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# **ENERGY DIVISION**

**2015 – 2016**

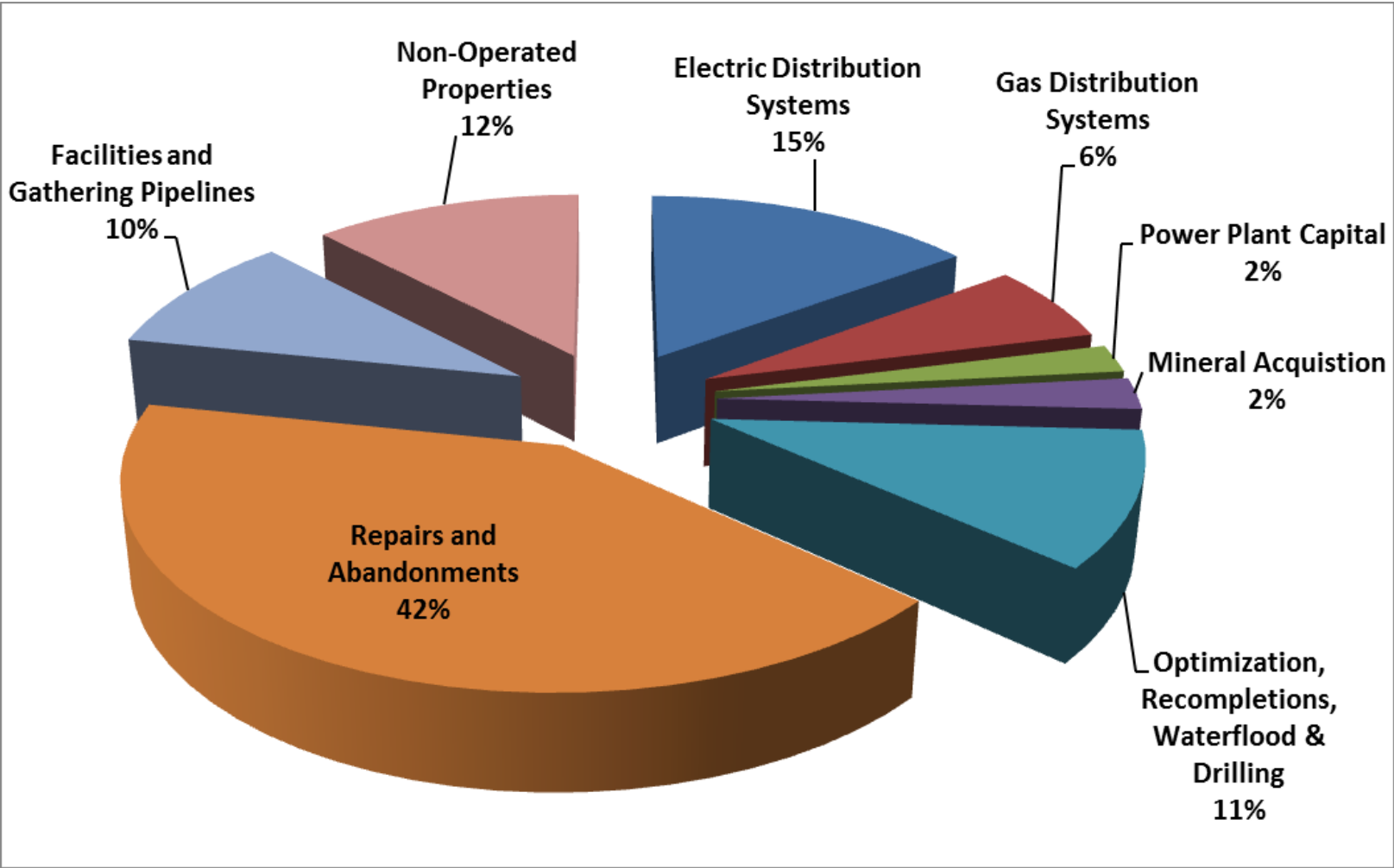
**Operating and Capital Budgets**

# Assumptions in Developing the 2015 – 2016 TCA and Operating Budgets

- CMH Energy Division includes Gas and Electric Discos, Gas, Oil and Electric power production.
- Unlike exploration and development operations that make significant cuts when drilling stops – production units require staff and resources to keep gas, oil and electricity flowing.
- Focus is on optimization of current assets – getting the most from what we currently own – whether gas, oil or electricity.
- Oil and gas commodity price forecasts – January 2015.
- Given the price forecast, NGPR has suspended oil and gas drilling programs until prices prove to be more economical for this activity.
- Increase funding/objectives for abandonment of end of economic life assets.
- No general Inflation provision; only known inflation adjustments included.

# Tangible Capital Asset Budget Highlights

# Final 2015 Tangible Capital Asset Budget



**\$59,413M (2015); \$59,546M (2016)**

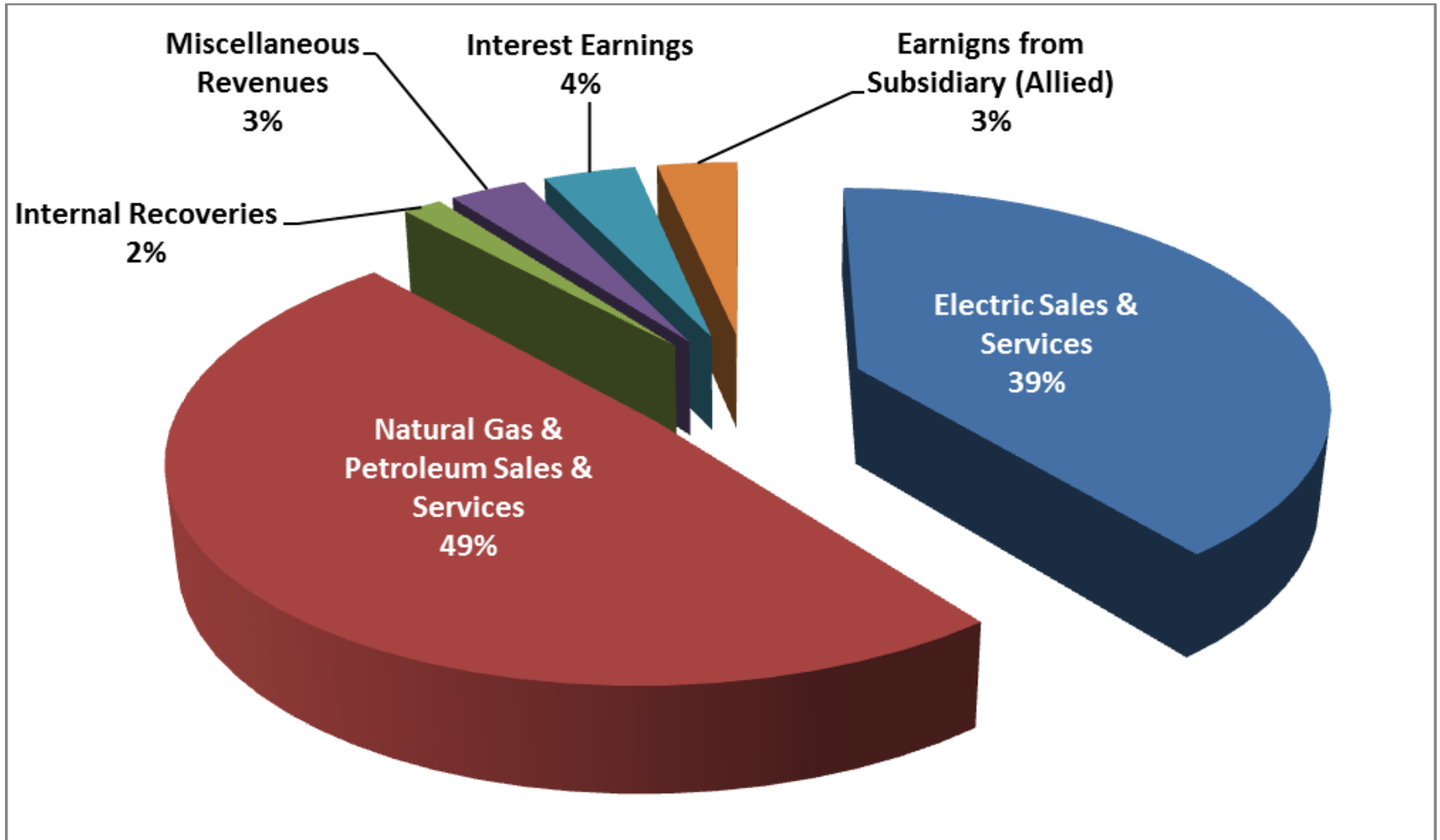
# Operating Budget Highlights

# 2015 - 2016 Operating Budget

Budgeted Energy Net Income is \$6,492,000 for 2015 and \$14,173,000 for 2016

Energy Division Operating Summary Budget	2014 Budget (\$000's)	2015 Budget (\$000's)	2016 Budget (\$000's)
Revenues	\$ 239,801	\$ 199,728	\$ 211,563
Expenses	145,591	139,343	144,902
Earnings Before Interest, Taxes, and Amortization	94,210	60,385	66,661
Interest, Taxes, and Amortization	69,680	53,893	52,488
<b>Net Earnings</b>	<b>\$ 24,530</b>	<b>\$ 6,492</b>	<b>\$ 14,173</b>

