



**Conservation and Ratemaking Efficiency: CARE programs in VA**

**Governor's Energy Conference  
October 13, 2010**

# Natural Gas – the cleaner, greener fuel

- **It's clean** - Natural Gas is clean and environmentally friendly, producing 45% less carbon dioxide emissions than coal and 30% less than oil.
- **It's efficient** - Over 90% of natural gas produced is delivered to homeowners as usable energy, compared with less than 1/3 of the energy converted to electricity.
- **It's abundant** - More than 80% of the natural gas used in the United States is produced here in the US!
- **It's Safe** - More than 60 billion cubic feet of natural gas is safely delivered to more than 63 million homes through two million miles of pipeline every day!
- **It's affordable** - Natural gas is one of the least expensive forms of energy available to residential customers. The DOE estimates that natural gas is the lowest cost conventional energy source available for residential use.

# Natural Gas Distribution



Provide a service, not a product

Service is provided 24/7/365

Cannot use more or less of the service

# Virginia Energy Plan

- **Recognizes benefit of natural gas as a cleaner traditional fuel**
- **Calls for more efficient use of existing resources**
- **Better regulatory methodology for ratemaking to achieve conservation**



# Tension Between Ratemaking and Conservation

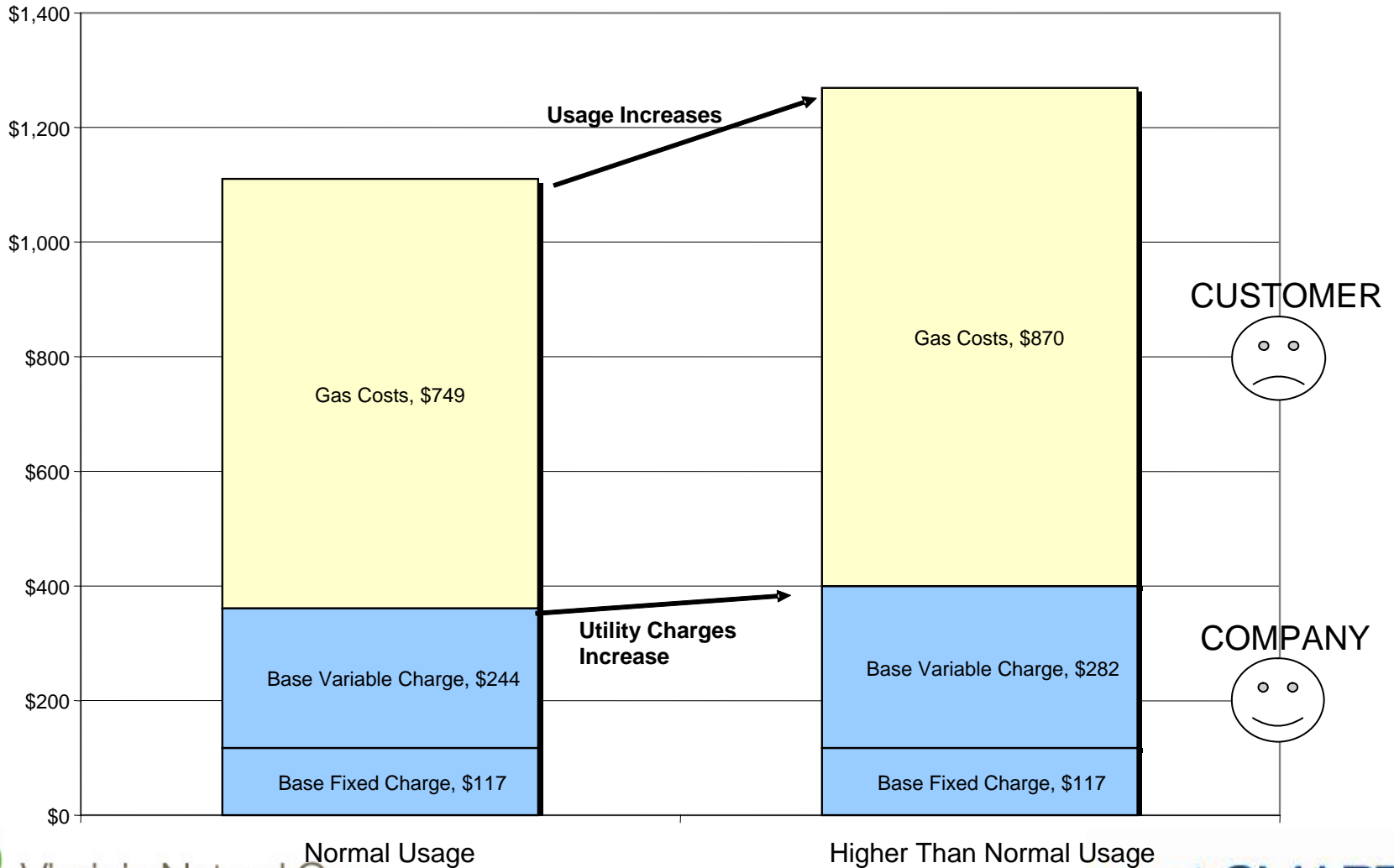
## Traditional Rate Design

- Encouraged consumption to create economies of scale, attract capital, provide universal service, build out grid
- Earnings fall when usage falls so a utility has a disincentive to promote energy conservation
- Volumetric design hits customers hardest in winter when both prices and use are highest
  - Big commodity bill, big distribution bill
  - Heavily weather dependent
    - Cold winters
    - Hot summers
    - Hurricanes
- Price volatility clouds price signals to customers
- Utilities/customers on a roller-coaster
- Utilities rewarded for higher consumption, even though they make no profit on the commodity

