
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 Co	mm	odity Sav	rings	\$	-				\$	112,102			
Discount	Rate	Э			7.73%					7.73%			
Program			- 111		\$0					\$66,230			
(present	value	e of comn	nodity savir	igs)									

<sup>\*</sup>Atmos GCA, escalated using NYMEX futures prices at Henry Hub

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

http://www.cmegroup.com/trading/energy/natural-gas/natural-gas guotes settlements futures.html **Prior Day Estimated** Month Open High Low Last Change Settle Open Volume Interest Nov-17 2.971 3.004 2.960 2.988 (0.017)2.974 114,500 46,837 3.139 3.165 3.117 3.135 105,230 3.148 (0.021)267,776 Dec-17 Jan-18 3.258 3.285 3.243 3.268 (0.023)3.257 44,476 201,511 3.260 3.287 3.246 3.27 (0.024)3.260 16,371 82,361 Feb-18 3.218 3.243 3.201 3.227 (0.024)3.216 33,907 174,362 Mar-18 2.979 2.995 2.975 2.992 2.989 29,734 126,898 Apr-18 (0.003)2.970 2.950 May-18 2.960 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 3.019 3.026 3.008 3.018 3.021 Aug-18 (0.002)2,014 31,390 Sep-18 3.000 3.007 2.990 3.002 (0.003)3.002 1,963 33,363 3.023 3.030 3.012 3.026 (0.002)3.025 Oct-18 7,560 69,251 Nov-18 3.075 3.077 3.061 3.077 28,248 (0.003)3.077 1,053 3.208 Dec-18 3.204 3.212 3.195 3.204 (0.003)1,393 28,455 3.291 3.271 Jan-19 3.285 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 3.168 3.179 3.161 3.177 3.178 1,371 Mar-19 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 2.778 2.784 2.778 0.002 2.785 Jul-19 2.784 84 3,786 Aug-19 2.771 2.775 2.771 2.775 0.002 2.785 20 2,673 2.755 2.755 23 Sep-19 2.765 2.765 0.002 2.768 2.485 2.792 2.792 513 Oct-19 2.776 2.790 2.790 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 2.712 Jun-20 0.000 (0.001)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 0.000 2.750 0 0 0 (0.001)-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 -0.0063.037 187 Apr-21 -----0.0092.739 -116 May-21 -0.009 2.714 \_ 102 Jun-21 -0.0092.737 89 Jul-21 -----0.0092.761 -89 Aug-21 -\_ -0.0092.777 92 -2.771 2.77 Sep-21 -0.0092.777 100 Oct-21 -0.0092.803 73 -Nov-21 -0.009 2.877 72

Dec 24		Ι		Γ	-0.009	3.030	0	100
Dec-21 Jan-22	-	-		-	0.000	3.142	-	18
			-	-		3.119		22
Feb-22	-	-		-	-0.001 -0.001		-	
Mar-22		-	-	-		3.063 2.768	-	19 14
Apr-22	4.00	4.00	4.00		-0.001		-	
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	-	-

Jul-26					-0.001	3.063	T -	
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
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<sub>t</sub> = Bill reductions in year t (not accounted for in participant cost test).

BI<sub>t</sub> = Bill increases in year t TC<sub>t</sub> = Tax credits in year t

 $INC_t$  = Incentives paid to the participant by the Utility

PC<sub>t</sub> = Participant costs in year t, which include

incremental captial costs

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

### 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 <sub>t</sub>	INC <sub>t</sub>	$B_P$
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<sub>t</sub> = Bill reductions in year t TC<sub>t</sub> = Tax credits in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

Atmos Energy Demand Side Management (DSM) Program Participant Test

### BR<sub>t</sub> = Bill reductions in year t

			G-1	Re	sidential			
							(4)	
	(1)		(2)		(3)	(2	(3)	$(1) \times (4)$
	Ccf	Pr	ojected		Demand	Cor	nbined	
t	Conserved	Ga	s Cost*		Charge	F	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	: <del>-</del>
24		\$	0.673		0.1825		0.86	-
25		\$	0.687		0.1825		0.87	-
							\$	-

~ 4	C	ı
7-1	Commercia	

				(4)						
	(1)		(2)		(3)	(2	) + (3)		$(1) \times (4)$	
	Ccf	Pr	ojected		Demand	Cor	nbined			
t	Conserved	Ga	s Cost*		Charge	F	Rate		BRt	
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.

Atm	Atmos Energy						
Dem	Demand Side Management (DSM) Program						
Part	articipant Test						
TC <sub>t</sub>	C <sub>t</sub> = Tax credits in year t (presently no federal tax credits are available in 2014)						
		A. High Efficiency Heating Savings	(1) Program Participants	(2) Residential Energy Credits	(1) x (2) TC <sub>t</sub>		
		B. High Efficiency Water Heating Savings					
		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
Demand Side Management (DSM) Program
Participant Test

INC<sub>t</sub> = Incentives paid to the participant by the Utility, for t = 1

Energy Savings by Customer Class	INC <sub>t</sub>
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 Demand Side Management (DSM) Program Participant Test

$$C_{P} = \sum_{t=1}^{N} \frac{PC_{t} + BI_{t}}{(1+d)^{t-1}}$$

t	(1) Bl <sub>t</sub>	(2) <b>PC</b> <sub>t</sub>	(1) + (2) C <sub>P</sub>
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

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

PC<sub>t</sub> = Participant costs in year t, which include incremental capital costs

Atmos Energy
Demand Side Management (DSM) Program
Participant Test

PC<sub>t</sub> = Participant costs for t = 1

	(1)	(2)	(1) x (2)
A. High Efficiency Heating Savings	Program Participants	Incremental Cost	PCt
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
B. High Efficiency Water Heating Savings			
Tank W/H .6266 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
C. High Efficiency Commercial Kitchen Equipmen	<u>nt</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

<sup>(1)</sup> 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<sub>pa</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t PRC<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UICt = 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 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 <sub>t</sub>	
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

(1) UAC<sub>t</sub> scheduled per calculation performed for RIM test

UAC<sub>t</sub> = Utility avoided supply costs in year t

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

$$C_{pa} = \sum_{t=1}^{N} \frac{PRC_{t} + INC_{t} + UIC_{t}}{(1+d)^{t-1}}$$

	(1)	(2)	(3)	
t	PRC <sub>t</sub>	INC <sub>t</sub>	UIC <sub>t</sub>	$C_{pa}$
1	34,327	31,750	-	66,077
2	=	-	-	<u>=</u>
3	-	-	÷	-
4	-	-	-	-
5	-		-	-
6	-	-	-	-
7	-	-	-	-
8	-		-	-
9	-	-	-	
10	-	-	-	
	34,327	31,750	-	66,077