# Where the Money Comes From (2015 - 2016)



**Total Revenues by Source**

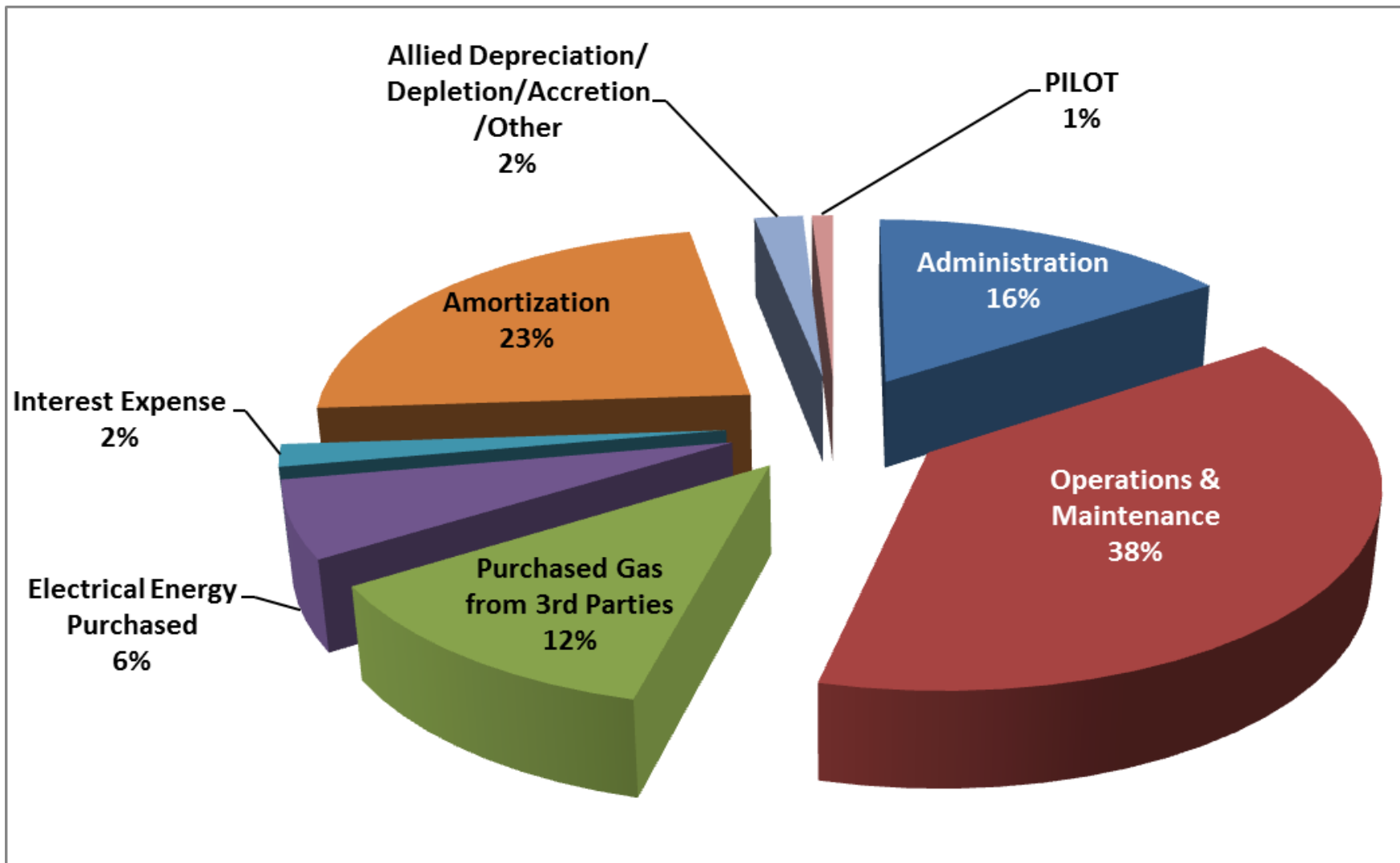
# Revenues

## Sales of Goods and Services:

- Decreased sales in 2015 from 2014 budget is due to lower Electric, Gas and Oil revenues due to lower forecasted commodity prices.
- Increased sales in 2016 from 2015 is due to higher Electric, Gas and Oil revenues due to higher forecasted commodity prices.



# Where the Money is Spent (2015 - 2016)



**Total Expenses by Type**

# Expenses

## Projects:

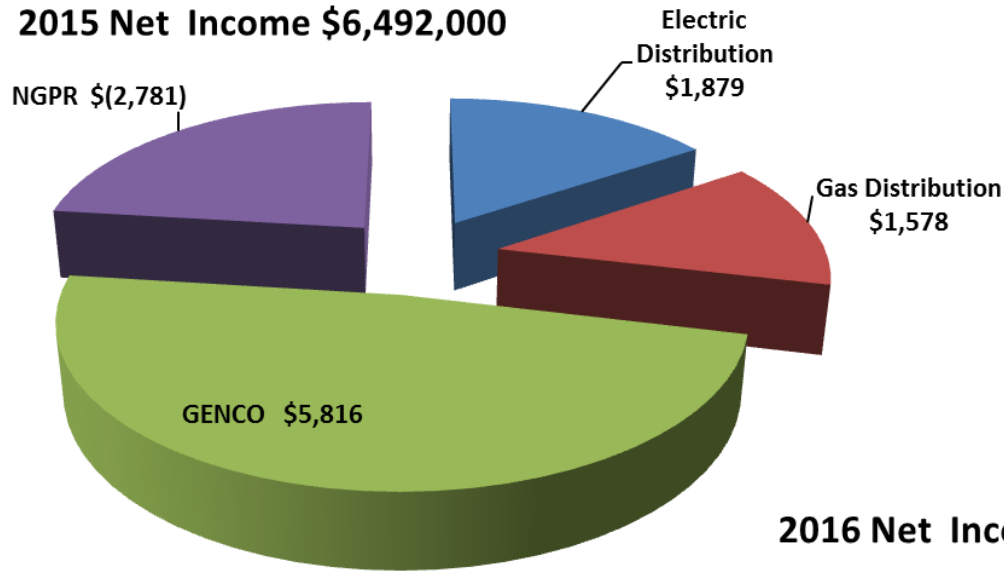
- Expenses decreased in 2015 from 2014 mainly due to lower operations and maintenance due to reduced maintenance work.
- Amortization decreased due to less capital projects being completed and lower net book value due to a forecasted impairment in NGPR in 2014.

## Staffing:

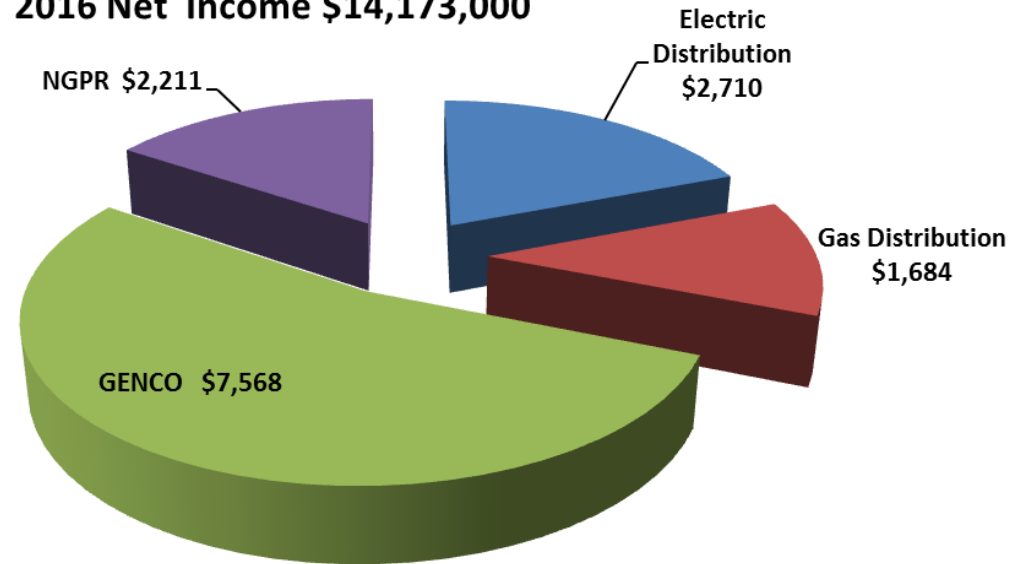
- An overall reduction of 14 positions from the Energy Division in 2015 from 2014.
- By the end of this budget cycle (2016 from 2012) NGPR will be down 17 positions – nearly 15%.