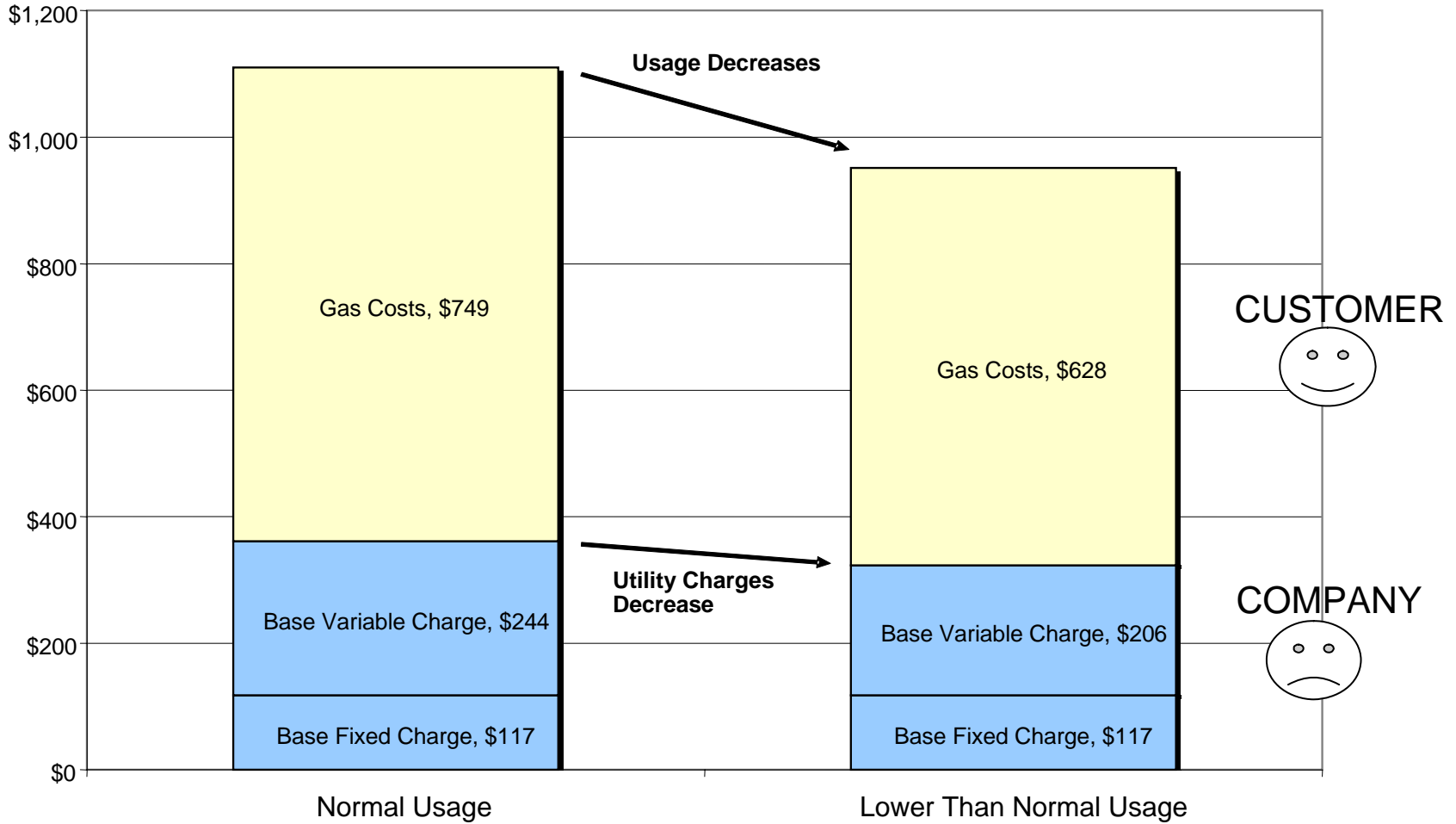
# Goals of Conservation Rate Design

- **Break the link between a utility's earnings and consumption**
- **Enable a utility to promote energy conservation while maintaining a reliable distribution system**
- **Provide base rate stability, predictability**
- **Give customers clear conservation price signals**
- **Reward safe, reliable service**
- **Reward cost-effective conservation and efficiency programs**
- **Reverse incentive to promote consumption**
- **Better alignment between customer, utility, societal goals**
- **Reduce environmental footprint**
- **Spread fixed costs on a per customer basis, not per unit of energy sold**
  - Revenue-neutral per customer to utility
- **Make conservation/efficiency part of the regulatory compact**
  - Allow recovery of cost-effective conservation/efficiency programs
- **Reward utilities for declining energy use per customer**