7.730% Discount Rate

\$61,336 NPV

PRC<sub>t</sub> = Program Administrator Costs in year t

INC<sub>t</sub> = Incentives paid to the participant by the Utility

UIC<sub>t</sub> = Utility increased supply costs in year t

- (1) Program costs scheduled from PRC<sub>t</sub> which was calculated for the RIM Test
- (2) Incentives scheduled from INC<sub>t</sub> 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

$$B_{RIM} = $ 66,230$$
 $C_{RIM} = 152,185$ 
 $NPV_{RIM} = $ (85,955)$ 

### Benefit-Cost Ratio

0.44

### Conclusion:

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

Where:

NPV<sub>RIM</sub> = Net present value levels

 $B_{RIM}$  = Benefits to rate levels or customer bills  $C_{RIM}$  = Costs to rate levels or customer bills

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

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

 $\begin{array}{lll} \mathsf{UAC}_t & = & \mathsf{Utility} \ \mathsf{avoided} \ \mathsf{supply} \ \mathsf{costs} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \mathsf{UIC}_t & = & \mathsf{Utility} \ \mathsf{increased} \ \mathsf{supply} \ \mathsf{costs} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \mathsf{RL}_t & = & \mathsf{Revenue} \ \mathsf{loss} \ \mathsf{from} \ \mathsf{reduced} \ \mathsf{sales} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \mathsf{PRC}_t & = & \mathsf{Program} \ \mathsf{administrator} \ \mathsf{costs} \ \mathsf{in} \ \mathsf{year} \ \mathsf{t} \\ \end{array}$ 

INC<sub>t</sub> = 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 Demand Side Management (DSM) Program Ratepayer Impact Measure (RIM) Test

$$B_{RIM} \sum_{t=1}^{N} \underbrace{UAC_{t}}_{(1+d)^{t-1}}$$

t	UAC <sub>t</sub>
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<sub>t</sub> = Utility avoided supply costs in year t

RIM Test B Page 22 of 27

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

UAC<sub>t</sub> = Utility avoided supply costs in year t

	G-1 Residential					G-1 Commercial					
	Pr	rojected	Annual	(	Commodity	Pr	ojected	Annual	Co	mmodity	
t	Ga	as Cost*	Savings		Savings	Ga	s Cost*	Savings	,	Savings	UAC <sub>t</sub>
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 Con	nmodity	y Savings		\$					\$	112,102	\$ 112,102

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

<sup>(1)</sup> Total projected Ccf savings, based on budgeted participation levels in year one of the program. These amounts continue to be saved year after year.

<sup>(2)</sup> Based on Department of Energy 2011 "Annual Energy Outlook", converted to per ccf residential cost; where t = 1 = 2012

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

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

t	(1) <b>UIC</b> t	(2) <b>RL</b> <sub>t</sub>	(3) <b>PRC</b> <sub>t</sub>	(4) INC <sub>t</sub>	(1) + (2) C <sub>RIM</sub>
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
		11,349		-	11,349
6 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	-	_			-
A	-	152,995	34,327	31,750	219,072

7.730% Discount Rate

\$152,185 NPV

 $\begin{array}{lll} \text{UIC}_t & = & \text{Utility increased supply costs in year t} \\ \text{RL}_t & = & \text{Revenue loss from reduced sales in year t} \\ \text{PRC}_t & = & \text{Program administrator costs in year t} \end{array}$ 

INC<sub>t</sub> = 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

RIM Test C Page 24 of 27

# 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<sub>TRC</sub> = \$ (31,221)

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<sub>TRC</sub> = 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<sub>t</sub> = Utility avoided supply costs in year t

TC<sub>t</sub> = Tax credits in year t

UIC<sub>t</sub> = Utility increased supply costs in year t PRC<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

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

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

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

		(1) UAC <sub>t</sub>	(2) <b>TC</b> <sub>t</sub>		D
t			1 C <sub>t</sub>		B <sub>TRC</sub>
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	ф.	- 440 400	<u>-</u>	Ф.	440 400
	\$	112,102	-	\$	112,102

7.730% Discount Rate

\$66,230 NPV

 $UAC_t$  = Utility avoided supply costs in year t

TC<sub>t</sub> = Tax Credits in year t

(1) Scheduled per calculation performed for RIM Test

(2) Scheduled per calculation performed for Participant Test

TRC Test B Page 26 of 27

### **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 <sub>t</sub>	(2) PCN <sub>t</sub>	(3) UIC <sub>t</sub>	C <sub>TRC</sub>
1	34,327	70,656	-	104,984
2	-	-	-	-
3	-	-	-	-
4	÷	-	-	<del>-</del>
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
-	34,327	70,656	-	104,984

7.730% Discount Rate

\$97,451 NPV

PRC<sub>t</sub> = Program administrator costs in year t

PCN<sub>t</sub> = Net participant costs

UIC<sub>t</sub> = 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<sub>t</sub> from the Participant Test.
- (3) No known increased supply costs as a result of operating the CEP

PSC KY. No. 2

Second Revised SHEET No. 30

Cancelling

First Revised SHEET No. 30

(T)

### 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.

DATE OF ISS	SUE October 30, 2017					
	Month/Date/Year					
DATE EFFEC	CTIVE 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					

PSC KY. No. 2

Second Revised SHEET No. 33

Cancelling

First Revised SHEET No. 33

(T)

### 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:

<b>Equipment Type</b>	Efficiency Level	BTU Input	Rebate
			Amount
Forced Air Furnace	90-93% AFUE	30,000 or greater	\$250.00
Forced Air Furnace	94-95% AFUE	30,000 or greater	\$325.00
Forced Air Furnace	96% AFUE or greater	30,000 or greater	\$400.00
Boiler	85% AFUE or greater	30,000 or greater	\$250.00
Programmable Thermostat			\$25.00
Tank Water Heater	0.62-0.66 EF	40 gallon or greater	\$200.00
Tank Water Heater	0.67 EF or greater	40 gallon or greater	\$300.00
Tankless Water Heater	0.82 EF or greater	n/a	\$400.00

