GREAT PLAINS
NATURAL GAS CO.
A Division of MDU Resources Group, Inc.

705 West Fir Ave.

Mailing Address:
P.O. Box 176
Fergus Falls, MN 56538-0176
1-877-267-4764

April 25, 2018

Mr. Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55101-2147

Mr. William Grant
Deputy Commissioner
Division of Energy Resources
Minnesota Department of Commerce
85 Seventh Place East, Suite 500
St. Paul, MN 55101-2198

Re: Docket No. G004/M-18-____
CIP Tracker and Demand Side Management Incentive

Docket No. G004/CIP-16-121
2017 Conservation Improvement Program Status Report

Dear Mr. Wolf and Mr. Grant:

Great Plains Natural Gas Co. (Great Plains), a Division of MDU Resources Group, Inc., herewith electronically files its 2017 Conservation Improvement Program (CIP) Status Report for the period of January 1, 2017 through December 31, 2017, its 2017 Conservation Improvement Program (CIP) Tracker filing (CCRA), and the Demand Side Management (DSM) Incentive for the period of January 1, 2017 through December 31, 2017.

The 2017 CIP expenditures were $403,118, which exceeds the minimum spending requirement of $121,325, and was approximately 46 percent of the authorized budget for 2017, as established by Decision of the Deputy Commissioner, Department of Commerce on November 3, 2016. Great Plains' programs provided total annual energy savings of 13,577 dk, which was 24 percent of the authorized level. The total lifetime energy reduction related to the 2017 CIP projects is 162,924 dk. The reduction in expenditures and variance from the authorized portfolio expenditures for 2017 is primarily attributable to the lack of custom projects. The continuing low commodity price of natural gas has decreased the incentive for customers to partake in custom

conservation projects. Excluding this line item, 2017 expenditures were at approximately 86 percent of the budgeted expenditures.

Pursuant to the Commission's Order issued on November 23, 2016, in Docket No. G004/M-16-384, Great Plains has calculated the CCRA based on the existing tracker balance, as well as the projected sales, expenditures, financial incentive, and any pertinent adjustments that may occur over the period the CCRA will be in place. Carrying charges are calculated at the short-term debt cost authorized in Great Plains' most recent rate case, Docket No. G004/GR-15-879. There was no financial incentive achieved for 2017. Please see Exhibit E, page 4 for a summary of the projected CIP tracker activity and ending balance on August 2019.

The CIP Tracker filing reflects a proposed CCRA of $0.0130 per dk, which is a decrease of $0.1967 per dk from the current CCRA. For a typical residential customer using 76 dk per year, this reflects a decrease of $14.95 annually or $1.25 per month. Great Plains requests that the proposed CCRA be implemented September 1, 2018. Attachment A provides the Conservation Improvement Program Adjustment Clause tariff, 5th Revised Sheet No. 5-111.

Great Plains DSM Financial Incentive did not meet the considerations required pursuant to Minnesota Statute, Section 216B.16. The energy saved and net benefit derived from Great Plains' 2017 CIP program do not qualify the Company to receive an incentive for the 2017 CIP program year, pursuant to Docket No. E,G-999/CI-08-133, Order Adopting Modifications to Shared Savings Demand-Side Management Financial Incentive Plan.

This filing includes the 2017 CIP Status Report, CIP Tracker filing, and CIP Demand-Side Management Incentive filing with all supporting attachments.

Please refer all inquiries regarding this filing to:

Ms. Tamie A. Aberle
Director of Regulatory Affairs
Great Plains Natural Gas Co.
400 North Fourth Street
Bismarck, ND 58501

Great Plains respectfully requests this filing be accepted as being in full compliance with the filing requirements of this Commission and the Department of Commerce.

Sincerely,

/s/ *Tamie A. Aberle*

Tamie A. Aberle
Director of Regulatory Affairs

cc: Brian M. Meloy

Index

GREAT PLAINS NATURAL GAS CO.
2017 CONSERVATION INCENTIVE PROGRAMS (CIP) STATUS REPORT

Pursuant to Minnesota Statute 7690.0550 and the Minnesota Department of Commerce, Division of Energy Resources (Department) November 3, 2016 Decision on the 2017-2019 CIP Triennial Filing in Docket G004/CIP-16-121, Great Plains submits this status report on its Conservation Improvement Program (CIP). This report covers the 2017 CIP year: January 1, 2017 through December 31, 2017.

I. Overall Summary:

The approved 2017 budget for the CIP was $885,396, while Great Plains' actual expenditures for the twelve-month period ending December 31, 2017 were $403,118, which exceeds the minimum spending requirement of $121,325. The low-income expenditures of $58,553 exceeded the minimum spending requirement of $50,375 based on the methodology established in the 2013 legislation. Please see Attachment B for a summary of the details of the expenditures, participants and decatherm (dk) savings for 2017.

Great Plains achieved 45.5 percent of its total expenditure goal and 34.1 percent of its Low-income expenditure goal, as demonstrated below:

	Expenditures			% of
	Authorized 1/	Actual	Difference	Authorized
Residential and Small Commercial				
Space Heating Equipment	$142,936	$172,961	$30,025	121.0%
Water Heating Equipment	14,149	11,655	(2,494)	82.4%
Attic Insulation	402	0	(402)	0.0%
Pilotless Fireplace	503	210	(293)	41.7%
Residential Energy Assessment	21,798	2,246	(19,552)	10.3%
Total Residential	$179,788	$187,072	$7,284	104.1%
Low Income				
Weatherization	$96,573	$24,829	($71,744)	25.7%
Furnace Replacement	70,797	33,462	(37,335)	47.3%
Furnace/Boiler Tune-up	4,225	262	(3,963)	6.2%
Hot Water Heater Temp Set-Back	0	0	0	0.0%
Total Low-Income	$171,595	$58,553	($113,042)	34.1%
Commercial & Industrial				
Space Heating Equipment	$47,770	$129,498	$81,728	271.1%
Water Heating Equipment	2,786	3,361	575	120.6%
Commercial Boiler Equipment	18,318	4,273	(14,045)	23.3%
Foodservice Equipment	2,532	929	(1,603)	36.7%
Custom	417,927	0	(417,927)	0.0%
Building Certification Program	5,066	0	(5,066)	0.0%

Commercial Energy Assessment	6,015	0	(6,015)	0.0%
Industrial Energy Assessment	7,599	0	(7,599)	0.0%
Total Commercial and Industrial	$508,013	$138,061	($369,952)	27.2%
CIP Assessments	26,000	19,432	(6,568)	74.7%
Total CIP Program	$885,396	$403,118	($482,278)	45.5%

The reduction in expenditures and variance from the authorized portfolio expenditures for 2017 is primarily attributable to the lack of custom projects. The continuing low commodity price of natural gas has decreased the incentive for customers to partake in custom conservation projects. Excluding this line item, 2017 expenditures were approximately 86 percent of the budgeted expenditures.

Great Plains achieved 23.9 percent of its 2017 authorized dk savings target.

	Dk Savings			% of
	Authorized 1/	Actual	Difference	Authorized
Residential and Small Commercial				
Space Heating Equipment	6,063	6,611	548	109.0%
Water Heating Equipment	1,075	767	(308)	71.3%
Attic Insulation	13	0	(13)	0.0%
Pilotless Fireplace	22	9	(13)	40.9%
Residential Energy Assessment	0	0	0	0.0%
Total Residential	7,173	7,387	214	103.0%
Low Income				
Weatherization	1,050	111	(939)	10.6%
Furnace Replacement	323	135	(188)	41.8%
Furnace/Boiler Tune-up	74	4	(70)	5.4%
Hot Water Heater Temp Set-Back	14	0	(14)	0.0%
Total Low-Income	1,461	250	(1,211)	17.1%
Commercial & Industrial				
Space Heating Equipment	2,949	4,843	1,894	164.2%
Water Heating Equipment	161	121	(40)	75.2%
Commercial Boiler Equipment	903	933	30	103.3%
Foodservice Equipment	257	43	(214)	16.7%
Custom	44,000	0	(44,000)	0.0%
Building Certification Program	0	0	0	0.0%
Commercial Energy Assessment	0	0	0	0.0%
Industrial Energy Assessment	0	0	0	0.0%
Total Commercial and Industrial	48,270	5,940	(42,330)	12.3%
Total CIP Program	56,904	13,577	(43,327)	23.9%

The overall dk savings achieved was 13,577 dk, which is less than the authorized goal of 56,904 dk for the year and is a 76.0 percent decrease in dk savings compared to the

2016 result of 56,669 dk. The shortfall in actual dk savings from the authorized 2017 portfolio savings is attributable to the lack of custom projects. Excluding this line item, 2017 dk savings were approximately 105 percent of the authorized dk savings.

In summary:

- The Commercial Space Heating Equipment program provided additional savings of 1,964 dk over last year.
- The Custom Program had zero participants in 2017. This is the primary driver for actual results being lower than authorized.
- The total portfolio cost per dk increased from $11.33 in 2016 to $29.69 in 2017.

Great Plains plans to build upon its program successes in the residential programs, and to continue marketing its programs through its website, bill inserts, direct mail campaigns, and other marketing media as appropriate. Great Plains' CIP Program Manager will continue to work directly with the local contractor network on program awareness and education and will continue the involvement with the custom programs. There are several customers considering significant custom projects in 2018. However, it is uncertain how many may come to fruition in the next program year.

The cost per dk for the total portfolio is $29.69 per dk or $14.13 per dk above the authorized level, as shown in the table below. The total cost per dk for the portfolio is primarily due to the lack of participation in the custom projects, which typically experience a lower cost per dk saved than other sectors. The total cost per dk saved for the Residential sector is slightly higher the authorized cost per dk. The cost per dk saved for the Low-Income sector is higher than authorized. The primary driver for this increase in cost per dk saved compared to authorized is higher weatherization and higher furnace replacement costs per participant. For the Commercial and Industrial sector, the actual cost per dk saved was higher than authorized, primarily due to lack of custom project participation, which typically experience a lower cost per dk saved than other programs.

The authorized and actual cost per dk saved are:

	Cost per Dk Saved			% of
	Authorized 1/	Actual	Difference	Authorized
Residential				
Space Heating Equipment	$23.58	$26.16	$2.58	110.94%
Water Heating Equipment	13.16	15.20	2.04	115.50%
Attic Insulation and Bypass	30.92	0.00	(30.92)	0.00%
Pilotless Fireplace	22.86	23.33	0.47	102.06%
Residential Energy Assessment	0.00	0.00	0.00	0.00%
Total Residential	25.06	25.32	0.26	101.04%
Low Income				
Weatherization	91.97	223.68	131.71	243.21%
Furnace Replacement	219.19	247.87	28.68	113.08%
Furnace/Boiler Tune-up	57.09	65.50	8.41	114.73%
Total Low Income	117.45	234.21	116.76	199.41%

Commercial & Industrial				
Space Heating Equipment	$16.20	$26.74	$10.54	165.06%
Water Heating Equipment	17.30	27.78	10.48	160.58%
Commercial Boiler Equipment	20.29	4.58	(15.71)	22.57%
Foodservice Equipment	9.85	21.60	11.75	219.29%
Custom	9.50	0.00	(9.50)	0.00%
Building Certification Program	0.00	0.00	0.00	0.00%
Commercial Energy Assessment	0.00	0.00	0.00	0.00%
Industrial Energy Assessment	0.00	0.00	0.00	0.00%
Total Commercial	$10.52	$23.24	$12.72	220.91%
Total CIP Program 2/	$15.56	$29.69	$14.13	190.81%

1/ 2017-2019 Triennial Plan for Natural Gas CIP, Docket No. G004/CIP-16-121. Approved by the MN DOC on November 3, 2016.
2/ Includes direct assessment charges.