# Utility Charges Coupled to Usage - Illustrative

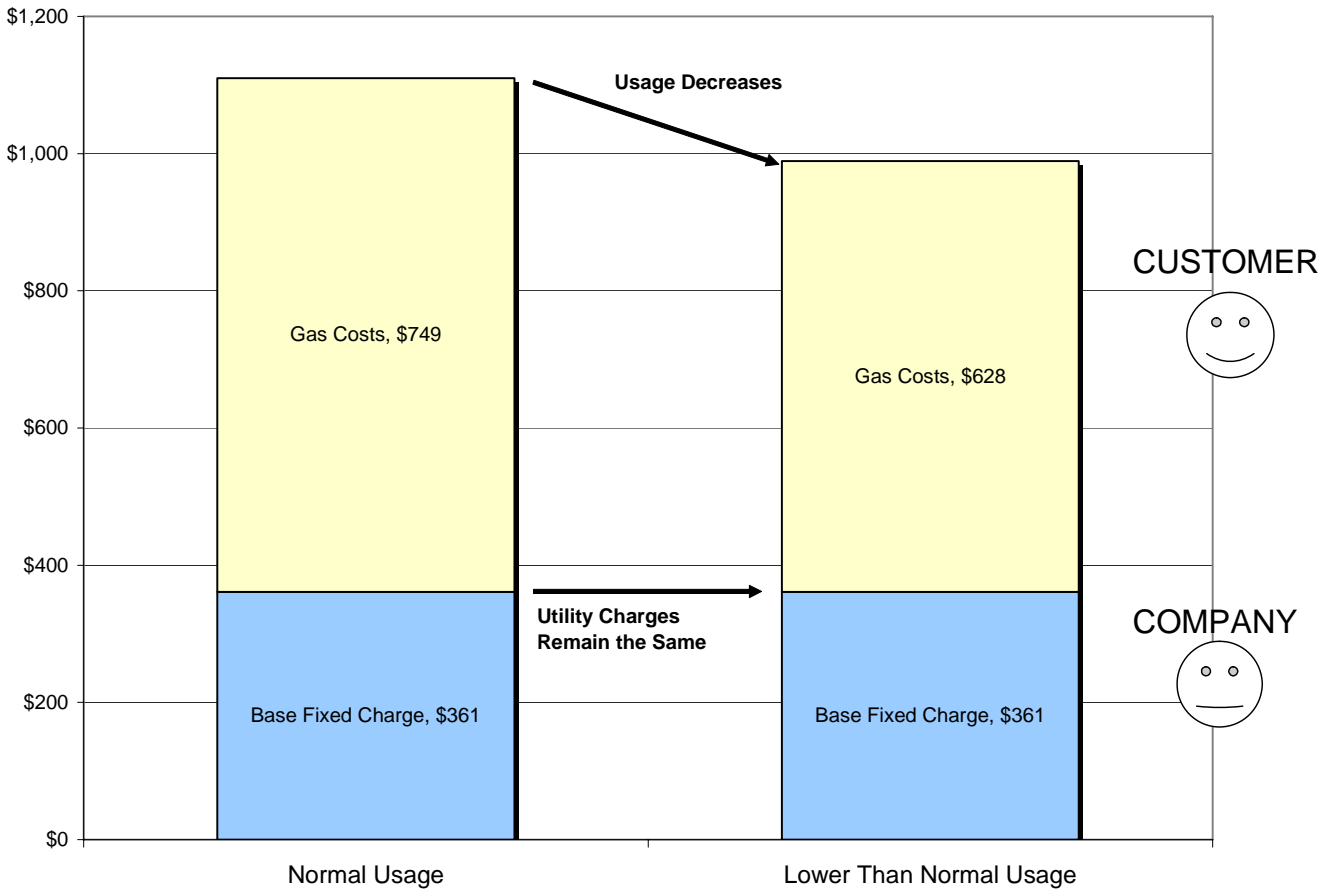


# Utility Charges Coupled to Usage – Illustrative





# Utility Charges Decoupled From Usage – Illustrative



# Plan Benefits

- **Environmental Benefit**

- Reduced consumption = reduced environmental impact

- **Utility Benefit**

- More predictable fixed cost recovery, less volatility

- **Consumer Benefits**

- More customer control
- Introduction and promotion of new efficiency and conservation programs to reduce demand and lower bills
- Reduced commodity prices for all due to lower demand
- Permanent efficiency gains for the customer

# CARE Act 5 principal components

- a **decoupling mechanism**, including straight-fixed variable rates or a sales adjustment mechanism, for example, that is revenue-neutral to the average customer compared with traditional rates;
- a **cost-effective conservation and energy efficiency program**, the costs of which are 100 percent recoverable;
- **margin protection for utilities that opt-in** to a decoupled rate structure;
- a **utility incentive** of up to a 15 percent share of the initial, independently verified customer savings that accrue from conservation plans; and
- a **streamlined procedure** for handling of CARE plans at the State Corporation Commission, including a six-month schedule for regulatory approvals.

# Revenue Normalization Adjustment

## What is Revenue Normalization Adjustment (RNA)?

### The RNA rider:

- Ensures that the gas utility recovers no more or no less than the allowed distribution revenue per customer and a reasonable return as approved by the State Corporate Commission in the gas utility's last general rate review
- Enables the natural gas utility to mitigate the impact of declining customer usage and to promote energy efficiency and conservation while recovering its fixed costs