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

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	e President – Rates and Regulatory Affairs

PSC KY, No. 2

First Revised SHEET No. 34

Cancelling

## Original SHEET No. 34

### 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. 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 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 ISSU	October 20, 2017
	Month/Date/Year
DATE EFFECT	
	Month/Date/Year
Issued by A	uthority 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

PSC KY. No. 2

### Fifth Revised SHEET No. 36

### Cancelling

Fourth Revised SHEET No. 36

### ATMOS ENERGY CORPORATION

(NAME OF UTILITY)

		ent Cost Recovery Mechanism DSM	
DSM Cost Recove	ry Component (DSMRC-F		
DSM Cost Recover	ry – Current:	\$0.00067 per Mcf	(R)
DSM Lost Sales A	djustment	\$0.0002 per Mcf	(R)
DSM Incentive Ad	justment	(\$0.0001) per Mcf	(R)
DSM Balance Adju	ustment:	\$0.0003 per Mcf	(R)
DSMRC Residenti	al Rate G-1	\$0.0078 per Mcf	(R)
DSM Cost Recover	ry Component (DSMRC-C	<u>C):</u>	
DSM Cost Recover	ry – Current:	\$0.0013 per Mcf	(R)
DSM Lost Sales A	djustment	\$0.0001 per Mcf	(-)
DSM Incentive Ad	justment	\$0.0000 per Mcf	(R)
DSM Balance Adju	ıstment:	(\$0.0013) per Mcf	(I)
DSMRC Residentia	al Rate G-1	\$0.0001 per Mcf	(R)

DATE OF ISSUI	October 30, 2017
	Month/Date/Year
DATE EFFECTI	VE May 1, 2018
	Month/Date/Year
Issued by Au	thority 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

	Weatheri	zation		Residential Rebates							Education Monthly Totals					Commercial Rebates								
					Rebates	Ccf					# of				Rebate	Rebates			The same of the sa					
Payment Month	Expenses	Ccf Savings 2,317	Houses	Rebate Expenses	Issued	Savings	Promo & Misc.	Qtly. Fees	Monthly Totals	Presentations	Students	Expenses	\$ 20,035.50	Ccf Savings	Expenses	Issued	Ccf Savings	Promo & Misc.	Qtly. Fees	Monthly Totals				
Jan-00 5 Feb-00 5	\$ 20,035.50 \$ 5,739.72	828	5										\$ 20,035.50	2,317 828						1				
Mar-00 \$	\$ 8,496.71	1,324	8						1				\$ 8,496.71	1,324						1 1				
Apr-00 \$		2,317	14						1				\$ 18,762.90	2,317				1		1 1				
May-00 \$		1,490	9										\$ 11,573.54	1,490				1	-	1 1				
Jun-00 5 Jul-00 5	\$ 7,396.73 \$ 4,154.31	1,159 828	/							1			\$ 7,396.73 \$ 4,154.31	1,159 828										
Aug-00 \$	\$ 12,973.03	1,821	11							1			\$ 12,973.03	1,821			1	1		1				
Sep-00 S	\$ 12,627.73	1,655	10							1			\$ 12,627.73	1,655						1 1				
Oct-00 \$	\$ 8,125.69	1,324	8							1			\$ 8,125.69	1,324			1	1						
Nov-00 \$	\$ 14,839.30	2,317 662	14										\$ 14,839.30	2,317 662						1				
Dec-00 5	\$ 2,881.78 \$ 127,606.94	18,043	109	s -	- 0	0		-	s -		-	\$ -	\$ 2,881.78 \$ 127,606.94	18,043		-			•					
Cum. Totals	\$ 127,606.94	18,043	109	š -	0	0		\$ - \$ -	s .	0	0	s -	\$ 127,606.94	18,043	s -	0			\$ .	s . l				
Jan-01 5		1,490	9										\$ 8,567.83	1,490										
Feb-01 \$	\$ 14,791.75	1,821	11							1			\$ 14,791.75	1,821						1 1				
Mar-01 \$		1,655	10							1			\$ 13,078.09	1,655						1				
Apr-01 S May-01 S		2,317 2,648	14										\$ 18,341.19 \$ 19,408.59	2,317 2,648						1 1				
Jun-01 5		4,138	25										\$ 19,400.59	4,138										
Jul-01 5		1,821	11										\$ 14,386.72	1,821										
Aug-01 \$	\$ 11,578.57	1,655	10										\$ 11,578.57	1,655										
Sep-01 S	\$ 7,736.57	1,324	8										\$ 7,736.57	1,324						1				
Oct-01 \$		1,324	8										\$ 9,103.17	1,324				1						
Nov-01 S Dec-01 S		2,317 3.311	14										\$ 17,506.89 \$ 26,983.09	2,317 3,311				1		1 1				
2001 Totals	THE RESERVE OF THE PERSON NAMED IN	25,823	156	s .	0	0		\$ -	s -	0	0	s -	\$ 196,356.31	25,823	s .	0	1	0	\$ -	s -				
Cum. Totals	\$ 323,963.25	43,865	265	\$ .	0	0		\$ .	\$ -	o o	0	s .	\$ 323,963.25	43,865	\$ .	0		o	\$ -	\$ -				
Jan-02 3	\$ 21,222.28	2,980	18										\$ 21,222.28	2,980										
Feb-02 5	\$ 20,566.12	2,483	15										\$ 20,566.12	2,483						1				
Mar-02		2,152	13				1			1		1	\$ 16,330.10	2,152										
Apr-02 5 May-02 5	\$ 27,149.37 \$ 18,256.86	3,311 2,317	14										\$ 27,149.37 \$ 18,256.86	3,311 2,317				1						
Jun-02		3,145	19										\$ 26,051.68	3,145					1					
Jul-02	\$ 18,516.82	2,317	14						I				\$ 18,516.82	2,317										
Aug-02	\$ 11,449.86	1,490	9	1									\$ 11,449.86	1,490			1			1				
Sep-02	\$ 13,743.29	1,655	10	1									\$ 13,743.29	1,655										
Oct-02	\$ 13,208.46	1,490 1,324	9	1						1			\$ 13,208.46 \$ 11,997.19	1,490 1,324										
Nov-02 : Dec-02 :		1,324	1 5	1									\$ 1,500.00	1,324						1 1				
2002 Totals	WHEN PERSON NAMED IN COLUMN	24,830	150	· .	0	0		\$ -	\$ -	0	0	s -	\$ 199,992.03	24,830	s :	0		ol	\$ .	s -				
Cum. Totals		68,695		s .	0	0		\$ -	\$ -	0	0	\$ -	\$ 523,955.28	68,695	\$ -			0	\$ -	\$ -				
Jan-03		1,986	12										\$ 17,596.91	1,986										
Feb-03		993											\$ 7,996.11	993			1	1						
Mar-03 : Apr-03 :		1,324 2,317	14				1						\$ 10,119.31 \$ 22,161.59	1,324 2,317		1	1			1				
May-03	\$ 13,969.39	1,821	11										\$ 13,969.39	1,821			1	1						
Jun-03		662	4										\$ 6,547.15	662										
Jul-03		497	3	1						1			\$ 4,357.30	497		1	l .							
Aug-03		1,324	8	1									\$ 10,414.70	1,324		1	1			1				
Sep-03		1,159 1,986										1	\$ 8,577.02 \$ 16,703.38	1,159 1,986			1	1		1				
Oct-03 Nov-03		1,821	111	1						1			\$ 14,629.94	1,821			1	1		1				
Dec-03		1,159	7										\$ 11,487.21	1,159										
2003 Totals	\$ 144,560.01	17,050		\$ -	0	0			\$ -	0	0	s -	\$ 144,560.01	17,050	\$ .			0	\$ -	\$ -				
Cum. Totals		85,745		\$ -	0	0		\$ -	\$ -	0		\$ -	\$ 668,515.29	85,745	\$ -			0	\$ -	\$ -				
Jan-04		1,159								1			\$ 10,757.10	1,159										
Feb-04 Mar-04		1,490 2,648			1								\$ 14,497.95 \$ 23,181.08	1,490 2,648					1					
Mar-04 Apr-04		1,821		1									\$ 16,843.44	1,821										
May-04		1,821	11										\$ 17,739.85	1,821		1								
Jun-04	\$ 18,301.54	1,986	12							1			\$ 18,301.54	1,986										
Jul-04	\$ 12,525.03	1,490		1									\$ 12,525.03	1,490										
Aug-04		828								1			\$ 8,395.00	828										
Sep-04		1,986 1,324		1									\$ 15,337.19 \$ 12,748.01	1,986 1,324						1 1				
Oct-04 Nov-04		1,324		1						1			\$ 10,177.65	1,159										
Dec-04		1,324	8										\$ 12,580.47	1,324										
2004 Totals	\$ 173,084.31	19,036	115		0	0		\$ -	\$ .	0		\$ -	\$ 173,084.31	19,036	\$ .	1		0	\$ -	\$ -				
Cum. Totals	\$ 841,599.60	104,780	633	\$ -	- 0	0		\$ -	\$ -			\$ -	\$ 841,599.60	104,780	\$ -			0	\$ -	\$ -				