The total portfolio and each program that had participation were cost effective with a Utility Cost Test ratio of 1.00 or greater, with the exception of the Low-Income programs, which had a Utility Cost Test ratio under 1.00. The results of the cost/benefit analysis are shown below:

	RIM	Utility	Societal	Participant
Residential				
Space Heating Equipment	0.57	2.20	1.37	1.80
Water Heating Equipment	0.61	3.11	2.42	3.89
Attic Insulation and Bypass	---	---	---	---
Pilotless Fireplace	0.60	2.73	2.05	3.30
Residential Energy Assessment	0.00	0.00	0.00	1.07
Total Residential Portfolio	0.56	2.15	1.31	1.78
Low Income				
Weatherization	0.24	0.34	0.69	2.61
Furnace Replacement	0.22	0.31	0.65	1.84
Furnace/Boiler Tune-up	0.14	0.17	0.18	1.29
Hot Water Heater Temp Set-back	---	---	---	---
Total Low Income Portfolio	0.22	0.32	0.64	2.06
Commercial and Industrial				
Space Heating Equipment	0.62	2.79	3.51	3.97
Water Heating Equipment	0.59	2.30	1.07	1.16
Commercial Boiler Equipment	0.60	2.46	0.57	0.84
Foodservice Equipment	0.61	2.52	1.98	1.92
Custom Program	---	---	---	---
Building Certification Program	---	---	---	---
Commercial Energy Assessment	---	---	---	---
Industrial Energy Assessment	---	---	---	---
Total Commercial & Industrial Portfolio	0.60	2.38	2.62	2.97
Total Portfolio	0.53	1.59	1.27	1.86

The BENCOST Summary for Great Plains' overall CIP program for 2017, as well as the summary for each program is provided as Attachment C. The ESP™ Project Information Sheets are provided as Attachment D.

Great Plains did not have any expenditures related to research and development, distributed and renewable generation projects or evaluation.

Program Modifications

Great Plains has not submitted a modification to its 2017–2019 Triennial Plan.

II. Status Report by Project:

Residential and Small Commercial Programs

1. Residential Space Heating Program

Great Plains offers a three-tiered rebate plan ($15, $50, or $75 depending on features) for installation of programmable thermostats, a $300 rebate for a 94 percent AFUE or greater furnace, a $400 rebate for a 96 percent AFUE or greater furnace, a $300 rebate for a boiler 84 percent AFUE or greater, a $500 rebate for a 91 percent AFUE or greater boiler, and a $50 rebate for a furnace or boiler tune-up. The program is available to residential customers.

The Space Heating program overall achieved 109.5 percent of the participant goal and achieved 109.0 percent of its energy savings goal. The rebates for replacement of higher efficiency furnaces (96 percent AFUE or greater) and high efficiency boilers (91 percent AFUE or greater) exceeded the authorized level, which indicates that customers are interested in the higher efficiency appliances.

Great Plains tracked the number of rebates provided for installation in new homes versus for replacement equipment and type of dwelling information. Replacement equipment accounted for 98 percent of participants with 2 percent of participants representing new home construction. Great Plains has historically experienced low residential new construction growth in its service territory and expects the trend to continue.

Single family homes made up 96 percent of participants, duplexes represented 1 percent, town house and condos 2 percent and all other the remaining 1 percent of participants.

2. Water Heating Equipment Upgrade Incentive Program

Great Plains provides a $100 rebate for the installation of a .67 EF or greater natural gas water heater, and a $250 rebate for a .82 EF tankless natural gas water heater. This program also includes a free low-flow shower head kit upon request to customers that have natural gas water heating.

Great Plains achieved 71.3 percent of authorized dk savings with 82.4 percent of authorized expenditures and 85.4 percent of authorized participation levels in 2017. Only the .67 EF or greater water heating program exceeded the authorized dk savings in 2017. Both Tankless Water Heating and Low Flow Showerhead programs underperformed authorized participation and dk savings levels.

3. Residential Attic Insulation

The Residential Attic Insulation Program provides a dollar per square foot rebate to customers for the installation or replacement of attic insulation. In 2017, Great Plains did not have any participants in this program. As a result, it did not meet its authorized participation and dk savings levels.

4. Pilotless Fireplace

The Residential Pilotless Fireplace Program is a program that offers residential customers a $75 rebate for the installation of a qualifying pilotless natural gas fireplace. Participation, expenditures and dk savings were 40.0 percent, 41.7 percent and 40.9 percent of authorized, respectively.

5. Residential Energy Assessment

Great Plains offers residential customers, whose primary heat source is natural gas, a comprehensive energy assessment, which includes analyses and recommendations on ways to increase energy efficiency in existing residential homes. Customers are charged a co-pay of $50, while low-income customers are not charged for an audit. In addition to the audit, customers receive weatherization materials valued at approximately $10 which include weather stripping, caulk and a caulking gun, a filter whistle, outlet and switch plate gaskets and energy educational information.

The energy assessments are performed by state certified auditors and provide Great Plains' customers with information on energy conservation measures, potential costs for implementing the identified measures and the estimated energy savings for the measures. The assessment includes, at a minimum, a blower door test, carbon monoxide (CO) testing of combustion appliances, and if the home has atmospherically-vented appliances, natural draft and worst-case depressurization (WCD) tests.

Great Plains saw a decrease in participants in its Residential Energy Assessment program in 2017 compared to 2016. Participation was 7.7 percent of authorized and expenditures were 10.3 percent of authorized.

6. Low Income Programs

Great Plains offers conservation measures to low income customers via three programs by funding weatherization measures through CAP agencies, funding for an emergency replacement of a furnace or boiler and funding for furnace and boiler tune-ups for qualified low-income customers. The maximum funding available to the CAP agency for a qualified customer is $1,800 for weatherization, $2,500 for a

furnace replacement, $5,000 for a boiler replacement and $200 for a furnace or boiler tune-up.

The Low Income programs participation was 16.1 percent of authorized while dk savings represents 17.1 percent of authorized. A summary of projects and dk savings is provided in Attachment B, page 8.

Commercial and Industrial Customer Programs

7. Commercial and Industrial Space Heating Equipment Program

The Commercial and Industrial Space Heating Equipment program provides commercial and industrial customers a cash rebate for the installation of qualifying high-efficiency space heating equipment with minimum input ratings. The program includes a rebate of $300 for a 94 percent or greater AFUE furnace and $400 for a 96 percent or greater AFUE furnace. The rebates for the 85 percent or greater high efficiency hot water boilers, 88 percent or greater high efficiency hot water boilers, 84 percent or greater AFUE low pressure boilers, and 83 percent or greater AFUE high pressure boilers vary based on the size and efficiency of equipment. The program also includes a rebate of $250 for low-intensity tube-type infrared heaters and $300 for 88 percent or greater condensing unit heaters.

Overall, the participation was 109.1 percent of authorized with dk savings at 164.2 percent of authorized. There was a substantial increase in participation from 34 participants in 2016 to 72 participants in 2017.

8. Commercial and Industrial Water Heating Equipment Program

The Commercial and Industrial Water Heating Equipment program provides commercial and industrial customers a cash incentive for the installation of qualifying commercial natural gas water heating equipment. The program includes a rebate of $100 for a .64 EF or greater storage type (≥ 40 gallons) water heater and a rebate based on the installed BTUH size of the water heater for 88 percent Condensing Efficiency water heaters.

Overall participation was 85.7 percent of authorized. The corresponding dk savings was only 75.2 percent of authorized due to the efficiency of the installed equipment.

9. Commercial and Industrial Boiler Equipment Program

The Commercial and Industrial Boiler Equipment program provides commercial and industrial customers a cash incentive for the repair or upgrade of boiler equipment with qualifying energy efficiency boiler equipment. The program includes boiler O2 controls, modulating burners, boiler stack dampers, boiler turbulators, boiler outdoor

air resets, boiler cut-out controls, boiler tune-ups and steam traps, with the rebate based on the type of equipment and kBTUH levels.

The Commercial and Industrial Boiler Equipment program had eight participants in 2017. Seven participants were in the Commercial Boiler Tune-up program, with the remaining participant in the Outdoor Air Reset program. Participation was 30.8% of authorized, with a corresponding dk savings of 103.3% of authorized, the result of increased actual boiler tune-up dk savings over authorized.

10. Foodservice Equipment Program

The Foodservice equipment program provides the restaurant industry and public facilities, such as schools and hospitals, cash incentives for the installation of natural gas foodservice cooking equipment. There are separate rebates for two groups of food service equipment. The first tier provides a $500 rebate for the following equipment types: convection ovens, conveyor ovens, fryers, pasta cookers, char-broilers, salamander broilers, rotisserie ovens, and griddles. The second tier provides a $1,000 rebate for the following equipment types: combi-ovens, upright broilers, rotating rack ovens, and steamers.

There was one Foodservice program participant in 2017. This participant was in Tier 1. The Foodservice Equipment Program achieved 33.3 percent participation with an associated 16.7 percent dk savings.

11. Commercial and Industrial Custom Program

The Commercial and Industrial Custom Program offers commercial and industrial customers a cash rebate for an energy saving project that is not eligible under a prescriptive program. Custom projects require the involvement of both the customer and the Company working together to develop cost-effective energy saving projects specific to the individual customer's business. Each project is individually evaluated using established criteria and utilizing the BENCOST model to determine eligibility and rebate amounts. Great Plains offers an incentive of $10 per dk or up to 50 percent of the equipment cost or buy down the project cost to a simple payback of one year, whichever is less.

Great Plains did not have any participation in the custom program in 2017. The continuing low commodity price of natural gas has decreased the incentive for customers to partake in custom conservation projects. There are several customers considering significant custom projects in 2018, although it is uncertain how many may come to fruition.

12. Building Certification Program

The Building Certification Program provides rebates to qualifying customers that participate in the Energy Star, Leadership in Energy and Environmental Design (LEED), or Green Globes Certified Buildings Programs.

ENERGY STAR Labeled Buildings Program

Great Plains will grant a rebate of 50 percent of the cost of professional engineering services up to a maximum of $3,000 per facility. This rebate is available to new and existing commercial or industrial buildings that meet the eligibility requirements as set by ENERGY STAR and that use natural gas as the primary heating source.

Leadership in Energy and Environmental Design (LEED) Building Certification Program

Great Plains will grant a rebate of 50 percent of the cost of application fees and/or professional engineering services up to a maximum of $5,000 per facility. This rebate is available to new and existing buildings that are eligible under the requirements of the LEED rating systems and that use natural gas as the primary heating source.

Green Globes™ Certified Buildings

Great Plains will grant a rebate of 50 percent of the cost of independent third-party review and site assessments up to a maximum of $2,500 per facility. This rebate is available to new and existing commercial or industrial buildings that meet the minimum 35 percent threshold of the new construction self-assessment or the continual improvement for existing buildings assessment and that use natural gas as the primary heating source.

Great Plains did not have any participation in the building certification program in 2017.

13. Commercial Energy Assessment Program

The Commercial Energy Assessment Program provides commercial customers using more than 1,000 dk annually a comprehensive energy assessment which includes analyses and recommendations on ways to increase energy efficiency in existing commercial buildings. The program offers the following services to participants: an analysis of recent natural gas usage (excluding process load) at the customer's facility, a thorough inspection of the customer's facility including the building envelope, insulation and installed natural gas equipment, a review of how the natural gas equipment is currently operated and a report of energy related opportunities identified during the assessment.

The commercial energy assessment is performed by third-party certified energy managers and provides Great Plains' customers with information on energy conservation measures, potential costs for implementing the identified measures and the estimated energy savings for the measures. Customers are responsible for a co-payment of $150 for the assessment which is refundable upon implementation of an energy saving project identified in the assessment.

Great Plains did not have any participation in the commercial energy assessment program in 2017.

14. Industrial Energy Assessment Program

The Industrial Energy Assessment Program provides industrial and grain-drying customers with a comprehensive energy assessment which includes analyses and recommendations on ways to increase energy efficiency in existing facilities. The program is available to customers with industrial processing load of at least 1,000 dk annually and customers with natural gas grain-drying load.

The industrial energy assessment is performed by third-party certified energy managers and provides Great Plains' customers with information on energy conservation measures, potential costs for implementing the identified measures and the estimated energy savings for the measures. Industrial customers are responsible for a co-payment of $500 for an industrial assessment and $250 per assessment for a grain dryer which is refundable upon implementation of an energy saving project identified in the assessment.

Great Plains did not have any participants in the industrial energy assessment program in 2017.

15. CIP Assessment Charges

The CIP Assessment Charges from the Department of Commerce, Division of Energy Resources (Department) related to Technical Assistance, Research and Development (R&D) grants and Facilities Energy Efficiency are fees assessed on a quarterly basis. These expenses are not directly related to Great Plains' CIP Program, but are tracked and recovered through the Conservation Cost Recovery Charge (CCRC) and the Conservation Cost Recovery Adjustment (CCRA) charged to the Company's customers

In 2017, CIP assessments amounted to $19,432, which is below the $26,000 authorized.