# Net Income by Division

2015 Net Income \$6,492,000

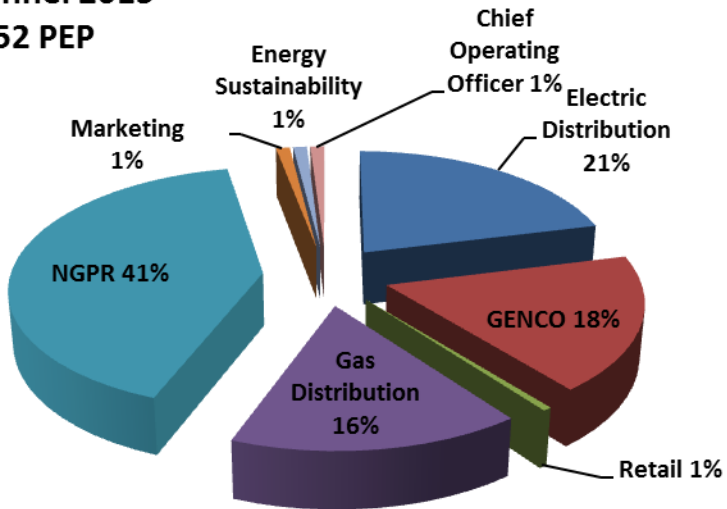


2016 Net Income \$14,173,000



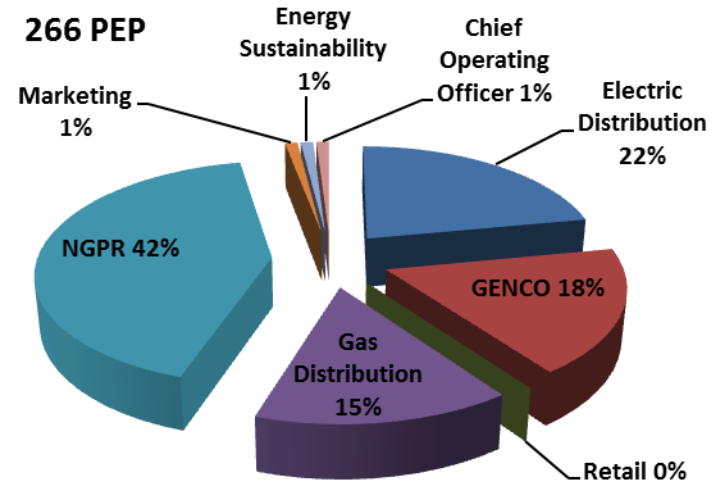
# Personnel Summary

**Personnel 2015**  
252 PEP



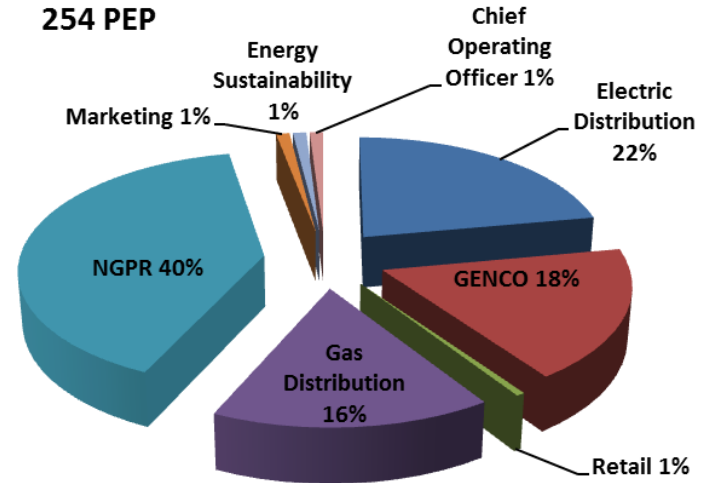
**Personnel 2014**

266 PEP



**Personnel 2016**

254 PEP





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**ELECTRIC DISTRIBUTION**  
**2015 - 2016**  
**Operating and Capital Budgets**

# ELECTRIC DISTRIBUTION – PURPOSE AND OBJECTIVE

## Purpose:

To safely distribute electrical energy within the City's service area.

## Objective:

TO distribute electrical energy to customers in a safe and reliable manner, providing a rate advantage and delivering a financial return that is in keeping with Alberta Utilities Commission principles enabling Electric Distribution to pay the 6.25% of equity dividend.

# ELECTRIC DISTRIBUTION - ASSUMPTIONS

- The CMH Electric Distribution System (service area) will continue to maintain exemption from all requirements of Part 7 of the Electric Utility Act (EUA)
- The CMH Electric Distribution System or Transmission Facilities within the service area of CMH will remain separate from inclusion in the Alberta Interconnected Electric System (AIES)
- Distribution Tariffs will be calculated following a Cost of Service model
- Maintain best-in-class operational construction standards
- Develop and implement operational structural review recommendations
- City Council's Strategic priorities align with Electric Distributions objectives of sustaining environment and infrastructure; financial responsibility focused on the long term; as well as ensuring public and employee safety

# ELECTRIC DISTRIBUTION

## 2015-2016 Capital Budget for Approval

Electric Distribution Capital Project	2014 Budget	2015 Proposed Budget	2016 Proposed Budget	2017 Forecast Budget	2018 Forecast Budget
Infrastructure projects (Over \$1M):					
Overhead Distribution System	1,111				
Downtown Network Upgrade		1,750		-	-
Substations	10,000				
Subdivision Redevelopment		-	-	2,000	-
Replace 69 Kv Transformers		-	-	-	-
Transmission Upgrade: Convert MH-15L		-	2,100	-	-
Buildings	2,339				
Infrastructure projects (under \$1M)	1,941	7,074	3,155	4,335	4,580
<b>Total Capital</b>	<b>\$ 15,391</b>	<b>\$ 8,824</b>	<b>\$ 5,255</b>	<b>\$ 6,335</b>	<b>\$ 4,580</b>

Significant Capital Budget additions proposed for 2015 - 2016 are:

- Downtown Network Upgrade – the majority of the downtown network system was constructed prior to 1980; an infrastructure investment is required to ensure the safe, reliable delivery of electricity to the downtown core.
- Transmission Upgrades – the City will acquire a transmission line from AltaLink to allow the Power Plant to import and export power from the new inter-tie.



# ELECTRIC DISTRIBUTION – CAPITAL PLAN

Electric Distribution - Capital Budget Requests							
	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
	<u>Budget*</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Forecast</u>	<u>Forecast</u>
Overhead Distribution Systems	1,061	1,045	1,111	1,266	-	1,200	1,250
Underground Distribution Systems	-	1,145	-	2,395	-	2,730	-
Transmission	4,740	9,900	-	-	2,100	-	-
Substations	-	-	10,000	-	-	-	-
Buildings	-	1,800	2,339	-	-	-	-
Distribution System - Contributed	-	-	-	1,010	-	1,290	1,290
Projects < \$1M	3,492	1,871	1,941	4,153	3,155	-	2,040
<b>Total</b>	<b>\$ 9,293</b>	<b>\$ 15,761</b>	<b>\$ 15,391</b>	<b>\$ 8,824</b>	<b>\$ 5,255</b>	<b>\$ 5,220</b>	<b>\$ 4,580</b>
* AMI Capital for Gas and Water Removed							

# ELECTRIC DISTRIBUTION

## 2015-2016 Operating Budget for Approval

Electric Distribution Financial Summary	2014 Budget	2014 Forecast	2015 Proposed Budget	2016 Proposed Budget	2017 Proposed Forecast	2018 Proposed Forecast
Revenues	17,363	17,063	17,314	19,450	20,255	20,508
Expenses	16,411	15,918	15,435	16,740	17,640	17,900
Net Earnings (Loss)	952	1,145	1,879	2,710	2,615	2,608
Dividend Payable	919	934	945	1,004	1,110	1,204
Closing equity	14,118	15,124	16,058	17,763	19,268	20,672
Return on Equity	6.8%	7.9%	11.7%	15.3%	13.6%	12.6%

The 2015 proposed Operating Budget changes from 2014 Approved Budget plans a Net Income of \$1,879,000 (11.7% ROE) as compared to \$952,000 (6.8% ROE) in the approved 2014 Budget.

The significant changes are:

Revenues decrease by \$49,000:

- Distribution Tariff revenue increases by \$897,000
- Communications and Electrical Maintenance revenue decreases by \$1,830,000;
- Rechargeable revenue increases by \$220,000;
- Automated Meter Infrastructure recovery increases by \$565,000

Expenses decrease by \$976,000:

- Interest expense decreases by \$124,000;
- Operations & Maintenance expense increases by \$235,000;
- Administrative expense decreases by \$216,000;
- Communications and Electrical Maintenance relocation reduces expenses by \$1,252,000
- Rechargeable project expense increases by \$220,000

# Why is an electric rate increase required in 2015?

## 2015 Electric Rate Increase Synopsis:

- Investment in new infrastructure to support load growth  
([\\$1.03/month - \\$12.36/year](#))
- Replacement of aging infrastructure  
([\\$0.41/month - \\$4.92/year](#))
- Upgrade systems to current technology  
([\\$0.29/month - \\$3.48/year](#))
- Continue to focus on Health and Safety  
([\\$0.07/month - \\$0.84/year](#))
- Continue to deliver reliable electricity  
([priceless](#))

# ELECTRIC DISTRIBUTION

## 2015 – 2016 PROPOSED STAFF

Power System Electricians – The current staff levels cannot sustain the amount of maintenance and capital work required to maintain system integrity. Although outsourced resources are being utilized, Electric Distribution needs to build the internal knowledge base to better deal with system interruptions and reduce outage times.

(2 PEP – 2015; 1 PEP – 2016)

Powerline Technicians – Additional proposed staff increases will support the execution of the asset management and renewal plan developed which includes an additional annual capital investment of \$2.75M. Current staff compliment has remained unchanged since 1990 despite large infrastructure increases and asset aging, requiring additional maintenance.