	Weatheriz	zation				Res	idential Rebates			E	Education			otals	Commercial Rebates							
Downson May 11		Ccf Savings	Maurar	Rebate Expenses	Rebates Issued	Ccf	Promo & Misc.	Qtly. Fees	Monthly Totals	Presentations	# of Students				Rebate	Rebates		Promo & Misc.	Qtly. Fees	Monthly Totals		
Payment Month Jan-05	Expenses \$ 23,366.02	2,317	Houses	Redate Expenses	Issued	Savings	Promo & MISC.	Qtiy. Fees	Monthly Totals	Presentations	Students	Expenses	\$ 23,366.02	Ccf Savings 2,317	Expenses	Issued	Cct Savings	Promo & Misc.	Qtiy. Fees	Monthly Totals		
Feb-05	\$ 22,121.83	2,483	15										\$ 22,121.83	2,483						1		
Mar-05	\$ 18,675.61	2,152	13										\$ 18,675.61	2,152								
Apr-05 May-05		3,145 2,980	19										\$ 28,094.00 \$ 27,951.09	3,145 2,980								
Jun-05		1,986	12							1			\$ 18,668.02	1,986			1					
Jul-05	\$ 5,014.29	497	3										\$ 5,014.29	497						1		
Aug-05 Sep-05		662 1,490	4							1			\$ 5,615.40 \$ 13.032.57	662 1,490								
Oct-05		1,490	7										\$ 13,032.57	1,490			1			1		
Nov-05	\$ 8,319.13	993	6										\$ 8,319.13	993			l	i :				
Dec-05		1,324	8										\$ 11,224.40	1,324	-							
2005 Totals Cum. Totals		21,188 125,968	128 761	\$ .	0	0		\$ .	\$ .	0	0	\$ .	\$ 193,265.67 \$ 1,034,865.27	21,188 125,968	\$ .	0			\$ ·	\$ :		
Jan-06		828	5	•		-		-	1		-	•	\$ 7,727.22	828	•	-	<u> </u>		*	-		
Feb-06	\$ 20,189.02	2,152	13										\$ 20,189.02	2,152								
Mar-06 Apr-06		2,648 2,152	16										\$ 24,264.95 \$ 18,546.27	2,648 2,152						1 1		
May-06		2,648	16							1			\$ 22,690.10	2,648			1			1		
Jun-06	\$ 22,507.85	2,483	15										\$ 22,507.85	2,483			y					
Jul-06	\$ 10,658.37	1,159	7										\$ 10,658.37	1,159								
Aug-06 Sep-06	\$ 9,470.36 \$ 20,453.75	1,159 2,152	7										\$ 9,470.36 \$ 20,453.75	1,159 2,152								
Oct-06		1,324	8										\$ 10,813.07	1,324								
Nov-06	\$ 15,527.99	2,152	13										\$ 15,527.99	2,152						1		
Dec-06		1,655	10		-				-				\$ 15,014.38	1,655								
2006 Totals Cum. Totals		22,512 148,480	136 897		0	0		s -	s -	0	0	s -	\$ 197,863.33 \$ 1,232,728.60	22,512 148,480	s -	0			s .	\$ -		
Jan-07		1,986	12	•				*	1			•	\$ 18,174.85	1,986		-	<u> </u>		•	1		
Feb-07	\$ 4,858.87	497	3										\$ 4,858.87	497						1 1		
Mar-07		1,490 993	9						1				\$ 13,685.29 \$ 9,441.01	1,490 993								
Apr-07 May-07		1,324	8										\$ 12,938.53	1,324						1 1		
Jun-07		1,490	9										\$ 14,555.36	1,490								
Jul-07		1,324	8										\$ 11,232.27	1,324			1					
Aug-07		1,159 1,159	7										\$ 8,806.27 \$ 9,016.69	1,159 1,159								
Sep-07 Oct-07		1,490	9							1			\$ 13,814.23	1,490						1		
Nov-07	\$ 16,773.21	1,986	12										\$ 16,773.21	1,986						1 1		
Dec-07		828	5							ļ			\$ 7,351.17	828								
2007 Totals Cum. Totals		15,725 164,206	95 992		0	0		\$ - \$ -	\$ .	0	0		\$ 140,647.75 \$ 1,373,376.35	15,725 164,206		0			\$ .	\$ .		
Jan-08	\$ 12,738.11	1,324	8										\$ 12,738.11	1,324								
Feb-08		1,159	7							1			\$ 9,582.69	1,159						1 1		
Mar-08 Apr-08		1,490 1,159	7							1			\$ 12,055.53 \$ 9,632.38	1,490 1,159						1		
May-08		331	2							1			\$ 2,882.82	331						1		
Jun-08	\$ 4,855.90	662	4										\$ 4,855.90	662								
Jul-08	\$ 5,791.40	662 662	4										\$ 5,791.40 \$ 4,858.75	662 662								
Aug-08 Sep-08	\$ 4,858.75 \$ 8,302.17	1,324	8										\$ 8,302.17	1,324								
Oct-08	\$ 7,823.76	993	6										\$ 7,823.76	993								
Nov-08		1,324	8	1									\$ 11,501.85 \$ 9,151.33	1,324 993				1				
Dec-08		993	73	š .	0	0		s .	S -	1 0	0	s -	\$ 99,176.69	12,084	s -	1		ol -	\$ -	s -		
Cum. Totals	\$ 1,472,553.04	176,289	1,065		0	0		\$ .	\$ -	, o	0	\$ -	\$ 1,472,553.04	176,289				0	\$ .	\$ -		
Jan-09	\$ 11,220.78	1,159 2,152	7										\$ 11,220.78 \$ 18,302.80	1,159								
Feb-09 Mar-09	\$ 18,302.80 \$ 8,158.05	2,152	13										\$ 18,302.80 \$ 8,158.05	2,152 993								
Apr-09	\$ 14,214.36	1,490	9										\$ 14,214.36	1,490								
May-09	\$ 21,464.36	2,648	16	1									\$ 21,464.36	2,648								
Jun-09 Jul-09	\$ 13,424.55 \$ 3,199.38	1,490 497	9	1									\$ 13,424.55 \$ 3,199.38	1,490 497			1					
Aug-09	\$ 3,199.38 \$ 12,860.06	1,324	8										\$ 12,860.06	1,324								
Sep-09	\$ 10,901.51	1,159	7	1						1			\$ 10,901.51	1,159	1							
Oct-09	\$ 14,981.10	1,655	10	1							234		\$ 14,981.10	1,655 1,655								
Nov-09 Dec-09	\$ 19,703.09 \$ 16,780.79	1,655 1,655	10	\$ 4,392,00	20	2,187	\$ -	\$ 1,200.0	0 \$ 5,592.00	10	234	\$ 1,351.82 \$ 1,775.50	\$ 21,054.91 \$ 24,148.29									
2009 Totals	\$ 165,210.83	17,877	108	\$ 4,392.00	20	2,187	\$ -	\$ 1,200.0	0 \$ 5,592.00	10		\$ 3,127.32	\$ 173,930.15	20,064	-							
Cum. Totals	\$ 1,637,763.87	194,167	1,173		20	2,187	s -		0 \$ 5,592.00		234	\$ 3,127.32	\$ 1,646,483.19									