16. Employee Expenses

Pursuant to Minnesota Statues 2008, Section 216B.16, Great Plains recorded minimal employee expenses for travel in 2017. Great Plains has not exceeded the 0.5 percent of total annual CIP expense limit of $2,016.

	Employee Expenses		
	Residential and Commercial	Residential Attic	Total
Vehicles	$84	$0	$84
Commercial Air	0	0	0
Personal Vehicle Use	0	0	0
Meals	0	0	0
Other Reimbursable Expenses	0	0	0
Total	$84	$0	$84

GREAT PLAINS NATURAL GAS CO.
CONSERVATION IMPROVEMENT PROGRAM
TRACKER REPORT

III: Conservation Improvement Tracker Program:

Pursuant to the Order issued in Docket No. E,G-999/CI-08-133, Great Plains submits for approval its report on collections and expenditures from the Conservation Improvement Program (CIP) and the calculation of a proposed Conservation Improvement Resource Adjustment (CCRA) proposed to be effective September 1, 2018.

Attachment E, page 1 is the calculation of the proposed CCRA using estimated volumes excluding CIP-exempt customer volumes, as authorized in Docket No. G004/M-12-439. The proposed CCRA is $0.0130 per dk for all non-CIP Exempt customers, a decrease of $0.1967 from the current CCRA (established in Docket No. G-004/GR-17-338). For a typical residential customer using 76 dk per year, this reflects a decrease of $14.95 annually or $1.25 per month.

The CIP True-up on page 2 includes the balance in the CIP account at December 31, 2016, as well as the projected sales, expenditures, and any pertinent adjustments that may occur over the period the CCRA will be in place. The Company does not qualify to receive a 2017 DSM financial incentive. Carrying charges are calculated at the short-term debt cost authorized in Great Plains' most recently filed rate case, Docket No. G004/GR-15-879.

The detailed activity by month is shown on pages 3 and 4.

Attachment A is the CCRA tariff sheet (Sheet No. 5-111) with the proposed rate per dk.

2017 DEMAND-SIDE MANAGEMENT (DSM) INCENTIVE

IV: Demand-Side Management Incentive:

Great Plains submits this report in compliance with the Commission's Order approving the natural gas DSM Financial Incentive program, Docket No. E,G-999/CI-08-133.

Attachment F shows the calculation of the DSM Incentive for 2017 based on the results of the 2017 CIP program. As shown in Attachment B, Great Plains total energy savings in 2017 were 13,577 dk, which results in an achievement level of 0.24%. This level of achievement is below the minimum level required to receive a financial incentive, which is an achievement level greater than 0.70%, or energy savings greater than 39,064 dk. Therefore, Great Plains' 2017 CIP results do not qualify for a DSM incentive.

The Commission approved a conservation improvement plan incentive program for gas and electric utilities in its January 27, 2010 Order Establishing Utility Performance Incentives for Utility Conservation in Docket No. G,E-999/CI-08-133. Great Plains' plan is consistent with the four considerations contained in Section 216B.16,subd.6c.

1. **Whether the plan is likely to increase utility investment in cost-effective energy conservation.**

   The incentive plan is likely to increase Great Plains' investment in cost-effective energy conservation because the incentive for achieving each new increment of energy savings increases as the percent of goal achieved increases. No significant incentive is provided unless Great Plains meets or exceeds its expected energy savings at minimum statutory spending guidelines. The increasing increment of the incentive motivates Great Plains to exceed energy savings achievable at statutory spending levels.

   The DSM Financial Incentive Plan has increased Great Plains' investment in cost-effective energy conservation because the mechanism encourages cost-effective spending above the statutory minimum.

2. **Whether the plan is compatible with the interest of utility ratepayers and other interested parties.**

   Great Plains' Plan is compatible with the interest of utility customers and other interested parties because it does not receive a significant incentive until it extends beyond the energy savings goals associated with statutory spending requirements. In addition, the incentive never exceeds the incremental increase in net benefits that are created by surpassing the incentive energy savings goals. The incentive is only a fraction of the achieved net benefits and therefore customers receive the vast majority of benefits achieved under the CIP programs.

3. Whether the plan links the incentive to the utility's performance in achieving cost-effective conservation

Great Plains' DSM Financial Incentive Plan links the incentive to its performance in achieving cost-effective conservation. If Great Plains' CIP Program is not cost-effective, there are no net benefits, and, thus, no incentive. As a CIP Program's cost effectiveness increases (increased Mcf saved per dollars spent), net benefits increase, and thus, the incentive increases. Therefore, the plan is directly linked to the cost-effectiveness of the program.

4. Whether the plan is in conflict with other provisions of Minnesota Statute 216B

Great Plains' Plan does not conflict with other provisions of 216B, which requires that all rates be just and reasonable. Awarding incentives under the Plan will not result in unjust or unreasonable rates because the incentives are not cumulative and are only a small portion of the net benefits (avoided costs).

Attachment A

CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT CLAUSE

of the distribution delivery charge authorized in Docket No. G004/GR-15-879. The CCRC is approved and applied on a per dk basis by dividing the test-year CIP expenses by the test-year sales volumes (net of CIP-exempt volumes).

Determination of Conservation Cost Recovery Adjustment:

The CCRA Factor shall be calculated for each customer class by dividing the allocated recoverable Conservation Improvement Program costs, not recovered through the Base Charge by the projected sales volumes, excluding CIP-exempt customer volumes, for a designated recovery period. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission.

The applicable rate that will be assessed to all non-CIP exempt customers in each rate class is:

Base Charge CCRC	Adjustment CCRA Factor
$0.0556	$0.0130

Exemption:

Any customer account determined by the Commissioner to qualify for a CIP exemption as a Large Customer Facility or a Commercial Gas Customer pursuant to Minnesota Statutes 216B.241 and 216B.2421, shall be exempt from the CCRC and the CCRA. Customer accounts granted exemption by a decision of the Commissioner after the beginning of the calendar year shall be credited for any CIP collections billed after January 1st of the year following the Commissioner's decision.

Any customer account determined by the MPUC to qualify for a CIP exemption as a Large Energy Facility pursuant to Minnesota Statutes 216B.16, subd. 6b(b) and 216B.2421, subd. 2(1), shall be exempt from the CCRC and the CCRA Factor.

For Large Customer Facilities, Commercial Gas Customers or Large Energy Facilities, determined to be CIP exempt, the Flexible Distribution Charge will be reduced by the CCRC for exempt customers served under a specific flexed contract. Exempt customers not served under a flexed contract will be billed a credit CCRC. Upon exemption from the conservation program charges, no exempted customer may participate in the Company's gas conservation improvement program unless the owner of the facility submits a filing with the Commissioner or the MPUC to withdraw its exemption.

Tariffs Reflecting Proposed Changes

CONSERVATION IMPROVEMENT PROGRAM ADJUSTMENT CLAUSE

of the distribution delivery charge authorized in Docket No. G004/GR-15-879. The CCRC is approved and applied on a per dk basis by dividing the test-year CIP expenses by the test-year sales volumes (net of CIP-exempt volumes).

Determination of Conservation Cost Recovery Adjustment:

The CCRA Factor shall be calculated for each customer class by dividing the allocated recoverable Conservation Improvement Program costs, not recovered through the Base Charge by the projected sales volumes, excluding CIP-exempt customer volumes, for a designated recovery period. The factor may be adjusted annually with approval of the Minnesota Public Utilities Commission.

The applicable rate that will be assessed to all non-CIP exempt customers in each rate class is:

Base Charge CCRC	Adjustment CCRA Factor
$0.0556	~~$0.2097~~0.0130

Exemption:

Any customer account determined by the Commissioner to qualify for a CIP exemption as a Large Customer Facility or a Commercial Gas Customer pursuant to Minnesota Statutes 216B.241 and 216B.2421, shall be exempt from the CCRC and the CCRA. Customer accounts granted exemption by a decision of the Commissioner after the beginning of the calendar year shall be credited for any CIP collections billed after January 1st of the year following the Commissioner's decision.

Any customer account determined by the MPUC to qualify for a CIP exemption as a Large Energy Facility pursuant to Minnesota Statutes 216B.16, subd. 6b(b) and 216B.2421, subd. 2(1), shall be exempt from the CCRC and the CCRA Factor.

For Large Customer Facilities, Commercial Gas Customers or Large Energy Facilities, determined to be CIP exempt, the Flexible Distribution Charge will be reduced by the CCRC for exempt customers served under a specific flexed contract. Exempt customers not served under a flexed contract will be billed a credit CCRC. Upon exemption from the conservation program charges, no exempted customer may participate in the Company's gas conservation improvement program unless the owner of the facility submits a filing with the Commissioner or the MPUC to withdraw its exemption.

GREAT PLAINS NATURAL GAS CO.
SUMMARY OF 2017 CIP
AUTHORIZED VS. ACTUAL EXPENDITURES, PARTICIPANTS AND DK SAVINGS

	Expenditures			% of	Participants			% of	Dk Savings			% of
	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized
Residential and Small Commercial												
Space Heating Equipment	$142,936	$172,961	$30,025	121.0%	505	553	48	109.5%	6,063	6,611	548	109.0%
Water Heating Equipment	14,149	11,655	(2,494)	82.4%	519	443	(76)	85.4%	1,075	767	(308)	71.3%
Attic Insulation	402	0	(402)	0.0%	2	0	(2)	0.0%	13	0	(13)	0.0%
Pilotless Fireplace	503	210	(293)	41.7%	5	2	(3)	40.0%	22	9	(13)	40.9%
Residential Energy Assessment	21,798	2,246	(19,552)	10.3%	65	5	(60)	7.7%	0	0	0	0.0%
Total Residential	$179,788	$187,072	$7,284	104.1%	1,096	1,003	(93)	91.5%	7,173	7,387	214	103.0%
Low Income												
Weatherization	$96,573	$24,829	($71,744)	25.7%	60	10	(50)	16.7%	1,050	111	(939)	10.6%
Furnace Replacement	70,797	33,462	(37,335)	47.3%	17	7	(10)	41.2%	323	135	(188)	41.8%
Furnace/Boiler Tune-up	4,225	262	(3,963)	6.2%	20	1	(19)	5.0%	74	4	(70)	5.4%
Hot Water Heater Temp Set-Back	0	0	0	0.0%	15	0	(15)	0.0%	14	0	(14)	0.0%
Total Low-Income	$171,595	$58,553	($113,042)	34.1%	112	18	(94)	16.1%	1,461	250	(1,211)	17.1%
Commercial & Industrial												
Space Heating Equipment	$47,770	$129,498	$81,728	271.1%	66	72	6	109.1%	2,949	4,843	1,894	164.2%
Water Heating Equipment	2,786	3,361	575	120.6%	7	6	(1)	85.7%	161	121	(40)	75.2%
Commercial Boiler Equipment	18,318	4,273	(14,045)	23.3%	26	8	(18)	30.8%	903	933	30	103.3%
Foodservice Equipment	2,532	929	(1,603)	36.7%	3	1	(2)	33.3%	257	43	(214)	16.7%
Custom	417,927	0	(417,927)	0.0%	11	0	(11)	0.0%	44,000	0	(44,000)	0.0%
Building Certification Program	5,066	0	(5,066)	0.0%	1	0	(1)	0.0%	0	0	0	0.0%
Commercial Energy Assessment	6,015	0	(6,015)	0.0%	5	0	(5)	0.0%	0	0	0	0.0%
Industrial Energy Assessment	7,599	0	(7,599)	0.0%	2	0	(2)	0.0%	0	0	0	0.0%
Total Commercial and Industrial	$508,013	$138,061	($369,952)	27.2%	121	87	(34)	71.9%	48,270	5,940	(42,330)	12.3%
CIP Assessments	26,000	19,432	(6,568)	74.7%								
Total CIP Program	$885,396	$403,118	($482,278)	45.5%	1,329	1,108	(221)	83.4%	56,904	13,577	(43,327)	23.9%

1/ 2017-2019 Triennial Plan for Natural Gas CIP, Docket No. G004/CIP-16-121. Approved by the MN DOC on November 3, 2016.