(1 PEP – 2015; 1 PEP – 2016)

Engineering Technologist – Additional proposed staff are required to support the asset management and renewal plan. It is also critical to ensure the electrical system is designed to meet best-in-class construction standards.

(1 PEP – 2015)

# DISTRIBUTION TARIFF REVENUE

## Electric Distribution

### Cost of Service Model

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
							18,722			
Rate Base	23,789	28,926	27,556	28,784	30,265	39,471	43,683	62,405	66,522	66,701
Weighted Average Cost of Capital	7.71%	7.60%	6.76%	7.39%	7.26%	7.08%	6.96%	6.87%	6.78%	6.71%
<b>EXPENSES</b>										
Cash Expenses (excluding interest)	5,932	6,664	7,835	7,493	7,620	7,841	7,804	8,046	8,129	8,248
Amortization	1,709	1,917	1,876	1,670	1,758	1,708	1,944	2,609	3,098	3,188
Return*	1,835	2,197	1,864	2,126	2,197	2,795	3,040	4,286	4,510	4,474
<b>TOTAL EXPENSES</b>	<b>9,476</b>	<b>10,778</b>	<b>11,575</b>	<b>11,289</b>	<b>11,575</b>	<b>12,344</b>	<b>12,788</b>	<b>14,941</b>	<b>15,737</b>	<b>15,910</b>
<b>REVENUE</b>										
Tariff Revenue	9,483	10,806	11,593	11,315	11,600	11,924	12,821	14,955	15,722	15,935
<b>TOTAL REVENUE</b>	<b>9,483</b>	<b>10,806</b>	<b>11,593</b>	<b>11,315</b>	<b>11,600</b>	<b>11,924</b>	<b>12,821</b>	<b>14,955</b>	<b>15,722</b>	<b>15,935</b>

\* is calculated based on the Weighted Average Cost of Capital x the rate base (net book value of assets plus provision for working capital)

# ELECTRIC DISTRIBUTION

## 2015 Rate Revenue Requirements

Non-Commodity Charges	2014 Approved Budget (000's)	2014 Projected Actual at Q2 (000's)	2015 Budget for Approval (000's)
Administration Charge	\$3,294	\$3,256	\$2,686
Distribution Tariff	\$11,924	\$11,824	\$12,821
Capacity Charge	\$7,277	\$7,174	\$8,445

Rate Revenue requirements are the cost of service expenses to be recovered from rates. Rate revenue requirement changes from 2014 to 2015 are:

- Administration Charge – expenses decreased by \$608,000. Line loss costs decreased by \$691,000 to \$1,766,000 due to lower forecast commodity costs for energy; and, administration expenses increased by \$83,000 to \$920,000.
- Distribution Tariff – the revenue requirement increased by \$897,000 is the result of increased rate base of \$482,000 (capital infrastructure), \$415,000 is the result of executing the asset renewal and maintenance plan and increased interdepartmental charges (purchasing/stores, safety and environment).
- Capacity Charge – payments to Genco increase by \$1,169,000. Charge is based on expenses that would be incurred for 90 MW of system access service. The increase is the result of increased transmission tariffs.

# ELECTRIC DISTRIBUTION – FINANCIAL SUMMARY

Electric Distribution Financial Summary	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
	Actual	Actual	Actual	Actual	Actual	Budget	Proposed Budget	Proposed Budget	Proposed Forecast	Proposed Forecast
Revenues	14,216	14,809	16,402	16,765	19,398	17,363	17,314	19,450	20,255	20,508
Expenses	12,933	13,225	14,141	14,979	17,887	16,411	15,435	16,740	17,640	17,900
Net Earnings (Loss)	1,283	1,584	2,261	1,786	1,511	952	1,879	2,710	2,615	2,608
Dividend Payable	665	688	744	839	895	919	945	1,004	1,110	1,204
Closing equity	11,008	11,903	13,420	14,326	14,943	14,118	16,058	17,763	19,268	20,672
Return on Equity	11.7%	13.3%	16.8%	12.5%	10.1%	6.8%	11.7%	15.3%	13.6%	12.6%

## 2015 ELECTRIC NON-COMMODITY RATES \*

\*Customer Classes: E.2 Farm; E.6 Unmetered; E.7 Rental Lighting; & E.8 Street Lighting are not shown on chart

Rate Class	Rate Class Application	Admin. Charge (includes Line Losses)	Distribution Tariff		Capacity Charge	Change Impact on Average Customer
			Monthly Service Charge	Facilities Usage Charge		
Residential	Individual residence or apartment suite through a single meter	\$0.0058 / kWh  * (\$0.0068)	\$ 8.34 / Month  (\$7.73)	\$0.0135 / kWh  (\$0.0118)	\$0.0129 / kWh  (\$0.0118)	Increase of \$1.80 month for average customer 655 kWh month
Small Commercial	<5,000 kWh / month <25 kVA / month	\$0.0043/ kWh  (\$0.0053)	\$ 12.05 / Month  (\$10.98)	\$0.0130 / kWh  (\$0.0122)	\$0.0129 / kWh  (\$0.0118)	Increase of \$2.31 month for average customer 1,364 kWh month
Medium Commercial	>5,000 kWh / month >25 but <2,000 kVA / month	\$0.0034 / kWh  (\$0.0045)	\$ 48.22 / Month  (\$44.37)	\$3.53 / kVA  (\$3.45)	\$0.0129 / kWh  (\$0.0118)	Increase of \$8.50 month for average customer 17,166 kWh month

\* Current Rates



## 2015 ELECTRIC NON-COMMODITY RATES\*

\*Customer Classes: E.2 Farm; E.6 Unmetered; E.7 Rental Lighting; & E.8 Street Lighting are not shown.

Rate Class	Rate Class Application	Admin. Charge (includes Line Losses)	Distribution Tariff		Capacity Charge
			Monthly Service Charge	Facilities Usage Charge	
Large Commercial	Primary Metered Minimum Service Capacity: 1,000 kVA Voltage: 13,800 Volts	\$0.0010 / kWh  *(\$0.0014)	\$47.52 / Month  (\$43.52)	\$3.34 / kVA  (\$2.89)	\$0.0129 / kWh  (\$0.0118)
Industrial	Primary Metered Minimum Service Capacity: 1,000 kVA Voltage: 13,800 Volts	\$0.0010 / kWh  (\$0.0014)	\$46.93 / Month  (\$42.27)	\$3.23 / kVA  (\$2.80)	\$0.0129 / kWh  (\$0.0118)

\* Current Rates

# Electric Non-Commodity Rates - Comparison

## Residential (Regulated Rate Option) Customers

### ELECTRIC NON-COMMODITY RATES - COMPARISON

Residential (Regulated Rate Option) Customers

- Energy Charges are not included in this comparison

Based on customer using 655 kWh in month		Enmax - Calgary*	Epcor - Edmonton*	Lethbridge*	Red Deer*	Average	CMH 2015
Admin Charge (calculated \$ for month)		\$7.24	\$6.04	\$6.10	\$7.74	\$6.78	\$3.80
Distribution Access Service (DAS)	DAS Service Charge (\$/month)	\$12.85	\$15.37	\$18.17	\$13.06	\$14.86	\$8.34
	DAS Usage Charge (\$/kWh)	\$0.0086	\$0.0072	\$0.0098	\$0.0145	\$0.0100	\$0.0135
System Access Service (SAS)	SAS Service Charge (\$/month)	----	----	\$7.30	\$12.85	\$10.08	----
	SAS Variable Charge (\$/kWh)	\$0.0195	\$0.02785	\$0.0227	\$0.0111	\$0.0203	\$0.0129
	SAS Deferral Rider (\$/kWh)	\$0.0084	-\$0.00424	\$0.0068	-\$0.0050	\$0.0037	----
	Balancing Pool Rider (\$/kWh)	(\$0.0056)	(\$0.0118)	(\$0.0057)	(\$0.0057)	(\$0.0072)	----
Local Access Fee (calculated \$ for month)		\$9.82	\$4.72	\$11.64	\$7.44	\$8.41	None
Total Non-Commodity Charges for month		\$50.13	\$38.59	\$65.22	\$50.86	\$ 51.20	\$29.43

\* Rates in effect for October 2014; 2015 rates not known at this time

\*\* CMH Capacity Charge based on a notional 90MW of SAS



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**ELECTRIC GENERATION**  
**2015 - 2016**  
**Operating and Capital Budgets**

# Electric Generation – Purpose And Objectives

## Purpose:

To ensure the residents of Medicine Hat receive a safe and reliable supply of electricity at competitive rates while earning a targeted financial return on equity and support community initiatives on renewable energy.

## Objective:

Utilize operational / maintenance efficiency and optimization to deliver electricity from City owned generation as well as managing power purchase agreements, and/or the use of imports.