	Weatheriz	zation					dential Rebates			E	ducation # of		Monthly T	otals	Commercial Rebates								
Payment Month	Expenses	Ccf Savings	Houses	Rebate Expenses	Rebates	Ccf Savings	Promo & Misc.	Qtly. Fees	Monthly Totals	Presentations	Expenses	Expenditures	Rebate Rebates Expenses Issued Ccf Savings Promo & Misc. Qtty, Fees Monthly Totals										
Jan-10 \$	28,096.20	1,821	11	\$ 5,548.00	26	2,603	\$ 21,576.92	quy. 1 cos	\$ 27.124.92	1	Students 60	\$ -	\$ 55,221.12	Ccf Savings 4,424	Expenses	issueu	CCI Gavings	Fromo & Misc.	Quy, rees	monthly rotals			
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		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		92	8,629	\$ 13,324.38		\$ 34,214.38	1	55	\$ -	\$ 67,371.99	11,112									
May-10 \$ Jun-10 \$	24,547.98 34,758.55	1,821 1,986	11	\$ 19,315.00 \$ 25,708.50	115	7,310 9,888	\$ 1,109.24 \$	\$ 3,604.75	\$ 20,424.24 \$ 29,313.25	0	0	\$ -	\$ 44,972.22 \$ 64,071.80	9,131									
Jul-10 \$	8.895.25	662	4	\$ 26,554.00	120	11,227	\$ 10.578.00	\$ 3,604.75	\$ 29,313.25	0	0	•	\$ 46,027.25	11,875 11,889			1						
Aug-10 \$	14.624.63	993	6	\$ 23,389.00	102	9,551		- 1	\$ 23,389.00	0	0	\$ 161.16		10,544		ì							
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		8,613									
Nov-10 \$		2,483	15	\$ 14,743.50	67	6,130	\$ -		\$ 14,743.50	2	345	\$ 69.56		8,613									
Dec-10 \$	28,185.35	2,317	136	\$ 30,744.00	140	13,775	\$ 540.00	\$ 3,278.65 \$ 13,940.90	\$ 34,562.65	1	120	\$ 121.50		16,092		The same of the sa	-						
2010 Totals \$ Cum. Totals \$	296,599.23 1,934,363.10	22,512 216,679	1,309		1,071	99,087	\$ 61,245.60 \$ 61,245.60	\$ 13,940.90 \$ 15,140.90		11 21	1,277			121,599 317,456									
Jan-11 \$	21,962.79	1,490	9	\$ 25,989.00	112	10,405	\$ 819.65		\$ 26,808.65	1	50	\$ 79.26		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		\$ 62,085.86	9,532									
Apr-11 \$	8,063.21 29,133.87	1,159 1,986	7	\$ 16,094.00 \$ 21,589.50	72	5,288 8,258	\$ 1,667.09 \$ 5,544.76	1	\$ 17,761.09 \$ 27,134.26	0	0	\$ 19.57	\$ 25,843.87	6,447									
May-11 \$ Jun-11 \$	50,274.40	4,304	12 26		69	5,022	\$ 5,544.76	\$ 3,615.30	\$ 27,134.26 \$ 19,282.80	0	0	\$ -	\$ 56,268.13 \$ 69,557.20	10,245 9,326									
Jul-11 \$	21,444.96	1,821	11		70	6,522	\$ 1,920.00	0,010.00	\$ 18,403.00	o	0	\$ 60.68	\$ 39,908.64	8.343					1				
Aug-11 \$	15,605.10	2,317	14	\$ 11,586.00	50	4,580	\$ -		\$ 11,586.00	0	0	\$ -	\$ 27,191.10	6,897									
Sep-11 \$	32,864.48	2,483	15	\$ 7,519.50	33	2,303		\$ 3,153.80	\$ 10,673.30	0	0	\$ 63.36	\$ 43,601.14	4,786					1				
Oct-11 \$	15,902.20	1,324	8	\$ 13,333.00	54	4,822	\$ 3,540.00		\$ 16,873.00	2	63	\$ 477.40		6,146									
Nov-11 \$ Dec-11 \$	12,248.96 18.874.90	1,324 1.986	12	\$ 15,450.50 \$ 25,454.00	67 108	5,805 10,445	\$ -	\$ 3.304.80	\$ 15,450.50 \$ 28,758.80	6	402 295	\$ 77.07 \$ 5,736.79		7,129 10,942									
2011 Totals	254,966.92	22,512	136		943	83,469				18	1,016			104,492			-						
Cum. Totals \$	2,189,330.02	239,191	1,445		2,034	184,743				39	2,527			421,948									
Jan-12 \$	26,606.87	1,821	11		114	11,093	\$ -		\$ 27,721.00	1	15		\$ 54,327.87	12,914									
Feb-12 \$	28,127.32	1,986	12		46	3,613	\$ -	\$ 3,300.35	\$ 13,947.35	1	123		\$ 42,074.67	5,599		1							