GREAT PLAINS NATURAL GAS CO.
SUMMARY OF 2017 CIP
LOW INCOME AND RENTER PARTICIPANTS

	Expenditures			% of	Participants			% of	Dk Savings			% of
	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized
Low Income Participants												
Space Heating Equipment 2/	$3,716	$10,032	$6,316	270.0%	13	23	10	176.9%	156	361	205	231.4%
Water Heating Equipment 3/	1,005	326	(679)	32.4%	37	1	(36)	2.7%	77	7	(70)	9.1%
Attic Insulation	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Pilotless Fireplace	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Residential Energy Assessment	1,678	0	(1,678)	0.0%	5	0	(5)	0.0%	0	0	0	0.0%
Total Low Income Participants	$6,399	$10,358	$3,959	161.9%	55	24	(31)	43.6%	233	368	135	157.9%
Total Low Income Programs	$171,595	$58,553	($113,042)	34.1%	112	18	(94)	16.1%	1,461	250	(1,211)	17.1%
Grand Total Low Income	$177,994	$68,911	($109,083)	38.7%	167	42	(125)	25.1%	1,694	618	(1,076)	36.5%
Renter Participants												
Space Heating Equipment 2/	$17,009	$16,950	($59)	99.7%	60	45	(15)	75.0%	720	690	(30)	95.8%
Water Heating Equipment 3/	1,174	1,049	(125)	89.4%	43	35	(8)	81.4%	89	202	113	227.0%
Attic Insulation	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Pilotless Fireplace	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Residential Energy Assessment	327	0	(327)	0.0%	1	0	(1)	0.0%	0	0	0	0.0%
Total Renters	$18,510	$17,999	($511)	97.2%	104	80	(24)	76.9%	809	892	83	110.3%

1/ 2017-2019 Triennial Plan for Natural Gas CIP, Docket No. G004/CIP-16-121. Approved by the MN DOC on November 3, 2016.
2/ Includes rental property from the Furnace, Boiler, Furnace Tune-up and Programmable Thermostat programs.
3/ Includes rental property from the Water Heating Equipment and Low Flow Showerhead programs.

GREAT PLAINS NATURAL GAS CO.
SUMMARY OF 2017 CIP
PROGRAM RESULTS

Program	Expenditures			% of	Participants			% of	Dk Savings			% of
	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized
Residential and Small Commercial												
Space Heating Equipment												
Programmable Thermostats Tier 1	$502	$1,140	$638	227.1%	25	49	24	196.0%	63	122	59	193.7%
Programmable Thermostats Tier 2	$2,012	2,007	(5)	99.8%	30	31	1	103.3%	111	115	4	103.6%
Programmable Thermostats Tier 3	$2,516	1,685	(831)	67.0%	25	18	(7)	72.0%	153	100	(53)	65.4%
Furnace Tier 1 - 94-96% AFUE - New	1,610	1,290	(320)	80.1%	4	3	(1)	75.0%	76	16	(60)	21.1%
Furnace Tier 1 - 94-96% AFUE - Repl.	60,367	42,149	(18,218)	69.8%	150	98	(52)	65.3%	2,850	1,844	(1,006)	64.7%
Furnace Tier 2 - 96%+ AFUE - New	2,147	1,147	(1,000)	53.4%	4	2	(2)	50.0%	81	15	(66)	18.5%
Furnace Tier 2 - 96%+ AFUE - Repl.	53,660	96,342	42,682	179.5%	100	168	68	168.0%	2,030	3,382	1,352	166.6%
Furnace and Boiler Tune-up	10,061	11,287	1,226	112.2%	150	159	9	106.0%	345	382	37	110.7%
Boiler Tier 1 - 84-90.9% AFUE	2,012	3,011	999	149.7%	5	7	2	140.0%	38	62	24	163.2%
Boiler Tier 2 - 91%+ AFUE	8,049	12,903	4,854	160.3%	12	18	6	150.0%	316	573	257	181.3%
Total	$142,936	$172,961	$30,025	121.0%	505	553	48	109.5%	6,063	6,611	548	109.0%
Water Heat Equipment Upgrade												
Water Heating (.67 EF)	$1,610	$2,356	$746	146.3%	12	12	0	100.0%	26	30	4	115.4%
Tankless Water Heating (.82 EF)	2,348	1,472	(876)	62.7%	7	3	(4)	42.9%	49	20	(29)	40.8%
Low Flow Showerheads	10,191	7,827	(2,364)	76.8%	500	428	(72)	85.6%	1,000	717	(283)	71.7%
Total	$14,149	$11,655	($2,494)	82.4%	519	443	(76)	85.4%	1,075	767	(308)	71.3%
Attic Insulation	$402	$0	($402)	0.0%	2	0	(2)	0.0%	13	0	(13)	0.0%
Pilotless Fireplace	$503	$210	($293)	41.7%	5	2	(3)	40.0%	22	9	(13)	40.9%
Residential Energy Assessment	$21,798	$2,246	($19,552)	10.3%	65	5	(60)	7.7%	0	0	0	0.0%
Total Residential Portfolio	$179,788	$187,072	$7,284	104.1%	1,096	1,003	(93)	91.5%	7,173	7,387	214	103.0%
Low Income												
Weatherization	$96,573	$24,829	($71,744)	25.7%	60	10	(50)	16.7%	1,050	111	(939)	10.6%
Furnace Replacement	70,797	33,462	(37,335)	47.3%	17	7	(10)	41.2%	323	135	(188)	41.8%
Furnace/Boiler Tune-up/Temp. Set-back	4,225	262	(3,963)	6.2%	20	1	(19)	5.0%	74	4	(70)	5.4%
Hot Water Heater Temp Set-Back	0	0	0	0.0%	15	0	(15)	0.0%	14	0	(14)	0.0%
Total Low Income Portfolio	$171,595	$58,553	($113,042)	34.1%	112	18	(94)	16.1%	1,461	250	(1,211)	17.1%

GREAT PLAINS NATURAL GAS CO.
SUMMARY OF 2017 CIP
PROGRAM RESULTS

Program	Expenditures			% of	Participants			% of	Dk Savings			% of
	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized
Commercial and Industrial												
Space Heating Equipment												
Furnace Tier 1 - 94-96% AFUE - Repl.	$9,498	$6,686	($2,812)	70.4%	25	12	(13)	48.0%	880	360	(520)	40.9%
Furnace Tier 2 - 96%+ AFUE - New	1,013	6,686	5,673	660.0%	2	9	7	450.0%	75	183	108	244.0%
Furnace Tier 2 - 96%+ AFUE - Repl.	7,599	19,316	11,717	254.2%	15	26	11	173.3%	564	722	158	128.0%
Commercial Hot Water Boiler												
Tier 1 (85%+ AFUE)	1,925	4,291	2,366	222.9%	2	4	2	200.0%	79	65	(14)	82.3%
Tier 2 (88%+ AFUE)	20,769	79,025	58,256	380.5%	10	11	1	110.0%	988	2,606	1,618	263.8%
Commercial LP & HP Steam Boilers												
Tier 1 (<300,000 BTUH)	1,583	0	($1,583)	0.0%	1	0	(1)	0.0%	40	0	(40)	0.0%
Tier 2 (≥300,000 BTUH)	1,900	9,221	$7,321	485.3%	1	1	0	100.0%	83	349	266	420.5%
Infrared Heater	1,583	3,715	$2,132	234.7%	5	8	3	160.0%	141	484	343	343.3%
Condensing Unit Heater	1,900	558	($1,342)	29.4%	5	1	(4)	20.0%	99	74	(25)	74.7%
Total Space Heating	$47,770	$129,498	$81,728	271.1%	66	72	6	109.1%	2,949	4,843	1,894	164.2%
Water Heating Equipment												
Water Heater .64 EF+ (≥40 Gallons)	$253	$371	$118	146.6%	2	2	0	100.0%	40	8	(32)	20.0%
Water Heater Storage 88% cond	2,533	2,990	457	118.0%	5	4	(1)	80.0%	121	113	(8)	93.4%
Total Water Heating	$2,786	$3,361	$575	120.6%	7	6	(1)	85.7%	161	121	(40)	75.2%
Commercial Boiler Equipment												
O2 Control	$3,800	$0	($3,800)	0.0%	1	0	(1)	0.0%	37	0	(37)	0.0%
Modulating Burners												
Tier 1 (<2,500 kBTUH)	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Tier 2 (>2,500 kBTUH)	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Stack Dampers	634	0	(634)	0.0%	1	0	(1)	0.0%	92	0	(92)	0.0%
Turbulators	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Outdoor Air Reset	0	558	558	0.0%	0	1	1	0.0%	0	8	8	0.0%
Cut-Out Control	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%
Commercial Boiler Tune-Up												
Tier 1 (<2,500 kBTUH)	1,013	371	(642)	36.6%	4	1	(3)	25.0%	58	26	(32)	44.8%
Tier 2 (≥2,500 kBTUH)	1,900	3,344	1,444	176.0%	5	6	1	120.0%	507	899	392	177.3%
Commercial Steam Traps	10,971	0	(10,971)	0.0%	15	0	(15)	0.0%	209	0	(209)	0.0%
Total Commercial Boiler	$18,318	$4,273	($14,045)	23.3%	26	8	(18)	30.8%	903	933	30	103.3%

GREAT PLAINS NATURAL GAS CO.
SUMMARY OF 2017 CIP
PROGRAM RESULTS

Program	Expenditures			% of	Participants			% of	Dk Savings			% of
	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized	Authorized 1/	Actual	Difference	Authorized
Food Service Equipment												
Tier 1 ($500 Incentive)	$1,266	$929	($337)	73.4%	2	1	(1)	50.0%	174	43	(131)	24.7%
Tier 2 ($1,000 Incentive)	1,266	0	(1,266)	0.0%	1	0	(1)	0.0%	83	0	(83)	0.0%
Total	$2,532	$929	($1,603)	36.7%	3	1	(2)	33.3%	257	43	(214)	16.7%
Custom Projects	$417,927	$0	($417,927)	0.0%	11	0	(11)	0.0%	44,000	0	(44,000)	0.0%
Building Certification	5,066	0	(5,066)	0.0%	1	0	(1)	0.0%	0	0	0	0.0%
Comm. Energy Assessment	6,015	0	(6,015)	0.0%	5	0	(5)	0.0%	0	0	0	0.0%
Industrial Energy Assessment	7,599	0	(7,599)	0.0%	2	0	(2)	0.0%	0	0	0	0.0%
Total Commercial and Industrial Portfolio	$508,013	$138,061	($369,952)	27.2%	121	87	(34)	71.9%	48,270	5,940	(42,330)	12.3%
Total	$859,396	$383,686	($475,710)	44.6%	1,329	1,108	(221)	83.4%	56,904	13,577	(43,327)	23.9%
Direct Assessment	$26,000	$19,432	($6,568)									
Grand Total All Portfolios	$885,396	$403,118	($482,278)									

1/ 2017-2019 Triennial Plan for Natural Gas CIP, Docket No. G004/CIP-16-121. Approved by the MN DOC on November 3, 2016.