# Electric Generation

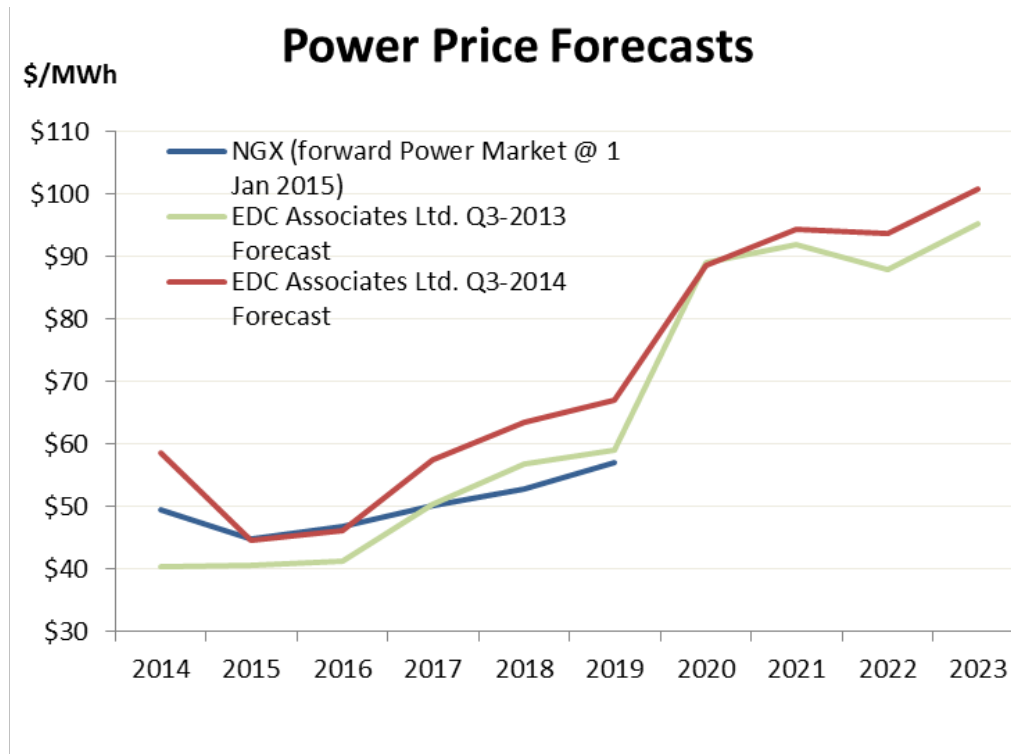
## 2015-2016 Tangible Capital Asset Budget For Approval

	Capital Project	Year	Amount
1	Upgrade #12 Pumphouse	2015	\$200,000
2	Waste Storage Containment	2015	\$90,000
3	Steam System Low Pressure Interconnection	2015	\$155,000
4	Upgrade #14/15 Chiller Control System	2015	\$200,000
5	Fire Suppression System Main Building	2015	\$300,000
6	Power Plant Building Fire System Interconnection	2015	\$60,000
7	Auxiliary Site Grading and Paving	2015	\$200,000
8	ION Server	2015	\$15,000
9	Document Management Software	2015	\$100,000
		<b>2015 Total</b>	<b>\$1,320,000</b>
10	Upgrade Unit #14 Turbine Control System	2016	\$750,000
11	Unit #15 Engine Replacement	2016	\$7,500,000
		<b>2016 Total</b>	<b>\$8,250,000</b>
	<b>2015-2016 Budget Total</b>		<b>\$9,570,000</b>

Significant Capital Budget items proposed for 2015-2016 to be financed from the Electric Facility and Equipment Reserve are:

- **Turbine Control System.** Approval is required for Unit #14 Turbine Control System at a cost of \$750,000. The current control system is obsolete and not supported therefore this would allow GENCO to convert to a common system with common spares
- **Unit #15 Engine Replacement.** \$7,500,000 new capital item for Unit #15 Engine Replacement. In 2016 Unit #15 is expected to be at end of life due to operational hours and will require an engine change out

# Electric Generation Power Price Forecast



The Energy Division used NGX forward Power (market trading) pricing as the forecast for Electric Budgeting in the near term (0-5 years); and EDC Associates Ltd (computer simulation) forecast pricing for analysis of capital investments that require a revenue outlook beyond five years.

# ELECTRIC GENERATION

## 2015-2016 Budget Assumptions

Commodity Assumptions	2014 Budget	2014 Projected	2015 Budget	2016 Budget
<b>Price Forecasts</b>				
• MRP Energy - Res/Sm&Med Com: Average RRO (¢/kWh)	6.56	7.56	5.14	5.71
• MRP Energy - LgCom/Indrl: Power Pool (¢/kWh)	5.78	7.49	6.47	6.69
• MRP Capacity Charge (based on notional 90MW STS) (¢/kWh)	1.18	1.18	1.29	1.29
• Energy Supply Pricing (ESP): Fuel Supply Charge (FSC)*+ Demand Supply Charge (DSC)**				
* FSC = 9.5 HR (GJs/MWh) x Gas Price (\$/GJ) in (¢/kWh)	3.27	4.17	2.95	3.16
** DSC for Res/Sm&Med Com customers (¢/kWh)	7.26	7.68	6.43	6.99
** DSC for LargeCom/Industrial customers - (\$/kVA)	18.73	18.73	17.22	17.27
• Average AECO C Gas Price (\$/GJ)	3.44	4.39	3.10	3.33
<b>Volume Forecasts</b>				
• Residential & Small/Med Com (GWhs)	529	512	530	535
• Large Com & Industrial (GWhs)	322	325	326	327
• Genco Gas Usage (GJs) x 1000	5,901	6,000	6,006	6,189

Notes:

1. Commodity Assumptions are from monthly NGX forward prices for both Natural Gas and Base Load Power as at January 1, 2015



# Electric Generation

## 2014 Operating Budget For Approval

	2014 Budget (000's)	2014 Projected (000's)	2015 Budget (000's)	2016 Budget (000's)
Revenues	\$85,436	\$91,709	\$70,938	\$73,883
Expenditures	\$73,423	\$78,189	\$65,121	\$66,315
Net Earnings	<b>\$12,013</b>	<b>\$13,520</b>	<b>\$5,817</b>	<b>\$7,568</b>
Return on Equity (ROE)	6.6%	7.7%	3.6%	4.5%
Personnel Positions (PEPs)	46	46	46	46
Return on Employed Equity	13.3%	16.7%	5.1%	7.0%

### Operating Budget Amendments:

Generation's 2015 proposed operating budget for approval plans a Net Income of \$5,817,000 (3.6% ROE) as compared to a projected Net Income of \$12,013,000 (6.6% ROE) in the approved 2014 Budget. The significant changes are:

- Sales to Retail - \$8,447,000 decrease due to forecast lower market reference prices.
- Sales to Power Pool - \$5,691,000 decrease due to forecast lower power pool prices.
- Miscellaneous Revenue- \$2,467,000 increase due to higher expected ancillary service revenue.
- Administration - \$776,000 increase due to increases in insurance premiums, consulting, and interdepartmental charges;
- Plant Operations and Maintenance expenditures - \$4,991,000 decrease in plant maintenance expenditures due to not having any scheduled hot section replacements (\$2.5M) and major inspections on the steam turbines (\$2.0M)
- Fuel expenditures – \$1,185,000 decrease due mainly to forecast lower natural gas prices.
- Payment in lieu of tax (PILOT) – \$1,123,000 decrease due to decreased value added from transactions with the grid.





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# **ENERGY SUSTAINABILITY**

## **2015 – 2016**

### **Operating Budget**

# ENERGY SUSTAINABILITY – PURPOSE AND OBJECTIVES

## Purpose:

Energy Sustainability's primary function is to prepare local residents for a fossil fuel constrained world by delivering education and incentive programs, and by providing support and leadership to encourage progress towards local energy sustainability goals and objectives as outlined in the Community Environmental Roadmap.

## Objectives:

Community – to assist the community in reaching the energy related targets, the City developed a residential renewable energy and conservation program under its environmental brand, HAT Smart. The objective of the program is to educate and assist residents in managing the environmental and economic impact of their household energy consumption. The 2008 Community Environmental Roadmap set the energy targets as:

- 25% of residential energy from renewable sources by 2025
- 20% decrease in residential per capita energy consumption by 2020

# ENERGY SUSTAINABILITY – PURPOSE AND OBJECTIVES

## Objectives (continued):

Customer Care – provide customer support to City energy customers based on direct information requests by customers and/or referrals from City Hall customer service and utility billing staff. Service includes home/business energy audits, HAT Smart program awareness, energy counselling and utility rate education.

Energy Sustainability also supports City Council's environmental stewardship priority by monitoring community progress towards all the targets outlined in the Community Environmental Roadmap.

# ENERGY SUSTAINABILITY – OPERATING BUDGET

Energy Sustainability Financial Summary	2014 Budget	2015 Proposed Budget	2016 Proposed Budget
Revenue	\$830,937	\$557,650	\$560,286
Expenditures	\$830,937	\$557,650	\$560,286
Net	\$0	\$0	\$0

## Revenue:

- Energy Conservation Charge revenue decrease (\$25,000)
- Cancellation of the HAT Smart Commercial program (\$200,000), therefore, Energy Dividend support not required
- Interdepartmental Allocations reduced (\$48,300)

## Expenditures:

- Decrease in expenses due to not funding vacant manager position; decrease in interdepartmental allocations; offset by increases to advertising and contracted services (net reduction of \$48,300)
- Cancellation of the HAT Smart Commercial program (\$200,000) and reduction in available monies for the HAT Smart Residential program (\$25,000)



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**GAS DISTRIBUTION**  
**2015 - 2016**  
**Operating and Capital Budgets**

# GAS DISTRIBUTION – PURPOSE AND OBJECTIVE

## **Purpose:**

To distribute natural gas to customers within its franchise boundary.