Mar-12 \$		1,655	10		96	8,695	\$ -		\$ 22,940.00	2	310	\$ 74.66	\$ 41,670.13	10,350									
Apr-12 \$	11,008.55	993	6	\$ 11,571.00	48	4,380	\$ -	1	\$ 11,571.00	1			\$ 22,579.55	5,373									
May-12 \$	34,889.43 58,197.09	2,483 3,807	15 23		67 61	5,836 5,159	\$ -	\$ 2,967,82	\$ 16,864.50 \$ 18,297.57	2	100		\$ 51,753.93 \$ 76,494.66	8,319									
Jun-12 \$ Jul-12 \$	9,959.32	662	4		39	3,139	*	\$ 2,907.02	\$ 14,615.85	1	80	\$ 752.88	\$ 26,566.20	8,959 3,928	\$ 32.75		27	\$ 545.40	\$ 660.00	\$ 1,238.15			
Aug-12 \$	11,201,71	828	5		68	5,521	\$ 4,177.38	\$ 3,191.29		1	300	7 752.00	\$ 40,002.20	6,186	\$ 32.73		20	\$ 469.32	\$ 000.00	\$ 469.32			
Sep-12 \$		1,655	10		71	5,830		,	\$ 46,647.79	1		\$ 77.00		7,352			0	\$ 3,019.30	\$ -	\$ 3,019.30			
Oct-12 \$	44,496.36	2,814	17		92	8,511		1	\$ 26,722.75				\$ 71,219.11	11,229		0	0	\$ -	\$ -	\$ -			
Nov-12 \$		1,821	11		109	10,167			\$ 32,152.69	10	338	\$ 48.01		11,981		1	142	\$ -	\$ 361.29	\$ 697.04			
Dec-12 \$	25,890.57	1,490	9		107	8,685		5 .	\$ 26,602.81	4	205	\$ 19.04		10,093			0	\$ -	\$ -	\$ -			
2012 Totals \$ Cum. Totals \$	313,033.97 2.502.363.99	22,015 261,206	133 1,578		918 2,952	80,736 265,479		\$ 9,459.46 \$ 38,075.89	\$ 286,414.48 \$ 890,122.77	25 64	1,471 3,998			102,283 524,231		2	168 168						
Jan-13 \$		993	6	\$ 32,262.26	127	10,362	\$ 140,111.03	\$ 30,075.09	\$ 32,262.26	1	55			13,215					\$ 1,021.29	\$ 5,423.81			
Feb-13 \$		331	2		66	4,785		\$ 3,899.33		2	177	58.81		5,668		4	551		\$ 442.91				
Mar-13 \$	14,274.51	828	5	\$ 39,275.75	143	11,671		\$ -	\$ 39,275.75	2	116		\$ 55,024.26	12,987	\$ 1,474.00	8	489	\$ -	\$ -	\$ 1,474.00			
Apr-13 \$	12,070.14	993	6	\$ 25,206.47	92	6,752		\$ -	\$ 25,206.47	4	141	\$ 20.73		9,991	\$ 5,965.00	21 150	2,246		\$ -	\$ 5,965.00			
May-13 \$		828	5	\$ 28,725.93 \$ 24,634.83	114 87	9,368 6,653				0	0	\$ -	\$ 94,929.43	30,097		150	19,901		\$ 387.70				
Jun-13 \$ Jul-13 \$	24,865.79 15,409.13	1,821 993	11	\$ 24,634.83 \$ 23,124.83	87	6,653		\$ -   S -	\$ 24,634.83 \$ 23,124.83	0	0	\$ . \$ .	\$ 53,012.37 \$ 42,259.96	9,866 8,441	\$ 3,511.75 \$ 3,726.00	15	1,392		\$ -	\$ 3,511.75 \$ 3,726.00			
Aug-13 \$	24.686.73	1.324	8	\$ 151,174.97	499	20,701		\$ 3,337.87		0	0	\$	\$ 179.871.45	22,178		12	2 153		\$ 379.13				
Sep-13 \$	6,398.85	497	3		78	6,430		\$ -	\$ 21,163.75	o	0	\$ 1,472.00		7,383		É	456		\$ -	\$ 1,332.75			
Oct-13 \$	35,643.88	1,986	12	\$ 51,789.50	246	18,618	\$ 36,311.87		\$ 88,101.37	3	290	\$ 128.96	\$ 129,450.22	21,267	\$ 1,451.50	5	663	\$ 4,124.51	\$ -	\$ 5,576.01			
Nov-13 \$	11,766.29	662	4	\$ 128,662.23	426	16,038	\$ 8,135.88	\$ 3,550.69	\$ 140,348.80	4	571	\$ 353.55		16,865		2	165	\$ 924.12	\$ 403.31	\$ 1,948.43			
Dec-13 \$	2,500.00	166	1	\$ 45,348.45	209	16,876	\$ .	5 .	\$ 45,348.45	3	352	\$ 1,906.41		17,042			0	\$ -	\$ -	\$ -			
2013 Totals \$	178,141.25 2,680,505,24	11,422 272,628	1,647		2,174 5,126	134,766 400,246		\$ 14,201.19 \$ 52,277.08		19 83	1,702 5,700			174,999 699,230		241 243			\$ 1,613.05 \$ 2,634.34				
Cum. Totals \$	2,680,505.24	212,628	1,647	1,293,095.46	5,126	400,246	9 192,040,13	9 52,211.08	1,538,012.67	83	5,700	¥ 21,496.25	4,310,155.95	699,230	\$ 71,730.25	243	28,979.46	\$ 9,082.65	a Z,634.34	3 83,447.24			