GREAT PLAINS NATURAL GAS CO.
COST PER DK SAVED
2017 ACTUAL TO AUTHORIZED

	Actual Participants	Cost per Dk Saved			% of Authorized
		Authorized 1/	Actual	Difference	
Residential and Small Commercial					
Space Heating Equipment					
Programmable Thermostats Tier 1	49	$7.97	$9.34	$1.37	117.19%
Programmable Thermostats Tier 2	31	18.13	17.45	(0.68)	96.25%
Programmable Thermostats Tier 3	18	16.44	16.85	0.41	102.49%
Furnace Tier 1 - 94-96% AFUE - New	3	21.18	80.63	59.45	380.69%
Furnace Tier 1 - 94-96% AFUE - Repl.	98	21.18	22.86	1.68	107.93%
Furnace Tier 2 - 96%+ AFUE - New	2	26.51	76.47	49.96	288.46%
Furnace Tier 2 - 96%+ AFUE - Repl.	168	26.43	28.49	2.06	107.79%
Furnace and Boiler Tune-up	159	29.16	29.55	0.39	101.34%
Boiler Tier 1 - 84-90.9% AFUE	7	52.95	48.56	(4.39)	91.71%
Boiler Tier 2 - 91%+ AFUE	18	25.47	22.52	(2.95)	88.42%
Total Space Heating	553	$23.58	$26.16	$2.58	110.94%
Water Heating Equipment					
Water Heating (.67 EF)	12	$61.92	$78.53	$16.61	126.82%
Tankless Water Heating (.82 EF)	3	47.92	73.60	25.68	153.59%
Low Flow Showerheads	428	10.19	10.92	0.73	107.16%
Total Water Heating	443	$13.16	$15.20	$2.04	115.50%
Attic Insulation	0	$30.92	$0.00	($30.92)	0.00%
Pilotless Fireplace	2	$22.86	$23.33	$0.47	102.06%
Residential Energy Assessment	5	$0.00	$0.00	$0.00	0.00%
Total Residential Portfolio	1,003	$25.06	$25.32	$0.26	101.04%
Low Income					
Weatherization	10	$91.97	$223.68	$131.71	243.21%
Furnace Replacement	7	219.19	247.87	28.68	113.08%
Furnace/Boiler Tune-up	1	57.09	65.50	8.41	114.73%
Hot Water Heater Temp Set-Back	0	0.00	0.00	0.00	0.00%
Total Low Income Portfolio	18	$117.45	$234.21	$116.76	199.41%
Commercial and Industrial					
Space Heating Equipment					
Furnace Tier 1 - 94-96% AFUE - Repl.	12	$10.79	$18.57	$7.78	172.10%
Furnace Tier 2 - 96%+ AFUE - New	9	13.51	36.54	23.03	270.47%
Furnace Tier 2 - 96%+ AFUE - Repl.	26	13.47	26.75	13.28	198.59%
Commercial Hot Water Boiler					
Tier 1 (85%+ AFUE)	4	24.37	66.02	41.65	270.91%
Tier 2 (88%+ AFUE)	11	21.02	30.32	9.30	144.24%
Commercial LP & HP Steam Boilers					
Tier 1 (<300,000 BTUH)	0	39.58	0.00	(39.58)	0.00%
Tier 2 (≥300,000 BTUH)	1	22.89	26.42	3.53	115.42%
Infrared Heater	8	11.23	7.68	(3.55)	68.39%
Condensing Unit Heater	1	19.19	7.54	(11.65)	39.29%
Total Space Heating	72	$16.20	$26.74	$10.54	165.06%

GREAT PLAINS NATURAL GAS CO.
COST PER DK SAVED
2017 ACTUAL TO AUTHORIZED

	Actual Participants	Cost per Dk Saved			% of Authorized
		Authorized 1/	Actual	Difference	
Water Heating Equipment					
Water Heater .64 EF+ (≥40 Gallons)	2	$6.33	$46.38	$40.05	732.70%
Water Heater Storage 88% cond	4	20.93	26.46	5.53	126.42%
Total Water Heating	6	$17.30	$27.78	$10.48	160.58%
Commercial Boiler Equipment					
O2 Control	0	$102.70	$0.00	($102.70)	0.00%
Modulating Burners					
Tier 1 (<2,500 kBTUH)	0	0.00	0.00	0.00	0.00%
Tier 2 (>2,500 kBTUH)	0	0.00	0.00	0.00	0.00%
Stack Dampers	0	6.89	0.00	(6.89)	0.00%
Turbulators	0	0.00	0.00	0.00	0.00%
Outdoor Air Reset	1	0.00	69.75	69.75	0.00%
Cut-Out Control	0	0.00	0.00	0.00	0.00%
Commercial Boiler Tune-Up					
Tier 1 (<2,500 kBTUH)	1	17.47	14.27	(3.20)	81.68%
Tier 2 (≥2,500 kBTUH)	6	3.75	3.72	(0.03)	99.20%
Commercial Steam Traps	0	52.49	0.00	(52.49)	0.00%
Total Commercial Boiler	8	$20.29	$4.58	($15.71)	22.57%
Foodservice Equipment					
Tier 1 ($500 Incentive)	1	$7.28	$21.60	$14.32	296.70%
Tier 2 ($1,000 Incentive)	0	15.25	0.00	(15.25)	0.00%
Total Foodservice	1	$9.85	$21.60	$11.75	219.29%
Custom Program	0	$9.50	$0.00	($9.50)	0.00%
Building Certification Program	0	0.00	0.00	0.00	0.00%
Commercial Energy Assessment	0	0.00	0.00	0.00	0.00%
Industrial Energy Assessment	0	0.00	0.00	0.00	0.00%
Total Commercial and Industrial Portfolio	87	$10.52	$23.24	$12.72	220.91%
Grand Total All Portfolios 2/	1,108	$15.56	$29.69	$14.13	190.81%

1/ 2017-2019 Triennial Plan for Natural Gas CIP, Docket No. G004/CIP-16-121.
Approved by the MN DOC on November 3, 2016.
2/ Includes direct assessment charges.

GREAT PLAINS NATURAL GAS CO.
SUMMARY OF LOW INCOME PROGRAMS
2017

Agency/ Customer Number	Weatherization Incentive Expense	Weatherization Dk Savings	Weatherization $/Dk	Furnace/Boiler Replacement Incentive Expense	Furnace/Boiler Replacement Dk Savings	Furnace/Boiler Replacement $/Dk	Furnace/Boiler Tune-up Incentive Expense	Furnace/Boiler Tune-up Dk Savings	Furnace/Boiler Tune-up $/Dk	Total Low Income Incentive Expense	Total Low Income Dk Savings	Total Low Income $/Dk
Mahube												
1				$2,348	28.0	$83.86				$2,348	28.0	$83.86
	$0	0.0	$0.00	$2,348	28.0	$83.86	$0	0.0	$0.00	$2,348	28.0	$83.86
Prairie V Community Action Council, Inc.												
2	$1,991	10.7	$186.07	$2,750	17.9	$153.63				$4,741	28.6	$165.77
3	1,041	11.8	88.22	2,750	17.9	153.63				3,791	29.7	127.64
4	825	10.4	79.33	5,500	17.9	307.26				6,325	28.3	223.50
5	1,978	17.1	115.67	2,585	17.4	148.56				4,563	34.5	132.26
6	1,964	13.0	151.08				$165	4.1	$40.24	2,129	17.1	124.50
7	1,976	12.7	155.59	2,750	17.4	158.05				4,726	30.1	157.01
	$9,775	75.7	$129.13	$16,335	88.5	$184.58	$165	4.1	$40.24	$26,275	168.3	$156.12
West Central MN Communities Action, Inc.												
8	$1,605	11.7	$137.18							$1,605	11.7	$137.18
9	1,783	12.7	140.39							$1,783	12.7	$140.39
10	1,168	4.0	292.00							$1,168	4.0	$292.00
	$4,556	28.4	$160.42	$0	0.0	$0.00	$0	0.0	$0.00	$4,556	28.4	$160.42
United Community Action												
11	$1,327	7.1	$186.90	$2,419	17.9	$135.14				$3,746	25.0	$149.84
	$1,327	7.1	$186.90	$2,419	17.9	$135.14	$0	0.0	$0.00	$3,746	25.0	$149.84
Total Low Income	$15,658	111.2	$140.81	$21,102	134.4	$157.01	$165	4.1	$40.24	$36,925	249.7	$147.88
Total Participants	10			7			1				18	
Average Dk/Participant Saved											13.9	

Company: Great Plains Natural Gas Co.
Project: Total Natural Gas Portfolio with Indirect Programs

Input Data	
1) Retail Rate ($/MCF) =	$5.7249
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.00
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	0.23%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	3.05%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$140,981
16 b) Incentive Costs =	$242,705
16 c) Total Utility Project Costs =	$383,686
17) Direct Participant Costs ($/Part.) =	$612
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	12
21) Avg. MCF/Part. Saved =	12.3
22) Avg Non-Gas Fuel Units/Part. Saved =	215 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1,108
24) Total Annual MCF Saved =	13,577
25) Incentive/Participant =	$219.05

Cost Summary	2017
Utility Cost per Participant =	$346.29
Cost per Participant per MCF =	$77.91
Lifetime Energy Reduction (MCF)	162,924
Societal Cost per MCF	$5.03

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($533,396)	0.53
Utility Cost Test	$227,111	1.59
Societal Test	$225,122	1.27
Participant Test	$585,369	1.86

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Total Residential Portfolio**

Input Data	
1) Retail Rate ($/MCF) =	$7.2476
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.00
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$55,625
16 b) Incentive Costs =	$131,447
16 c) Total Utility Project Costs =	$187,072
17) Direct Participant Costs ($/Part.) =	$478
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	12
21) Avg. MCF/Part. Saved =	7.4
22) Avg Non-Gas Fuel Units/Part. Saved =	197 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1,003
24) Total Annual MCF Saved =	7,387
25) Incentive/Participant =	$131.05

Cost Summary	2017
Utility Cost per Participant =	$186.51
Cost per Participant per MCF =	$89.80
Lifetime Energy Reduction (MCF)	88,644
Societal Cost per MCF	$6.04

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($309,495)	0.56
Utility Cost Test	$214,339	2.15
Societal Test	$168,229	1.31
Participant Test	$374,657	1.78

Company: **Great Plains Natural Gas Co.**
Project: **Total Residential Space Heating Equipment**

Input Data	
1) Retail Rate ($/MCF) =	$7.2476
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$52,318
16 b) Incentive Costs =	$120,643
16 c) Total Utility Project Costs =	$172,961
17) Direct Participant Costs ($/Part.) =	$830
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	13
21) Avg. MCF/Part. Saved =	12.0
22) Avg Non-Gas Fuel Units/Part. Saved =	357 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	553
24) Total Annual MCF Saved =	6,611
25) Incentive/Participant =	$218.16

Cost Summary	2017
Utility Cost per Participant =	$312.77
Cost per Participant per MCF =	$95.23
Lifetime Energy Reduction (MCF)	85,943
Societal Cost per MCF	$5.95

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($289,181)	0.57
Utility Cost Test	$208,114	2.20
Societal Test	$187,544	1.37
Participant Test	$367,358	1.80

Company: **Great Plains Natural Gas Co.**
Project: **Total Residential Water Heating Equipment**

Input Data	
1) Retail Rate ($/MCF) =	$7.2476
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$2,603
16 b) Incentive Costs =	$9,052
16 c) Total Utility Project Costs =	$11,655
17) Direct Participant Costs ($/Part.) =	$41
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	10
21) Avg. MCF/Part. Saved =	1.7
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	443
24) Total Annual MCF Saved =	767
25) Incentive/Participant =	$20.43

Cost Summary	2017
Utility Cost per Participant =	$26.31
Cost per Participant per MCF =	$39.59
Lifetime Energy Reduction (MCF)	7,670
Societal Cost per MCF	$2.71

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($22,709)	0.61
Utility Cost Test	$24,590	3.11
Societal Test	$29,390	2.42
Participant Test	$52,522	3.89

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: Great Plains Natural Gas Co.
Project: Residential Attic Insulation

Input Data	
1) Retail Rate ($/MCF) =	$7.2476
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$0
16 b) Incentive Costs =	$0
16 c) Total Utility Project Costs =	$0
17) Direct Participant Costs ($/Part.) =	$1,632
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	20
21) Avg. MCF/Part. Saved =	6.6
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	-
24) Total Annual MCF Saved =	0
25) Incentive/Participant =	#DIV/0!

Cost Summary	2017
Utility Cost per Participant =	#DIV/0!
Cost per Participant per MCF =	#DIV/0!
Lifetime Energy Reduction (MCF)	0
Societal Cost per MCF	#DIV/0!

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	$0	#DIV/0!
Utility Cost Test	$0	#DIV/0!
Societal Test	$0	#DIV/0!
Participant Test	$0	#DIV/0!