## **Objectives:**

To distribute natural gas to customers in a safe and reliable manner, providing a rate advantage which has an economic development attribute, and obtaining a financial return that is in keeping with Alberta Utilities Commission principles enabling Gas Distribution to pay a 6.25% of equity dividend.

# GAS DISTRIBUTION - ASSUMPTIONS

- The CMH Gas Distribution business unit will continue to provide gas distribution services within the franchise area.
- The annual volume of natural gas moved through the distribution system is based on a 5 year average of past years (6.1M gj/annum)
- Full staffing levels, with a managed manpower component. Wage increases area based on the 2.5% annual increase in the budget instructions.
- Distribution tariffs will be calculated on a zero “cross subsidy” basis, with a current COSA model.
- Regulatory standards for safety, environment and operating practices will always be met.
- Council’s strategic priorities of sustainable infrastructure, financial responsibility and public/employee safety are the basis of the business plan/budget.



# BUDGET ADJUSTMENT OVERVIEW

- The proposed 2015 Gas Distribution Budget requests an increase in overall Revenue of \$460K, of which \$336K will come from increased Distribution Tariffs.
- Overall Expenses increase by \$364K as a result of net increases in costs for Trans Canada pipeline delivery charges \$266K, a new engineering position at \$86K and interdepartmental charge backs for safety/environmental compliance \$166K. These new costs were offset by small savings in a variety of accounts.
- The anticipated return is 8.0% while maintaining a Medicine Hat advantage of 49% for residential customers when compared to the 2014 rates of Alberta competitors.



# GAS DISTRIBUTION

## Operating Budget Amendments

Gas Distribution Financial Summary (in thousands of dollars)	2014 Budget	2014 Forecast	2015 Proposed Budget	2016 Proposed Budget
Revenues	12,918	13,046	13,378	13,928
Expenses	11,436	11,183	11,800	12,244
Net Earnings (Loss)	1,482	1,863	1,578	1,684
Dividend Payable	1,183	1,172	1,215	1,238
Closing equity	19,227	19,444	19,807	20,253
Return on Equity	7.8%	9.9%	8.0%	8.4%

### Operating Budget changes from 2014 to 2015:

Distribution's 2015 proposed operating budget for approval plans a Net Income of \$1,578,000 (8.0% ROE) as compared to \$1,482,000 (7.8% ROE) in the approved 2014 budget. The significant changes are:

- Revenues increase by \$460K:
  - increase in Distribution Tariff revenue of \$336K
  - increased transportation fees on the high pressure pipeline system \$79K
- Expenses increase by \$364K:
  - net increases in costs for Trans Canada pipeline delivery charges \$266K
  - a new engineering position \$86K
  - interdepartmental charge backs for safety/environmental compliance \$166K

# Why is an gas rate increase required in 2015?

## 2015 Gas Rate Increase Synopsis:

- Continued funding of replacement infrastructure, due to condition, capacity and technology (\$56K increase in interest expense and amortization, and \$86K for engineering position for pipeline integrity.)
- Increase in resources to focus on Health, Safety and Environment (\$166K for new position within Disco)
- Ensure availability of purchased peaking energy through the Alberta TCPL pipeline system (\$266K increase for 2015)

# GAS DISTRIBUTION

## Incremental Staffing (2015-2106 Operating Budget)

- 2015 – 1 PEP, Pipeline Integrity Engineer
  - Current pipeline and utility codes include requirements for integrity investigation, engineering assessments and material examinations during replacement/upgrades.
- 2016 – 1 PEP, Data Analyst
  - This position will assist in the analysis of data from the SCADA System, Engineering modeling, the AMI metering data and operational observations.
  - Operating and maintenance practices will be adjusted to reflect high use or high cost activities.

# GAS DISTRIBUTION

## 2015-2016 Rate Revenue Requirements

<b>Non-Commodity Charges</b>	<b>2014 Approved Budget (000's)</b>	<b>2014 Forecast (000's)</b>	<b>2015 Budget (000's)</b>	<b>2016 Budget (000's)</b>
<b>Admin Charge</b>	\$961	\$1,005	\$1,076	\$1,104
<b>Distribution Tariff</b>	\$11,032	\$11,451	\$11,368	\$11,920

Rate Revenue requirements are the “cost of service” expenditures to be recovered from rates. Significant rate revenue requirement changes for 2014 are:

- Admin Charge – increase by \$114K, mostly due to a recovery of service costs through inter-departmental charges. (See Decision Item for detail) These costs are recovered through the Administrative Charge on the utility bill.
- Distribution Tariff – Increase by \$336K, primarily due higher recovery for inter-departmental charges, operational costs (including salary increases) and offset by some operational savings (See Decision Item for detail).

# GAS DISTRIBUTION

## Tangible Capital Asset Budget

Gas Distribution Capital Projects (in thousands of dollars)	2014 Approved Budget	2015 Proposed Budget	2016 Proposed Budget	2017 Forecast Budget	2018 Forecast Budget	2019 Forecast Budget
New Services (MP) - Third Party	299	329	329	335	370	378
Mains Replacement	1,500	1,550	1,600	1,600	1,650	1,650
Mains Extensions- Subdivisions	192	515	330	704	418	739
Regulating Stations	125	429	820	828	257	100
Meters	205	331	407	412	422	437
Cathodic Protection	38	116	60	60	61	62
Office Equipment	35	35	60	35	15	35
Distribution Equipment	171	158	107	43	26	51
SCADA System	30	250	30	30	130	30
<b>Total Capital</b>	<b>\$ 2,595</b>	<b>\$ 3,713</b>	<b>\$ 3,743</b>	<b>\$ 4,047</b>	<b>\$ 3,349</b>	<b>\$ 3,482</b>

Significant Capital Budget funds proposed for 2015 - 2016 are:

- Main replacement – to ensure safe and reliable delivery of natural gas, continuous investment and improvement of the infrastructure is required. The largest project anticipated in this budget cycle is main upgrading around the expansion of the Medicine Hat Hospital.
- Regulating Stations – several stations need to be relocated due to proximity to residential development and require upgrading to comply with safety/regulatory changes.
- Meters – government testing of gas meters will continue every year, and replacement of failed meters will need to be done on an annual basis.
- SCADA – the existing Distribution system is no longer reliable, and must be replaced to provide accurate data to Operations, to ensure reliable delivery of gas and timely alarms of any problems.

# 2015 PROPOSED GAS RATES

Rate Class	Rate Class Application	Admin Charge	Distribution Tariff		Energy Conservation Charge	Impact on Customer
			Monthly Service Charge	Delivery Charge		
Rate Class A Residential	≤ 5,000 Gjs in one year	\$0.215/ Gj <i>(was \$0.194)</i>	\$18.02/ Mth <i>(was \$17.92)</i>	\$1.034/ Gj <i>(was \$1.028)</i>	\$1.01 / Gj if greater than 22 Gjs/Month	Increase of \$0.38/mth for avg. customer 10.5 GJs/month
Rate Class A Commercial & Industrial	≤ 5,000 Gjs in one year	\$0.215/ Gj <i>(was \$0.194)</i>	\$18.02/ Mth <i>(was \$17.92)</i>	\$1.034/ Gj <i>(was \$1.028)</i>	-----	Increase of \$1.18/month for avg. customer 40 GJs/month
Rate Class B Commercial & Industrial	>5,000 Gjs in one year	\$0.094/ Gj <i>(was \$0.077)</i>	\$425.25/ Mth <i>(was \$416.32)</i>	\$0.417/ Gj <i>(was \$0.405)</i>	-----	Increase of \$21.11/month for avg. customer 420 GJs/month
Rate Class C High Pressure Service	Use Gas Distribution's high pressure system to transport natural gas to the Consumer's premises		\$1,250/ Mth <i>(was \$1,000)</i>	\$0.157/ Gj <i>(was \$0.151)</i>	-----	-----

# GAS MARKET RATES – COMPARISON

## *Residential Customers (2014 Alberta Retailers vs 2015 CMH Proposed Rate)*

Comparison based on 10.5 GJs and 30 days		Calgary	Lethbridge	Edmonton	Red Deer	Average	CMH 2015
Admin Charge (\$/month)		\$6.69	\$6.69	\$6.69	\$6.69	\$6.69	\$2.26
Fixed Charge (FC)	Distribution (Base)	\$22.95	\$22.95	\$26.28	\$26.28	\$24.62	\$18.02
	Variable Distribution (Base)	\$7.64	\$7.64	\$8.38	\$8.38	\$16.01	\$10.86
Delivery Charge (DC)	Transmission Service Charge	\$8.00	\$8.00	\$8.00	\$8.00		
	*Rider S (N) -5.90% of Base DC			\$0.00	\$0.00		
	*Rider S (S) -19.65% of Base DC	\$0.00	\$0.00				
	**Rider H (S) Refund Carbon Costs	\$0.00	\$0.00				
	Rider L - Load Balancing *Rider W	\$0.00 \$0.00	\$0.00 \$0.00	\$0.00	\$0.00		
Third Party Transportation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Local Access Fee	\$8.64	\$12.93	\$16.21	\$16.17	\$13.49	\$0.00	
<b>Total Charges for the Month</b>		<b>\$53.92</b>	<b>\$58.21</b>	<b>\$65.56</b>	<b>\$65.52</b>	<b>\$60.80</b>	<b>\$31.13</b>