# RNA Calculation

- RNA is calculated after and is separate from the weather normalization adjustment
- RNA can either be a credit or a debit. A credit is issued when the actual distribution revenue exceeds the allowed distribution revenue. A debit or surcharge is issued when the actual revenue is less than allowed.
- At the end of each month, the gas utility determines if the revenue received that month fails to meet, meets, or exceeds that allowed distribution revenue per customer and then determines whether a credit or surcharge allowed by RNA should be applied.
- That amount is then spread across the entire residential customer class proportionate to their use for the second following month. Example: If the actual revenue for January exceeds the allowed revenue, the credit will be computed on the normalized volumes for March and applied to actual usage in March





# VNG Energy Conservation Programs

- **Programs include:**
  - Community outreach and customer education program
  - High efficiency home heating and water heater rebates
  - Low income weatherization program
  - Seasonal check-up rebates
  - ENERGY STAR residential new construction program
  - Free programmable thermostats
  - Air filter coupons

# Rebates – Recap of savings



Rebate	Service or Product
\$500	Natural Gas Furnace ( <b>90%+ AFUE</b> )
\$500	Natural Gas Tankless Water Heater ( <b>.82+ Energy Factor</b> )
\$150	Natural Gas Tank Water Heater ( <b>.62+ Energy Factor</b> )
\$50	Seasonal Heating System Checkup
\$25	Programmable thermostat rebate if purchasing your own

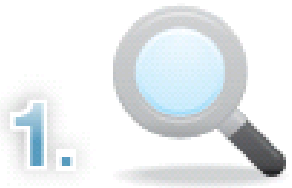
# Low Income Weatherization

Virginia Natural Gas is proud to partner with local community action agencies that provide weatherization services in the homes of qualified customers.