Company: **Great Plains Natural Gas Co.**
Project: **Residential Pilotless Fireplace**

Input Data	
1) Retail Rate ($/MCF) =	$7.2476
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$60
16 b) Incentive Costs =	$150
16 c) Total Utility Project Costs =	$210
17) Direct Participant Costs ($/Part.) =	$193
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	15
21) Avg. MCF/Part. Saved =	4.4
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	2
24) Total Annual MCF Saved =	9
25) Incentive/Participant =	$75.00

Cost Summary	2017
Utility Cost per Participant =	$105.00
Cost per Participant per MCF =	$68.04
Lifetime Energy Reduction (MCF)	135
Societal Cost per MCF	$3.30

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($385)	0.60
Utility Cost Test	$364	2.73
Societal Test	$467	2.05
Participant Test	$889	3.30

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS– Cost-Effectiveness Analysis

Company: Great Plains Natural Gas Co.
Project: Residential Energy Assessment Program

Input Data	
1) Retail Rate ($/MCF) =	$7.2476
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$644
16 b) Incentive Costs =	$1,602
16 c) Total Utility Project Costs =	$2,246
17) Direct Participant Costs ($/Part.) =	$300
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	10
21) Avg. MCF/Part. Saved =	-
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	5
24) Total Annual MCF Saved =	0
25) Incentive/Participant =	$320.40

Cost Summary	2017
Utility Cost per Participant =	$449.20
Cost per Participant per MCF =	#DIV/0!
Lifetime Energy Reduction (MCF)	0
Societal Cost per MCF	#DIV/0!

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($2,246)	0.00
Utility Cost Test	($2,246)	0.00
Societal Test	($2,144)	0.00
Participant Test	$102	1.07

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Total Low Income Programs**

Input Data	
1) Retail Rate ($/MCF) =	$7.2476
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$21,628
16 b) Incentive Costs =	$36,925
16 c) Total Utility Project Costs =	$58,553
17) Direct Participant Costs ($/Part.) =	$2,092
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	19
21) Avg. MCF/Part Saved =	13.9
22) Avg Non-Gas Fuel Units/Part. Saved =	280 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	18
24) Total Annual MCF Saved =	250
25) Incentive/Participant =	$2,051.39

Cost Summary	2017
Utility Cost per Participant =	$3,252.94
Cost per Participant per MCF =	$384.53
Lifetime Energy Reduction (MCF)	4,750
Societal Cost per MCF	$12.48

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($64,235)	0.22
Utility Cost Test	($39,921)	0.32
Societal Test	($21,577)	0.64
Participant Test	$40,015	2.06

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Total Commercial & Industrial Portfolio**

Input Data	
1) Retail Rate ($/MCF) =	$5.4537
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.00
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	0.09%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$63,728
16 b) Incentive Costs =	$74,333
16 c) Total Utility Project Costs =	$138,061
17) Direct Participant Costs ($/Part.) =	$1,855
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	17
21) Avg. MCF/Part. Saved =	68.3
22) Avg Non-Gas Fuel Units/Part. Saved =	408 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	87
24) Total Annual MCF Saved =	5,940
25) Incentive/Participant =	$854.40

Cost Summary	2017
Utility Cost per Participant =	$1,586.91
Cost per Participant per MCF =	$50.39
Lifetime Energy Reduction (MCF)	100,980
Societal Cost per MCF	$2.23

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($214,499)	0.60
Utility Cost Test	$190,397	2.38
Societal Test	$363,582	2.62
Participant Test	$317,844	2.97

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Total Commercial Space Heating Equipment**

Input Data	
1) Retail Rate ($/MCF) =	$6.9424
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$59,775
16 b) Incentive Costs =	$69,723
16 c) Total Utility Project Costs =	$129,498
17) Direct Participant Costs ($/Part.) =	$1,823
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	19
21) Avg. MCF/Part. Saved =	67.3
22) Avg Non-Gas Fuel Units/Part. Saved =	470 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	72
24) Total Annual MCF Saved =	4,843
25) Incentive/Participant =	$968.38

Cost Summary	2017
Utility Cost per Participant =	$1,798.58
Cost per Participant per MCF =	$53.81
Lifetime Energy Reduction (MCF)	92,017
Societal Cost per MCF	$2.08

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($219,743)	0.62
Utility Cost Test	$231,443	2.79
Societal Test	$479,922	3.51
Participant Test	$389,654	3.97

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Total Commercial Water Heating Equipment**

Input Data	
1) Retail Rate ($/MCF) =	$6.9424
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$1,551
16 b) Incentive Costs =	$1,810
16 c) Total Utility Project Costs =	$3,361
17) Direct Participant Costs ($/Part.) =	$1,650
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	15
21) Avg. MCF/Part. Saved =	20.2
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	6
24) Total Annual MCF Saved =	121
25) Incentive/Participant =	$301.67

Cost Summary	2017
Utility Cost per Participant =	$560.17
Cost per Participant per MCF =	$109.41
Lifetime Energy Reduction (MCF)	1,815
Societal Cost per MCF	$6.31

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($5,291)	0.59
Utility Cost Test	$4,359	2.30
Societal Test	$822	1.07
Participant Test	$1,560	1.16

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS– Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Total Commercial Boiler Equipment**

Input Data	
1) Retail Rate ($/MCF) =	$6.9424
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$1,973
16 b) Incentive Costs =	$2,300
16 c) Total Utility Project Costs =	$4,273
17) Direct Participant Costs ($/Part.) =	$2,306
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	2
21) Avg. MCF/Part. Saved =	116.6
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	8
24) Total Annual MCF Saved =	933
25) Incentive/Participant =	$287.50

Cost Summary	2017
Utility Cost per Participant =	$534.13
Cost per Participant per MCF =	$24.36
Lifetime Energy Reduction (MCF)	1,866
Societal Cost per MCF	$10.94

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($6,906)	0.60
Utility Cost Test	$6,260	2.46
Societal Test	($8,844)	0.57
Participant Test	($2,982)	0.84

Company: **Great Plains Natural Gas Co.**
Project: **Total Commercial Food Service Equipment Programs**

Input Data	
1) Retail Rate ($/MCF) =	$6.9424
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$429
16 b) Incentive Costs =	$500
16 c) Total Utility Project Costs =	$929
17) Direct Participant Costs ($/Part.) =	$1,781
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	12
21) Avg. MCF/Part. Saved =	43.0
22) Avg Non-Gas Fuel Units/Part. Saved =	1,637 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1
24) Total Annual MCF Saved =	43
25) Incentive/Participant =	$500.00

Cost Summary	2017
Utility Cost per Participant =	$929.00
Cost per Participant per MCF =	$63.02
Lifetime Energy Reduction (MCF)	516
Societal Cost per MCF	$4.28

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	($1,513)	0.61
Utility Cost Test	$1,408	2.52
Societal Test	$2,169	1.98
Participant Test	$1,640	1.92

Company: **Great Plains Natural Gas Co.**
Project: **Commercial and Industrial Custom Program**

Input Data	
1) Retail Rate ($/MCF) =	$5.3024
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	0.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$0
16 b) Incentive Costs =	$0
16 c) Total Utility Project Costs =	$0
17) Direct Participant Costs ($/Part.) =	$108,000
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	15
21) Avg. MCF/Part. Saved =	4,000.0
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	-
24) Total Annual MCF Saved =	0
25) Incentive/Participant =	#DIV/0!

Cost Summary	2017
Utility Cost per Participant =	#DIV/0!
Cost per Participant per MCF =	#DIV/0!
Lifetime Energy Reduction (MCF)	0
Societal Cost per MCF	#DIV/0!

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	$0	#DIV/0!
Utility Cost Test	$0	#DIV/0!
Societal Test	$0	#DIV/0!
Participant Test	$0	#DIV/0!

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Commercial Building Certification Program**

Input Data	
1) Retail Rate ($/MCF) =	$5.3024
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	0.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$0
16 b) Incentive Costs =	$0
16 c) Total Utility Project Costs =	$0
17) Direct Participant Costs ($/Part.) =	$8,000
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	-
21) Avg. MCF/Part. Saved =	-
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	-
24) Total Annual MCF Saved =	0
25) Incentive/Participant =	#DIV/0!

Cost Summary	2017
Utility Cost per Participant =	#DIV/0!
Cost per Participant per MCF =	#DIV/0!
Lifetime Energy Reduction (MCF)	0
Societal Cost per MCF	#DIV/0!

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	$0	#DIV/0!
Utility Cost Test	$0	#DIV/0!
Societal Test	$0	#DIV/0!
Participant Test	$0	#DIV/0!

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Commercial Energy Assessment Program**

Input Data	
1) Retail Rate ($/MCF) =	$5.3024
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	0.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$0
16 b) Incentive Costs =	$0
16 c) Total Utility Project Costs =	$0
17) Direct Participant Costs ($/Part.) =	$1,100
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	-
21) Avg. MCF/Part. Saved =	-
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	-
24) Total Annual MCF Saved =	0
25) Incentive/Participant =	#DIV/0!

Cost Summary	2017
Utility Cost per Participant =	#DIV/0!
Cost per Participant per MCF =	#DIV/0!
Lifetime Energy Reduction (MCF)	0
Societal Cost per MCF	#DIV/0!

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	$0	#DIV/0!
Utility Cost Test	$0	#DIV/0!
Societal Test	$0	#DIV/0!
Participant Test	$0	#DIV/0!

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS– Cost-Effectiveness Analysis

Company: **Great Plains Natural Gas Co.**
Project: **Industrial Energy Assessment Program**

Input Data	
1) Retail Rate ($/MCF) =	$5.3024
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/MCF) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$124.14
Escalation Rate =	4.00%
5) Peak Reduction Factor =	0.00%
6) Variable O&M ($/MCF) =	$0.0424
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.02322
Escalation Rate =	2.16%
11) Participant Discount Rate =	8.96%
12) Utility Discount Rate =	8.96%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	
15c) Project Analysis Year 3 =	

	2017
16 Utility Project Costs	
16 a) Administrative & Operating Costs =	$0
16 b) Incentive Costs =	$0
16 c) Total Utility Project Costs =	$0
17) Direct Participant Costs ($/Part.) =	$3,400
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	-
21) Avg. MCF/Part. Saved =	-
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	-
24) Total Annual MCF Saved =	0
25) Incentive/Participant =	#DIV/0!

Cost Summary	2017
Utility Cost per Participant =	#DIV/0!
Cost per Participant per MCF =	#DIV/0!
Lifetime Energy Reduction (MCF)	0
Societal Cost per MCF	#DIV/0!

Test Results	Triennial NPV	Triennial B/C
Ratepayer Impact Measure Test	$0	#DIV/0!
Utility Cost Test	$0	#DIV/0!
Societal Test	$0	#DIV/0!
Participant Test	$0	#DIV/0!

Program Name: Residential Space Heating
Program Design Manager: Great Plains Natural Gas
Category: Residential Space Heating (non-Heat Pumps)

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$36,386.00	$52,318.00	$38,468.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$106,550.00	$120,643.00	$106,550.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$142,936.00**	**$172,961.00**	**$145,018.00**
Program Participants			
Total Participants	505	553	505
% of Spending by Customer Segments			
Residential	100%	100%	100%
Commerical	0%	0%	0%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	2.6%	4.2%	2.6%
Budget % (% of Total Utility Costs)	2.6%	5.8%	2.6%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	6,063	6,611	6,063
Cost per Annual MCF Saved	$23.5751	$26.1626	$23.9185
Benefit/Cost Ratios			
Utility Ratio	2.52	2.20	2.52
Utility NPV	$604,277	$208,114	$604,277
Ratepayer Ratio	0.59	0.57	0.59
Ratepayer NPV	($702,604)	($289,181)	($702,604)
Participant Ratio	1.82	1.80	1.82
Participant NPV	$1,026,457	$367,358	$1,026,457
Societal Ratio	1.44	1.37	1.44
Societal NPV	$595,020	$187,544	$595,020
Narrative			

Program Name: Residential Water Heating
Program Design Manager: Great Plains Natural Gas
Category: Residential Domestic Hot Water

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$1,849.00	$2,603.00	$1,896.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$12,300.00	$9,052.00	$12,300.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$14,149.00**	**$11,655.00**	**$14,196.00**
Program Participants			
Total Participants	519	443	519
% of Spending by Customer Segments			
Residential	100%	100%	100%
Commerical	0%	0%	0%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	7.1%	0.2%	7.1%
Budget % (% of Total Utility Costs)	7.1%	2.8%	7.1%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	1,075	767	1,075
Cost per Annual MCF Saved	$13.1619	$15.1956	$13.2056
Benefit/Cost Ratios			
Utility Ratio	3.72	3.11	3.72
Utility NPV	$106,459	$24,590	$106,459
Ratepayer Ratio	0.64	0.61	0.64
Ratepayer NPV	($83,503)	($22,709)	($83,503)
Participant Ratio	4.28	3.89	4.28
Participant NPV	$228,965	$52,522	$228,965
Societal Ratio	2.84	2.42	2.84
Societal NPV	$138,338	$29,390	$138,338
Narrative			