- ✓ Compared to 2014 Distribution Rates of other Alberta Utilities





*A Community of Choice*



# **NATURAL GAS AND PETROLEUM RESOURCES**

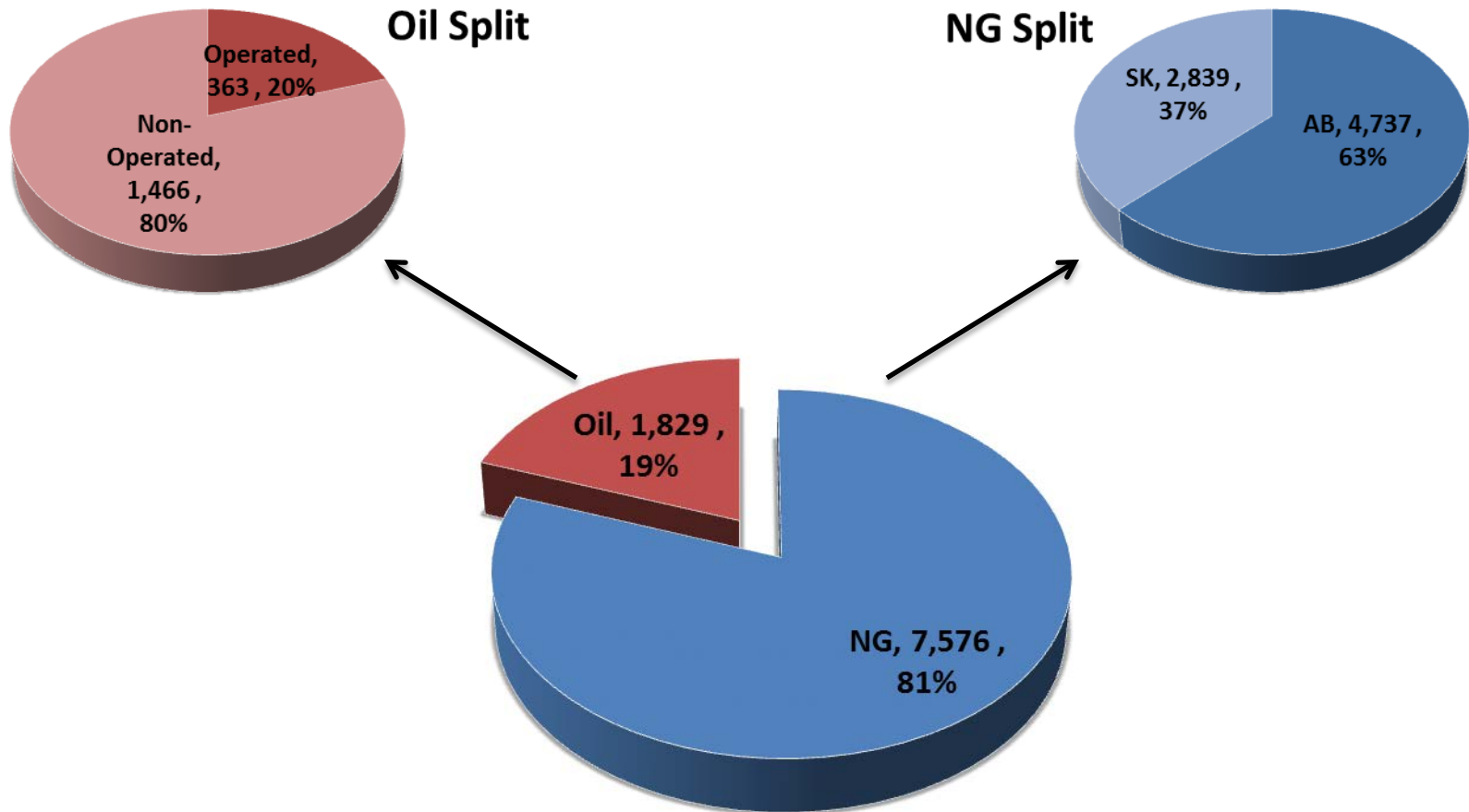
**2015 - 2016**

**Operating and Capital Budgets**

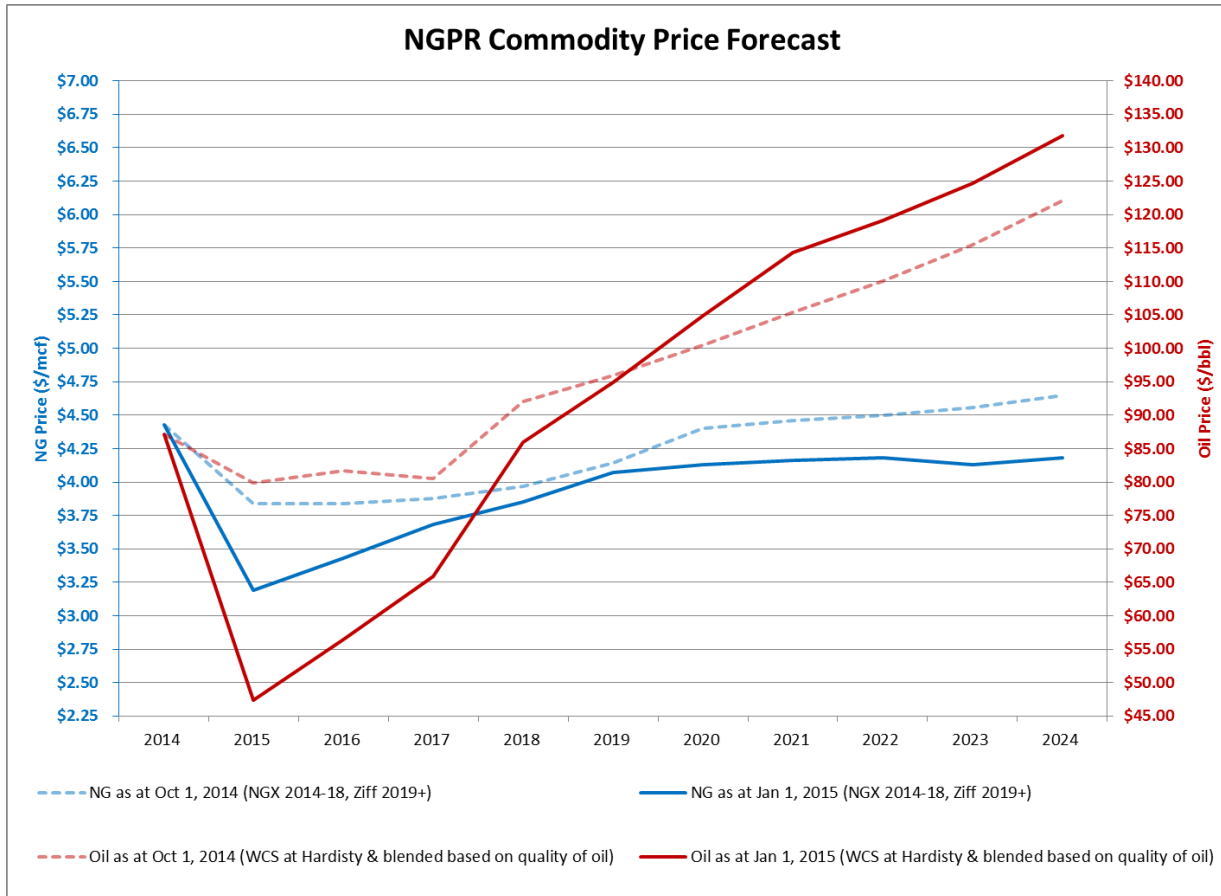


# CMH 2015 Budgeted Production (boed)

Includes Allied Oil & Gas  
(Oil to NG Converted at 6:1)



# NGPR Commodity Information



30% - 40% recent decline in oil and natural gas prices have prompted a **“Prudent Reduction”** budget.

# NGPR Purpose And Objective

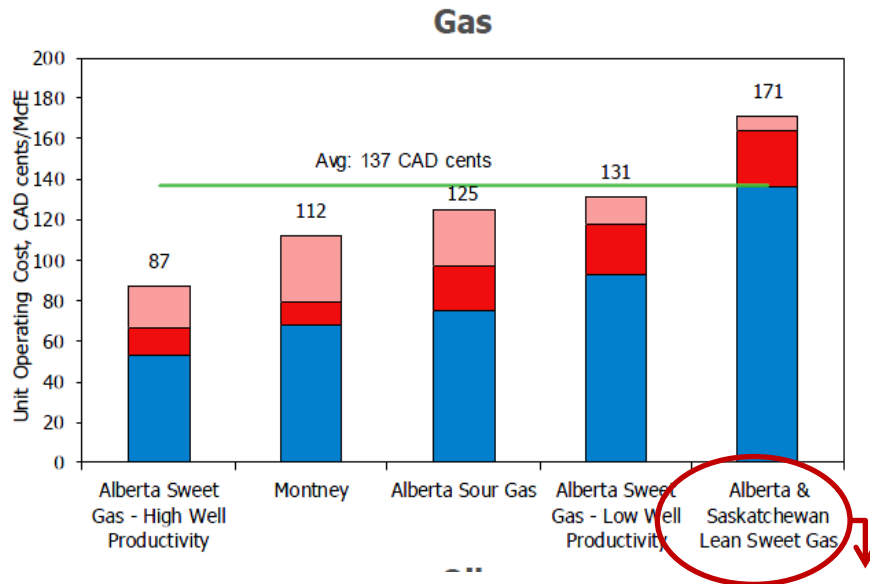
## Purpose:

- To manage the City's oil and natural gas assets for the benefit of the taxpayers in the City of Medicine Hat.