	Weatheriza	ation				Resid	tential Rebates			Е	ducation		Monthly T	otals	Commercial Rebates								
Payment Month	Expenses	Ccf Savings	Houses	Rebate Expenses	Rebates Issued	Ccf Savings	Promo & Misc.	Qtly, Fees	Monthly Totals	Presentations	Expenditures	Rebate Rebates Expenses Issued Ccf Savings Promo & Misc. Qtly, Fees Monthly Total											
Jan-14 \$	Expenses	Oct Savings	nouses	\$ 42.895.25	161	13,872	rionio a misc.	\$ -	\$ 42.895.25	riesemations 1	Students 100 \$	Expenses 358.17	\$ 43.253.42	Ccf Savings 13,872	\$ .	rssueu	Oct davings	\$ -	\$ -	\$			
Feb-14 \$		0	0	\$ 42,924.48	175	13,283	5 - 1	\$ 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	\$ -	\$ 3,915.23		6	462 \$	-	\$ 43,944.32	9,431	\$ 2,469.00	6	555		\$ 435.03				
Jun-14 \$	29,991.82	2,152	13		178	15,406		5 -	\$ 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 \$ 22,650.00	136 91	9,948 7,562	-	\$ 3,504.38	\$ 35,056.25 \$ 26,154.38	0	0 \$	481.44 25.44		11,493 8,886	\$ 830.50	3	56	\$ .	\$ 389.38	\$ 830.50 \$ 389.38			
Aug-14 \$ Sep-14 \$	20,050.37 31,624.03	1,324 2,317	14	\$ 24,210.00	97	8,136		\$ 3,504.36	\$ 24,210.00	0	0 \$	25,44	\$ 57,795,19	11,003	\$ 1,961,16	7	550	\$ .	\$ 309.30	\$ 1,961,16			
Oct-14 \$	31,024.00	0	0	\$ 25,538.20	96	7,952	š -	s -	\$ 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		4	217 \$	338.96	\$ 54,389.76	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	\$ 81,339.88	18,320	\$ 704.25	3	218	\$ -	\$ -	\$ 704.25			
2014 Totals \$	162,924.08	11,422	69		1,777	145,258	\$ -	\$ 14,829.98		20	1,959 \$	5,010.94		162,738	\$ 20,914.66	63			\$ 1,647.78				
Cum. Totals \$	2,843,429.32	284,049	1,716		6,903	545,504				103		26,507.19		861,968	\$ 92,644.91	306	35,038		\$ 4,282.12				
Jan-15 \$	16,114.96	1,517	6	\$ 29,779.23	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		0	0 \$		\$ 51,458.11	12,265	\$ 1,552.50	5	457		\$ 445.65				
Mar-15 \$ Apr-15 \$	16,656.22 14,235.29	1,517	6	\$ 46,068.46 \$ 50,121.23	170 202	12,609 15,527	5 -	\$ -	\$ 46,068.46 \$ 50,121.23	4	531 \$	3,048.41	\$ 69,867.59 \$ 67,295.02	15,140 17,596	\$ 4,094.50 \$ 2,938.50	14	1,013		\$ -	\$ 4,094.50 \$ 2,938.50			
May-15 \$		2,023	8	\$ 30,986.50	105	7,897	s -	\$ 4,128.83		1	238 \$		\$ 51,596,95	10,235	\$ 1,646.00	0	315		\$ 453.67	\$ 2,936.50			
Jun-15 \$		2,276	9	\$ 27,936.71	99	8,172		\$ -	\$ 27,936.71	o o	0 \$		\$ 52,100.51	10,642	\$ 1,234.50	3	194		\$ -	\$ 1,234,50			
Jul-15 \$		0	0	\$ 31,531.75	107	9,803	\$ -	\$ -	\$ 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		10,874	\$ 1,234.50	3	278		\$ -	\$ 1,234.50			
Oct-15 \$		1,517	6	\$ 31,557.00	107	9,274		\$ -	\$ 31,557.00	2	120 \$	63.87	\$ 45,544.53	11,059	\$ 1,653.50	5	268		\$ -	\$ 1,653.50			
Nov-15 \$		1,770	7	\$ 25,944.75	96	7,628	\$ -	\$ 3,660.54		4	307 \$	-	\$ 44,523.06	9,796	\$ 1,418.75	4	399		\$ 402.21	\$ 1,820.96 \$ 1,769.50			
Dec-15 \$		759	63	\$ 31,747.87 \$ 406.307.60	1.467	9,542	\$ 150,00	\$ 15,501,25	\$ 31,747.87 \$ 421,958.86	5	557 \$ 1,854 \$	4.998.63	\$ 42,556.15 \$ 597,809,36	10,712	\$ 1,769.50	72	Annual Control of the last of	THE REAL PROPERTY.	\$ 1,703.25	\$ 1,769.50			
2015 Totals \$		15,933 299,982	1,779		8,370	663,732		\$ 82,608.31		120	9,513 \$	31,505.82		1,001,862	\$ 22,987.25 \$ 115,632,16	378				\$ 130,700.17			
Jan-16 \$		759	3		196	16,103	\$ 134,584.84	\$ -	\$ 189,577.64	1	90 \$	-	\$ 214,217,29	17,123	\$ 780,00	3	262			\$ 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	267	\$ 152.26	\$ 444.02	\$ 1,863.53			