Program Name: Residential Attic Insulation
Program Design Manager: Great Plains Natural Gas
Category: Residential Building Envelope

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$102.00	$0.01	$109.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$300.00	$0.00	$300.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$402.00**	**$0.01**	**$409.00**
Program Participants			
Total Participants	2	0	2
% of Spending by Customer Segments			
Residential	100%	100%	100%
Commerical	0%	0%	0%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	13	0	13
Cost per Annual MCF Saved	$30.9231	$0.0000	$31.4615
Benefit/Cost Ratios			
Utility Ratio	2.56	#VALUE!	2.56
Utility NPV	$1,747	$0	$1,747
Ratepayer Ratio	0.59	#VALUE!	0.59
Ratepayer NPV	($1,992)	$0	($1,992)
Participant Ratio	0.81	#VALUE!	0.81
Participant NPV	($1,837)	$0	($1,837)
Societal Ratio	0.56	#VALUE!	0.56
Societal NPV	($4,329)	$0	($4,329)
Narrative			

Program Name: Residential Pilotless Fireplace
Program Design Manager: Great Plains Natural Gas
Category: Specialty Residential

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$128.00	$60.00	$136.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$375.00	$150.00	$375.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$503.00**	**$210.00**	**$511.00**
Program Participants			
Total Participants	5	2	5
% of Spending by Customer Segments			
Residential	100%	100%	100%
Commerical	0%	0%	0%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	22	9	22
Cost per Annual MCF Saved	$22.8636	$23.3333	$23.2273
Benefit/Cost Ratios			
Utility Ratio	2.88	2.73	2.88
Utility NPV	$2,623	$364	$2,623
Ratepayer Ratio	0.61	0.60	0.61
Ratepayer NPV	($2,625)	($385)	($2,625)
Participant Ratio	3.35	3.30	3.35
Participant NPV	$6,639	$889	$6,639
Societal Ratio	2.11	2.05	2.11
Societal NPV	$3,573	$467	$3,573
Narrative			

Program Name: Residential Energy Assessment
Program Design Manager: Great Plains Natural Gas
Category: Residential Energy Audits / Analysis

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$5,548.00	$644.00	$5,866.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$16,250.00	$1,602.00	$16,250.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$21,798.00**	**$2,246.00**	**$22,116.00**
Program Participants			
Total Participants	65	5	65
% of Spending by Customer Segments			
Residential	100%	100%	100%
Commerical	0%	0%	0%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	7.7%	0.0%	7.7%
Budget % (% of Total Utility Costs)	7.7%	0.0%	7.7%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	0	0	0
Cost per Annual MCF Saved	$0.0000	$0.0000	$0.0000
Benefit/Cost Ratios			
Utility Ratio	0.00	0.00	0.00
Utility NPV	($60,571)	($2,246)	($60,571)
Ratepayer Ratio	0.00	0.00	0.00
Ratepayer NPV	($60,571)	($2,246)	($60,571)
Participant Ratio	0.83	1.07	0.83
Participant NPV	($9,510)	$102	($9,510)
Societal Ratio	0.00	0.00	0.00
Societal NPV	($73,742)	($2,144)	($73,742)
Narrative			

Program Name: Low-Income Programs
Program Design Manager: Great Plains Natural Gas
Category: Low Income Weatherization

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$29,482.00	$21,628.00	$30,738.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$142,113.00	$36,925.00	$142,113.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$171,595.00**	**$58,553.00**	**$172,851.00**
Program Participants			
Total Participants	112	18	112
% of Spending by Customer Segments			
Residential	100%	100%	100%
Commerical	0%	0%	0%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	100.0%	100.0%	100.0%
Budget % (% of Total Utility Costs)	100.0%	100.0%	100.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	1,461	250	1,461
Cost per Annual MCF Saved	$117.4504	$234.2120	$118.3101
Benefit/Cost Ratios			
Utility Ratio	0.54	0.32	0.54
Utility NPV	($220,673)	($39,921)	($220,673)
Ratepayer Ratio	0.32	0.22	0.32
Ratepayer NPV	($552,813)	($64,235)	($552,813)
Participant Ratio	2.24	2.06	2.24
Participant NPV	$514,691	$40,015	$514,691
Societal Ratio	0.88	0.64	0.88
Societal NPV	($61,171)	($21,577)	($61,171)
Narrative			

Program Name: C/I Space Heating
Program Design Manager: Great Plains Natural Gas
Category: Non-Residential Space Heating (Non-Heat Pumps)

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$10,050.00	$59,775.00	$10,412.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$37,720.00	$69,723.00	$37,720.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$47,770.00**	**$129,498.00**	**$48,132.00**
Program Participants			
Total Participants	66	72	66
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	100%	100%	100%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	2,949	4,843	2,949
Cost per Annual MCF Saved	$16.1987	$26.7392	$16.3215
Benefit/Cost Ratios			
Utility Ratio	4.76	2.79	4.76
Utility NPV	$497,546	$231,443	$497,546
Ratepayer Ratio	0.68	0.62	0.68
Ratepayer NPV	($289,714)	($219,743)	($289,714)
Participant Ratio	2.82	3.97	2.82
Participant NPV	$574,768	$389,654	$574,768
Societal Ratio	3.47	3.51	3.47
Societal NPV	$902,688	$479,922	$902,688
Narrative			

Program Name: C/I Water Heating
Program Design Manager: Great Plains Natural Gas
Category: Non-Residential Service Water Heating

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$586.00	$1,551.00	$607.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$2,200.00	$1,810.00	$2,200.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$2,786.00**	**$3,361.00**	**$2,807.00**
Program Participants			
Total Participants	7	6	7
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	100%	100%	100%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	161	121	161
Cost per Annual MCF Saved	$17.3043	$27.7769	$17.4348
Benefit/Cost Ratios			
Utility Ratio	3.82	2.30	3.82
Utility NPV	$21,722	$4,359	$21,722
Ratepayer Ratio	0.66	0.59	0.66
Ratepayer NPV	($15,073)	($5,291)	($15,073)
Participant Ratio	1.33	1.16	1.33
Participant NPV	$10,583	$1,560	$10,583
Societal Ratio	1.38	1.07	1.38
Societal NPV	$13,672	$822	$13,672
Narrative			

Program Name: C/I Boiler Upgrades
Program Design Manager: Great Plains Natural Gas
Category: Non-Residential Space Heating (Non-Heat Pumps)

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$3,855.00	$1,973.00	$6,133.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$14,463.00	$2,300.00	$22,225.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$18,318.00**	**$4,273.00**	**$28,358.00**
Program Participants			
Total Participants	26	8	41
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	100%	100%	100%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	903	933	1,306
Cost per Annual MCF Saved	$20.2857	$4.5798	$21.7136
Benefit/Cost Ratios			
Utility Ratio	1.23	2.46	1.23
Utility NPV	$15,537	$6,260	$15,537
Ratepayer Ratio	0.48	0.60	0.48
Ratepayer NPV	($88,205)	($6,906)	($88,205)
Participant Ratio	1.04	0.84	1.04
Participant NPV	$6,711	($2,982)	$6,711
Societal Ratio	0.60	0.57	0.60
Societal NPV	($69,503)	($8,844)	($69,503)
Narrative			

Program Name: C/I Food Service Equipment
Program Design Manager: Great Plains Natural Gas
Category: Food Service

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$532.00	$429.00	$552.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$2,000.00	$500.00	$2,000.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$2,532.00**	**$929.00**	**$2,552.00**
Program Participants			
Total Participants	3	1	3
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	100%	100%	100%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	257	43	257
Cost per Annual MCF Saved	$9.8521	$21.6047	$9.9300
Benefit/Cost Ratios			
Utility Ratio	5.71	2.52	5.71
Utility NPV	$33,007	$1,408	$33,007
Ratepayer Ratio	0.70	0.61	0.70
Ratepayer NPV	($17,016)	($1,513)	($17,016)
Participant Ratio	2.75	1.92	2.75
Participant NPV	$35,315	$1,640	$35,315
Societal Ratio	3.01	1.98	3.01
Societal NPV	$46,233	$2,169	$46,233
Narrative			

Program Name: C/I Custom Program
Program Design Manager: Great Plains Natural Gas
Category: Non-Residential Custom Efficiency

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$87,927.00	$0.01	$91,087.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$330,000.00	$0.00	$330,000.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$417,927.00**	**$0.01**	**$421,087.00**
Program Participants			
Total Participants	11	0	11
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	100%	100%	100%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	44,000	0	44,000
Cost per Annual MCF Saved	$9.4983	$0.0000	$9.5702
Benefit/Cost Ratios			
Utility Ratio	5.40	#VALUE!	5.40
Utility NPV	$5,089,309	$0	$5,089,309
Ratepayer Ratio	0.71	#VALUE!	0.71
Ratepayer NPV	($2,590,986)	$0	($2,590,986)
Participant Ratio	2.62	#VALUE!	2.62
Participant NPV	$5,312,158	$0	$5,312,158
Societal Ratio	2.86	0.00	2.86
Societal NPV	$6,963,044	$0	$6,963,044
Narrative			

Program Name: Building Certification Program
Program Design Manager: Great Plains Natural Gas
Category: Other - Indirect

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$1,066.00	$0.01	$1,103.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$4,000.00	$0.00	$4,000.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$5,066.00**	**$0.01**	**$5,103.00**
Program Participants			
Total Participants	1	0	1
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	100%	100%	100%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	0	0	0
Cost per Annual MCF Saved	$0.0000	$0.0000	$0.0000
Benefit/Cost Ratios			
Utility Ratio	0.00	#VALUE!	0.00
Utility NPV	($14,024)	$0	($14,024)
Ratepayer Ratio	0.00	#VALUE!	0.00
Ratepayer NPV	($14,024)	$0	($14,024)
Participant Ratio	0.50	#VALUE!	0.50
Participant NPV	($11,040)	$0	($11,040)
Societal Ratio	0.00	#VALUE!	0.00
Societal NPV	($26,573)	$0	($26,573)
Narrative			

Program Name: Commercial Energy Assessment
Program Design Manager: Great Plains Natural Gas
Category: Non-Residential Building Energy Audits / Analysis

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$1,265.00	$0.01	$1,312.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$4,750.00	$0.00	$4,750.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$6,015.00**	**$0.01**	**$6,062.00**
Program Participants			
Total Participants	5	0	5
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	100%	100%	100%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	0	0	0
Cost per Annual MCF Saved	$0.0000	$0.0000	$0.0000
Benefit/Cost Ratios			
Utility Ratio	0.00	#VALUE!	0.00
Utility NPV	($16,654)	$0	($16,654)
Ratepayer Ratio	0.00	#VALUE!	0.00
Ratepayer NPV	($16,654)	$0	($16,654)
Participant Ratio	0.86	#VALUE!	0.86
Participant NPV	($2,070)	$0	($2,070)
Societal Ratio	0.00	#VALUE!	0.00
Societal NPV	($19,853)	$0	($19,853)
Narrative			

Program Name: Industrial Energy Assessment
Program Design Manager: Great Plains Natural Gas
Category: Non-Residential Building Energy Audits / Analysis

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$1,599.00	$0.01	$1,656.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$6,000.00	$0.00	$6,000.00
Other	$0.00	$0.00	$0.00
Total Utility Costs	**$7,599.00**	**$0.01**	**$7,656.00**
Program Participants			
Total Participants	2	0	2
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	0%	0%	0%
Industrial	100%	100%	100%
Farm	0%	0%	0%
Other	0%	0%	0%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	0	0	0
Cost per Annual MCF Saved	$0.0000	$0.0000	$0.0000
Benefit/Cost Ratios			
Utility Ratio	0.00	#VALUE!	0.00
Utility NPV	($21,036)	$0	($21,036)
Ratepayer Ratio	0.00	#VALUE!	0.00
Ratepayer NPV	($21,036)	$0	($21,036)
Participant Ratio	0.88	#VALUE!	0.88
Participant NPV	($2,208)	$0	($2,208)
Societal Ratio	0.00	#VALUE!	0.00
Societal NPV	($24,645)	$0	($24,645)
Narrative			

Program Name: CIP Assessment Charges
Program Design Manager: Great Plains Natural Gas
Category: Regulatory Charges