## Objective:

- Conduct business in a safe and ethical manner within regulatory standards, maximizing shareholder value and cash flow through controlling costs, expedient abandonment of non-economic assets, optimizing current production, continued development where economic, and through potential accretive acquisitions.
- Reduce costs prudently as the size and scope of the operations are reduced over time.

# Natural Gas - Ziff Study – Oct 2014



- Average unit costs for the Gas Asset Groups and the Oil Asset Groups are shown. Total unit cost includes the eight standard cost classifications, plus adjustments made for processing in another company's facilities, and the use of lease gas.
- These figures also display the splits between Energy Costs, External Processing, and Other (the remainder of the costs).

Local sweet shallow natural gas: high operating costs vs. unconventional gas (left hand side of chart)

# NGPR Business Plan – Natural Gas Goals

- Shallow conventional natural gas in SE Alberta / SW Saskatchewan is at a disadvantage:
  - High cost (due to low productivity and a high proportion of fixed costs such as property taxes and lease rentals)
  - Distant from market when compared with the new liquids rich or shale gas plays (unconventional gas).
  - Local gas plays are mature, have been intensely developed and are economically challenged in the current price environment.
  - Therefore, further significant acquisitions in local shallow natural gas are not likely.
- Therefore our focus is on optimization of current assets and Prudent Reduction of costs and resources are budgeted.
- Shallow natural gas goal: extract the greatest value possible over the remaining economic life of the existing assets while operating safely and within regulations through cost control, economical performance optimization, preventative maintenance, and prudent abandonment and site reclamation.

# Capital Budget

2014 Budget and Forecast		
	2014 Budget	2014 Estimate at Sep 30/14
<b>CMH Commodity Price</b>		
Oil (\$/bbl)	\$ 80.44	\$ 87.14
Nat Gas (\$/mcf)	\$ 3.56	\$ 4.43
<b>Capital Expenditures (000's)</b>		
Discretionary	\$ 18,710	\$ 6,140
% Change		
Non-Operated	\$ 7,108	\$ 7,104
Non-Discretionary	\$ 8,591	\$ 6,911
<b>Total Capex</b>	<b>\$ 34,409</b>	<b>\$ 20,155</b>
% Change		
Abandonments & Site Re	\$ 12,380	\$ 11,615
% Change		
<b>TOTAL</b>	<b>\$ 46,789</b>	<b>\$ 31,770</b>
% Change		

2015 Budget Changes		
Draft Budget ~ Oct 2014	Prudent Reduction	
\$ 79.92	\$	47.42
\$ 3.84	\$	3.19
\$ 20,366	\$	12,143
		-40%
\$ 7,849	\$	7,090
\$ 8,830	\$	7,589
<b>\$ 37,045</b>	<b>\$</b>	<b>26,822</b>
		-28%
\$ 14,429	\$	18,734
		30%
<b>\$ 51,474</b>	<b>\$</b>	<b>45,556</b>
		-11%

- 40% reduction in discretionary capex vs. previous draft
  - Discretionary projects will undergo final scrutiny before approved
- Non-op – using the most current info we have but likely to be curtailed.
- 30% increase in Abandonment Activity (185-225 wells)
  - Several uneconomic fields to be shut in permanently

# NGPR

## 2015-2016 Tangible Capital Asset Budget for Approval

Capital Budget Summary	2014 Approved Budget (000's)	2014 Forecast* (000's)	2015 Budget (000's)	2016 Budget (000's)	2017 Forecast (000's)	2018 Forecast (000's)
Optimization, Waterflood, Drilling & Completions	13,073	5,198	5,200	10,808	5,148	3,815
Exploitation - Geosciences & Engineering	530	198	1,200	100	250	250
Facilities	2,862	1,957	4,390	3,173	768	1,419
Gathering Pipelines	1,616	856	1,390	333	240	333
Mineral Acquisitions	1,502	656	1,500	1,500	1,500	1,500
Non-Operated	7,108	7,104	7,090	6,827	6,303	4,855
Facility & Pipeline Repair & Abandonment	6,552	4,185	9,328	6,043	5,802	3,711
Surface Lease Reclamation	6,140	4,549	9,675	7,488	9,633	3,900
Well Repair & Abandonment	7,356	6,979	5,698	6,001	6,924	3,673
Equipment	50	88	85	25	25	25
<b>Total</b>	<b>46,789</b>	<b>31,770</b>	<b>45,556</b>	<b>42,298</b>	<b>36,593</b>	<b>23,481</b>

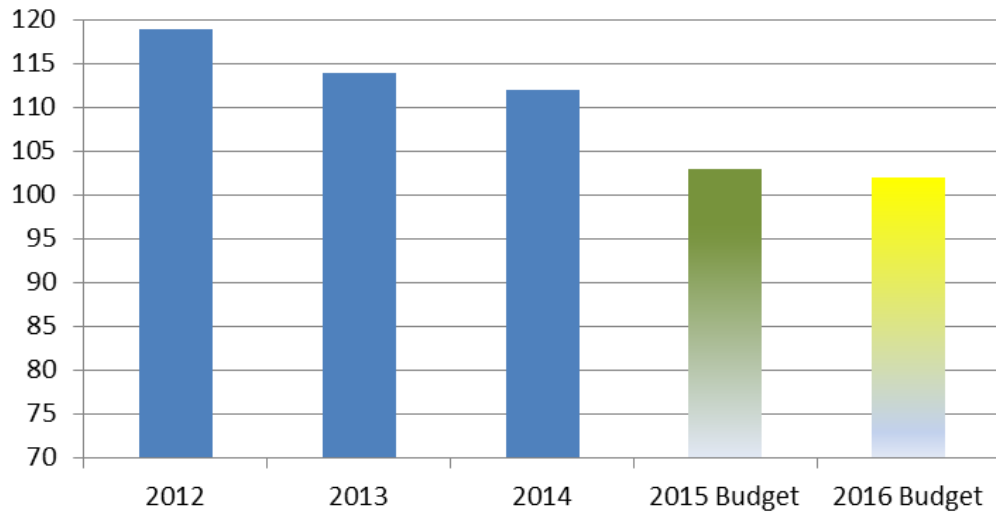
\* As of September 30, 2014

Significant Capital Budget projects proposed for 2015 includes:

- Discretionary Capital - \$5.2M on optimization, waterflood, reactivations, conversions and completions; no new drills in 2015
- Non-Discretionary Capital - \$7.6M on repairs and regulatory work
- Non-Operated Capital - \$6.4M for Glauco. C (polymer project, 6 wells, optimization and maintenance) and \$0.7m on all other non-operated properties. Likely to be curtailed under current commodity prices.
- Abandonment and Reclamation Capital - \$18.7M towards abandonment and reclamation projects on 225 wells and related pipelines and facilities.

# Prudent Reductions – NGPR Positions

**NGPR Permanent Positions**



	<u>Positions</u>	<u>Red. From 2012</u>
<b>2012</b>	119	
<b>2013</b>	114	4.2%
<b>2014</b>	112	5.9%
<b>2015 Budget</b>	103	13.4%
<b>2016 Budget</b>	102	14.3%

- As NGPR is 85% natural gas, and natural gas price has been low for several years, we have been focusing on costs for some time already.
- 2015 / 2016 Budget is for a reduction of 10 positions (9% of total current 112).
  - 2015 reduction of 9 positions
  - 2016 reduction of 1 position
  - Managed through attrition, no expected lay offs



# NGPR

## 2015-2016 Operating Budget for Approval

Budget Summary	2014 Approved Budget	2014 Forecast*	2015 Budget	2016 Budget	2017 Forecast	2018 Forecast
Revenues (000's)	118,166	117,459	87,213	92,317	87,393	90,615
Expenses (000's)	103,563	104,255	89,994	90,106	88,362	85,973
Net Earnings (000's)	14,604	13,204	(2,781)	2,211	(969)	4,641
Return on Equity	4.7%	4.3%	-0.9%	0.7%	-0.3%	1.5%
Staffing - Permanently Established Positions (PEP)	112	112	103	102	101	100

\* As of September 30, 2014

The 2015 Operating Budget forecasts Net Loss of \$2.8M vs. Net Earnings of \$13.2M per 2014 forecast.

Revenues decrease by \$30.2M includes:

- Commodity revenue (net of royalties and transportation) decrease of \$38.2M primarily due to lower commodity prices.
- Transfer from Gas Marketing increase of \$13.0M due to higher value on fixed NG contract due differential to current lower commodity prices.
- Allied Oil & Gas earnings decrease of \$4.5M due to lower commodity prices.

Expenses increase by \$151,000 (0.25%) includes:

- Administration increase of \$831,000 (5.7%) primarily due to higher corporate and interdepartmental support services and wage increases.
- Operating & Maintenance decrease of \$946,000 (2.1%). Reduction of variable operating costs due to volume decline.
- Staffing – reduction of 9 positions in 2015 through attrition.
- Depletion, Depreciation & Accretion decrease of \$14.1M primarily due lower capex than anticipated as well as a forecasted impairment in 2014.