Mar-16 \$	18,529.35	1,770	7	\$ 31,641.67	109	9,010		\$ -	\$ 33,835.02	2	185 \$		\$ 57,514.62	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		\$ -	\$ 41,347.55	2	44 \$		\$ 49,081.12	13,653	\$ 2,628.00	7	558		\$ -	\$ 2,684.93			
May-16 \$	13,093.22	1,265	5	\$ 41,904.99	167	9,816		\$ 4,138.52		0	0 \$	-	\$ 61,253.06	11,145	\$ 411.50	1	65						
Jun-16 \$		1,012	4	\$ 31,862.00 \$ 29,176.75	114	7,721 8,044		\$ -	\$ 35,652.30 \$ 29,176.75	0	0 \$	3,269.03	\$ 48,428.44 \$ 32,445.78	8,843 8,044	\$ 830.50	3	110	\$ 416.47	\$ -	\$ 1,246.97			
Jul-16 \$ Aug-16 \$		506	2	\$ 48,787,23	179	15,076		\$ 3,764.83		0	0 \$	3,269.03	\$ 63,592.32	15,869	\$ 1,444.00		287	\$ 324.70	\$ 413.67	\$ 2,182.37			
Sep-16 \$		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		\$ -	\$ 5,923.34			
Oct-16 \$		1,265	5	\$ 29,489.25	104	9,306		\$ -	\$ 41,102.50	4	227 \$		\$ 56,890.19	10,806	\$ 747.25	2	235		\$ -	\$ 2,023.29			
Nov-16 \$	5,017.39	506	2	\$ 38,259.75	122	11,946	\$ 3,437.07	\$ 3,722.38		2	310 \$	-	\$ 53,313.51	13,255	\$ 2,090.25	6	804		\$ 409.01	\$ 2,876.92			
Dec-16 \$		759	3	\$ 31,455.25	117	8,635	\$ 2,469.79	\$ -	\$ 33,925.04	3	385 \$	590.30		9,394	\$ -	0	0	\$ 271.38	\$ -	\$ 271.38			
2016 Totals	100,128.55	9,610 309,592	38 1,817		1,600 9,970	125,683 789,415		\$ 15,666.71 \$ 98,275.02		16 136	1,391 \$ 10,904 \$	3,922.40 35.428.22		139,568 1,141,431		56 434	7,2.10		\$ 1,721.43 \$ 7,706.79				
Cum. Totals 5	3,089,719.25 9,000.00	309,592 759	1,817		252	20,280	\$ 2,172.18	\$ 98,275.02	\$ 73,615.06	136	135 \$	35,426.22	\$ 6,382,279.05 \$ 82,853.73	21,038	\$ 131,000.66	434	45,046	\$ 32,723.58	\$ 7,706.79	\$ 238.67			
Jan-17 \$ Feb-17 \$		1,012	4	\$ 43,548.45	154	11,919	\$ 2,755.26	\$ 4,025.67	\$ 50,329.37	1	82 \$	- 1	\$ 64.033.02	14,030	\$ 2,928.25	10	1.099						
Mar-17 \$		1,517	6	\$ 23,152.47	84	4,994		\$ -	\$ 23,909.31	2	162 \$		\$ 38,247.57	6,684	\$ 509.75	4	173			\$ 592.91			
Apr-17 \$		1,012	4	\$ 30,622.00	117	7,866	\$ 2,022.75	\$ -	\$ 32,644.75	1	25 \$		\$ 44,033.10	8,877	\$ -	0	0	\$ 222.26	\$ -	\$ 222.26			
May-17 \$	4,284.01	506	2	\$ 30,385.25	109	7,600		\$ 4,268.94	\$ 35,996.68	0	0 \$	-	\$ 40,897.26	8,105	\$ -	0	0	\$ 147.51	\$ 469.06	\$ 616.57			
Jun-17 \$		2,782	11	\$ 35,369.72	124	9,931		\$ -	\$ 35,369.72	0	0 \$		\$ 67,448.31	12,713		0	0	\$ -	\$ -	\$ -			
Jul-17 \$		506	2	\$ 17,715.50 \$ 40,330.66	66 143	4,749 11,755		\$ -	\$ 18,140.71 \$ 48.857.64	0	0 \$		\$ 23,949.60	5,397	\$ 335.75	1 1	142		\$ - \$ 452.82	\$ 382.47 \$ 936.93			
Aug-17 5		759 506	3	\$ 40,330.66 \$ 48,987.25	172	13,392	\$ 4,405.89	\$ 4,121.08	\$ 48,857.64	0	0 3	297.63	\$ 58,181.91 \$ 54,861.90	12,514 13,991	\$ 411.50	"		\$ 484.11 \$ -	\$ 452.82	\$ 936.93			
Sep-17 S Oct-17 S		506	0	\$ 40,007.25	1/2 n	13,392	š .	\$	\$ 40,007.20	0	0 5	34.68	\$ 34,681.90	13,391	\$ 411.50		93	s .	\$	\$ -11.50			
Nov-17 5		0	0	s -	0	0	s -	\$ .	\$ -	0	0 5	-	\$ -	0	5 .	1 0		s -	s .	s -			
Dec-17 5		0	0	\$ -	0	ő	\$ .	\$ .	\$ -	0	0 \$	-	\$ -	0	\$ -		0	\$ -	\$ -	\$ -			
2017 Totals	99,283,66	9,357	37		1,221	92,485			\$ 367,850.48	6	404 \$	332.31		103,350	\$ 4,185.25	16	1,508	\$ 1,525.17	\$ 1,364.21	\$ 7,074.63			
		318,950	1.854	\$ 2,934,760.88	11,191	881,900	\$ 421,354.90	\$ 110,690,71	\$ 3,466,806,49		11,308 \$	35,760,53	\$ 6,856,820,14	1,244,781	\$ 135,235,91	450	46,554	\$ 34,248.75	\$ 9,071.00	\$ 178,555.66			