	2017 Plan	2017 Actual	2019 Plan
	Active	Active	Active
Utility Cost Components			
Delivery and Administration (2008-2010)			
Delivery (2011-present)	$0.00	$0.00	$0.00
Administration (2011-present)	$0.00	$0.00	$0.00
Evaluation, Measurement & Verification	$0.00	$0.00	$0.00
Advertising & Promotion	$0.00	$0.00	$0.00
Incentives	$0.00	$0.00	$0.00
Other	$26,000.00	$19,432.00	$26,000.00
Total Utility Costs	**$26,000.00**	**$19,432.00**	**$26,000.00**
Program Participants			
Total Participants	0	0	0
% of Spending by Customer Segments			
Residential	0%	0%	0%
Commerical	0%	0%	0%
Industrial	0%	0%	0%
Farm	0%	0%	0%
Other	100%	100%	100%
Total % of Spending	**100%**	**100%**	**100%**
Low-Income Participation			
Participant % (% of Total Participants)	0.0%	0.0%	0.0%
Budget % (% of Total Utility Costs)	0.0%	0.0%	0.0%
Budget Fixed ($)			
Energy Savings			
Annual MCF Saved	0	0	0
Cost per Annual MCF Saved	$0.0000	$0.0000	$0.0000
Benefit/Cost Ratios			
Utility Ratio	0.00	0.00	0.00
Utility NPV	$0	$0	$0
Ratepayer Ratio	0.00	0.00	0.00
Ratepayer NPV	$0	$0	$0
Participant Ratio	0.00	0.00	0.00
Participant NPV	$0	$0	$0
Societal Ratio	0.00	0.00	0.00
Societal NPV	$0	$0	$0
Narrative			

GREAT PLAINS NATURAL GAS CO.
CIP RATE TRUE-UP FILING
DOCKET NO. G004/M-18-____

	Projected Dk 1/	Volumetric Allocation	Total Under/(Over) Recovery	Proposed CCRA	Current CCRA 2/	Change
Residential	1,410,800	24.1270%	$18,374	$0.0130	$0.2097	($0.1967)
Firm General	1,235,600	21.1308%	16,093	0.0130	0.2097	(0.1967)
Interruptible	888,700	15.1982%	11,574	0.0130	0.2097	(0.1967)
Transportation	2,312,300	39.5440%	30,116	0.0130	0.2097	(0.1967)
Total	5,847,400	100.0000%	$76,157			

Rate change for the average residential customer using 76 Dk per year.

	Dk 3/	CCRC	CCRA	Total	Total CIP Cost
Current Rate	76	$0.0556 4/	$0.2097 2/	$0.2653	$20.16
Proposed Rate	76	0.0556	0.0130	0.0686	5.21
Change		$0.0000	($0.1967)	($0.1967)	

The average residential customer will pay an annual CIP cost of $5.21 per year.

1/ Docket No. G004/M-12-439 designates using projected dk throughput for the period in which the CCRA is proposed to be in effect. The proposed time period is 12 months running from September 2018 - August 2019.
2/ Authorized in Docket No. G004/M-17-338, effective September 1, 2017.
3/ Reflects average normalized 2017 residential dk per customer.
4/ Authorized in Docket No. G004/GR-15-879, effective January 1, 2017.

GREAT PLAINS NATURAL GAS CO.
CCRA FILING AND DEMAND INCENTIVE
DOCKET NO. G004/M-18-____

CIP True-Up	Beginning Balance	Expenses	Carrying Charges	Billed Recovery	Net Activity	Ending Balance
2017 Activity	$1,060,837	$749,046	$8,659	$1,594,344	($836,639)	$224,198
2018 Activity						
January - March Actual	$224,198	$94,731	($32)	$764,749	($670,050)	
April - August 2018 Projected		267,612	(3,363)	313,187	(48,938)	
	$224,198	$362,343	($3,395)	$1,077,936	($718,988)	($494,790)
2019 Activity						
Sept. 2018 - Aug. 2019 Projected	($494,790)	$899,549	($3,487)	$325,115 1/	$570,947	$76,157
Projected Balance September 1, 2019	$224,198	$1,261,892	($6,882)	$1,403,051	($148,041)	$76,157
2017 DSM Incentive to be recorded in September 2018						0 2/
Total projected Under/(Over) Recovery to be recovered through CCRA from Sept 2018 - August 2019						$76,157

1/ Projected CCRC recovery from Sept 2018 - August 2019.
2/ Reflects 2017 Utility Cost Test result multiplied by the Percent of Benefits Awarded.

GREAT PLAINS NATURAL GAS CO.
CIP PROGRAM
2017

Month	Beginning Balance	Carrying Charge 1/	Current Month Charges	Billed Recovery CCRC 2/	Billed Recovery CCRA 2/	Billed Recovery Total	Ending Balance
December 2016							$1,060,837
January 2017	$1,060,837	$1,423	$29,772	$54,840	$36,788	$91,628	1,000,404
February	1,000,404	1,342	19,030	47,642	179,927	227,569	793,207
March	793,207	1,064	30,530	42,876	163,893	206,769	618,032
April	618,032	829	14,897	35,461	135,557	171,018	462,740
May	462,740	621	22,040	26,834	102,580	129,414	355,987
June	355,987	478	26,486	17,405	66,528	83,933	299,018
July	299,018	401	32,530	12,417	47,445	59,862	272,087
August	272,087	365	11,973	12,022	45,939	57,961	226,464
September	226,464	304	384,183 3/	14,960	57,077	72,037	538,914
October	538,914	723	46,372	22,893	86,336	109,229	476,780
November	476,780	640	40,635	35,289	133,107	168,396	349,659
December	349,659	469	90,598	45,375	171,153	216,528	224,198
Total 2017		$8,659	$749,046	$368,014	$1,226,330	$1,594,344	

1/ Reflects the cost of short-term debt of 1.610% authorized in Docket No. G004/GR-15-879.

2/ Rates effective with service rendered on and after:

	January 1, 2017 - August 31, 2017 Docket No. G004/GR-16-384.	September 1, 2017 - August 31, 2018 Docket No. G004/M-17-338.
CCRC	$0.0556	$0.0556
CCRA	$0.2125	$0.2097

3/ Includes 2016 DSM incentive amount of $345,928 authorized by Commission Order in Docket No. G004/M-17-338 on August 16, 2017.

GREAT PLAINS NATURAL GAS CO.
CIP PROGRAM
2018

Month	Beginning Balance	Carrying Charge 1/	Current Month Charges	Billed Recovery CCRC 2/	Billed Recovery CCRA 2/	Billed Recovery Total	Ending Balance
December 2017							$224,198
January 2018	$224,198	$301	$27,231	$55,293	$208,558	$263,851	(12,121)
February	(12,121)	(16)	30,662	53,392	201,366	254,758	(236,233)
March	(236,233)	(317)	36,838	51,586	194,554	246,140	(445,852)
April - est.	(445,852)	(598)	36,923	26,088	98,391	124,479	(534,006)
May - est.	(534,006)	(716)	54,662	11,915	44,939	56,854	(536,914)
June - est.	(536,914)	(720)	65,659	9,235	34,831	44,066	(516,041)
July - est.	(516,041)	(692)	80,669	8,140	30,700	38,840	(474,904)
Aug. - est.	(474,904)	(637)	29,699	10,258	38,690	48,948	(494,790)
Total 2018 YTD		($3,395)	$362,343	$225,907	$852,029	$1,077,936	
Sept. - est.	($494,790)	($664)	$94,796 3/	$13,361	$3,124	$16,485	($417,143)
Oct. - est.	(417,143)	(560)	114,943	29,852	6,980	36,832	(339,592)
Nov. - est.	(339,592)	(456)	100,736	36,212	8,467	44,679	(283,991)
Dec. - est.	(283,991)	(381)	224,590	46,754	10,932	57,686	(117,468)
Jan. 2019 - est.	(117,468)	(158)	27,357	50,351	11,773	62,124	(152,393)
Feb. - est.	(152,393)	(204)	30,878	44,007	10,290	54,297	(176,016)
Mar. - est.	(176,016)	(236)	37,017	38,692	9,047	47,739	(186,974)
Apr. - est.	(186,974)	(251)	37,107	26,210	6,128	32,338	(182,456)
May - est.	(182,456)	(245)	54,984	11,965	2,798	14,763	(142,480)
Jun. - est.	(142,480)	(191)	66,089	9,263	2,166	11,429	(88,011)
Jul. - est.	(88,011)	(118)	81,167	8,162	1,908	10,070	(17,032)
Aug. - est.	(17,032)	(23)	29,885	10,286	2,405	12,691	139
Total 2019 YTD		($3,487)	$899,549	$325,115	$76,018	$401,133	

1/ Reflects the cost of short-term debt of 1.610% authorized in Docket No. G004/GR-15-879.

2/ Rates effective with service rendered on and after:

	Current: September 1, 2017 - August 31, 2018 Docket No. G004/M-17-338.	Proposed: September 1, 2018 - August 31, 2019 Docket No. G004/M-18-___.
CCRC	$0.0556	$0.0556
CCRA	$0.2097	$0.0130

3/ Includes 2017 projected financial incentive of: $0

GREAT PLAINS NATURAL GAS CO.
PERFORMANCE INCENTIVE MODEL

Inputs	
3-year Weather-Normalized Sales Average (Dth)	5,627,380
1.0% Energy Savings	56,274
Size of steps in Energy Savings	5,627
Approved CIP Budget	$885,396
Approved CIP Energy Goal	56,904
Estimated Net Benefits at Approved Goal	$1,700,578
Energy savings at 1.5%	84,411

Incentive Calibration		
Maximum Percent of Benefits Awarded	**13.50%**	
Earning Threshold	**0.70%**	
Maximum Achievement Level	**1.20%**	
Increment	7.5	% Points

Estimated Incentive Levels

Achievement Level (% of sales)	Energy Saved	Percent of Benefits Awarded	Estimated Benefits Achieved	Incentive Award	Average Incentive per unit Saved	Incremental Incentive Units Saved
0.0%	0	0.00%	$0	**$0**	$0.00	-
0.1%	5,627	0.00%	$168,174	**$0**	$0.00	$0.00
0.2%	11,255	0.00%	$336,349	**$0**	$0.00	$0.00
0.3%	16,882	0.00%	$504,523	**$0**	$0.00	$0.00
0.4%	22,510	0.00%	$672,698	**$0**	$0.00	$0.00
0.5%	28,137	0.00%	$840,872	**$0**	$0.00	$0.00
0.6%	33,764	0.00%	$1,009,047	**$0**	$0.00	$0.00
0.7%	39,392	9.75%	$1,177,221	**$114,779**	$2.91	$20.40
0.8%	45,019	10.50%	$1,345,396	**$141,267**	$3.14	$4.71
0.9%	50,646	11.25%	$1,513,570	**$170,277**	$3.36	$5.16
1.0%	56,274	12.00%	$1,681,744	**$201,809**	$3.59	$5.60
1.1%	61,901	12.75%	$1,849,919	**$235,865**	$3.81	$6.05
1.2%	67,529	13.50%	$2,018,093	**$272,443**	$4.03	$6.50
1.3%	73,156	13.50%	$2,186,268	**$295,146**	$4.03	$4.03
1.4%	78,783	13.50%	$2,354,442	**$317,850**	$4.03	$4.03
1.5%	84,411	13.50%	$2,522,617	**$340,553**	$4.03	$4.03
1.6%	90,038	13.50%	$2,690,791	**$363,257**	$4.03	$4.03
1.7%	95,665	13.50%	$2,858,966	**$385,960**	$4.03	$4.03
1.8%	101,293	13.50%	$3,027,140	**$408,664**	$4.03	$4.03
1.9%	106,920	13.50%	$3,195,314	**$431,367**	$4.03	$4.03
2.0%	112,548	13.50%	$3,363,489	**$454,071**	$4.03	$4.03

2017 Great Plains

Projected Gas CIP Incentive Results	
Spending	$403,118
Energy Saved (Dth)	13,577
Net Benefits Achieved	$227,111
Resulting Incentive	
Achievement Level	0.24%
Percent of Net Benefits Awarded	0.0000%
Financial Incentive Award	$0
Incentive/First Year Dth Saved $	**$0.0000**
Incentive/Net Benefits	**0.00%**
Incentive/CIP Expenditures	**0.00%**