Southeastern Tidewater Opportunity Project (STOP) and the Williamsburg/James City County Community Action Network administer this program with VNG to help customers who are at or below 175% of the federal poverty level.

# Claiming Your Rebate – Easy as 1-2-3!



Locate your Virginia Natural Gas account number, found on your bill.

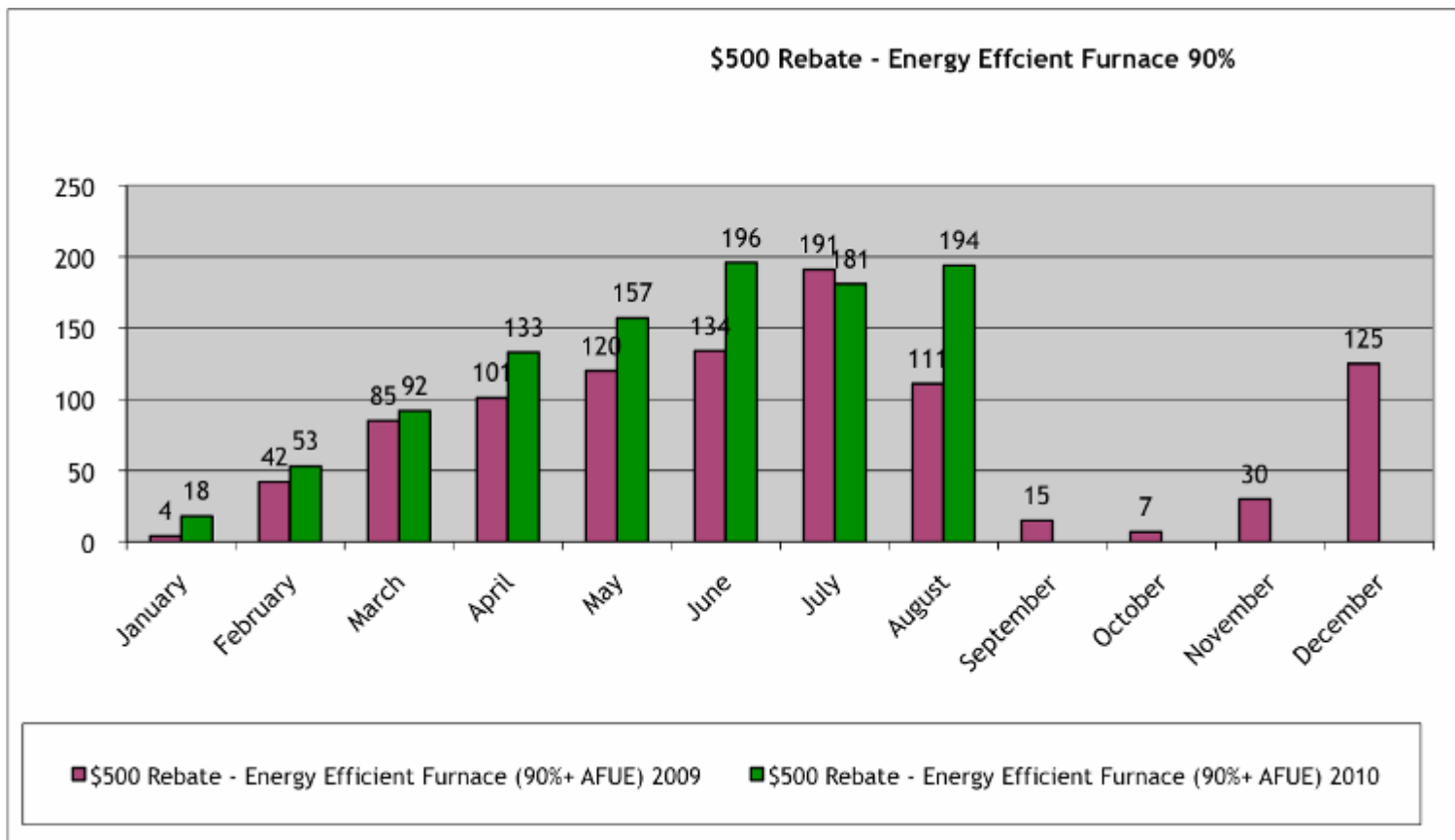


For appliance rebate or seasonal checkup, have your contractor complete a Service/Installation Verification Form. (Also available online)



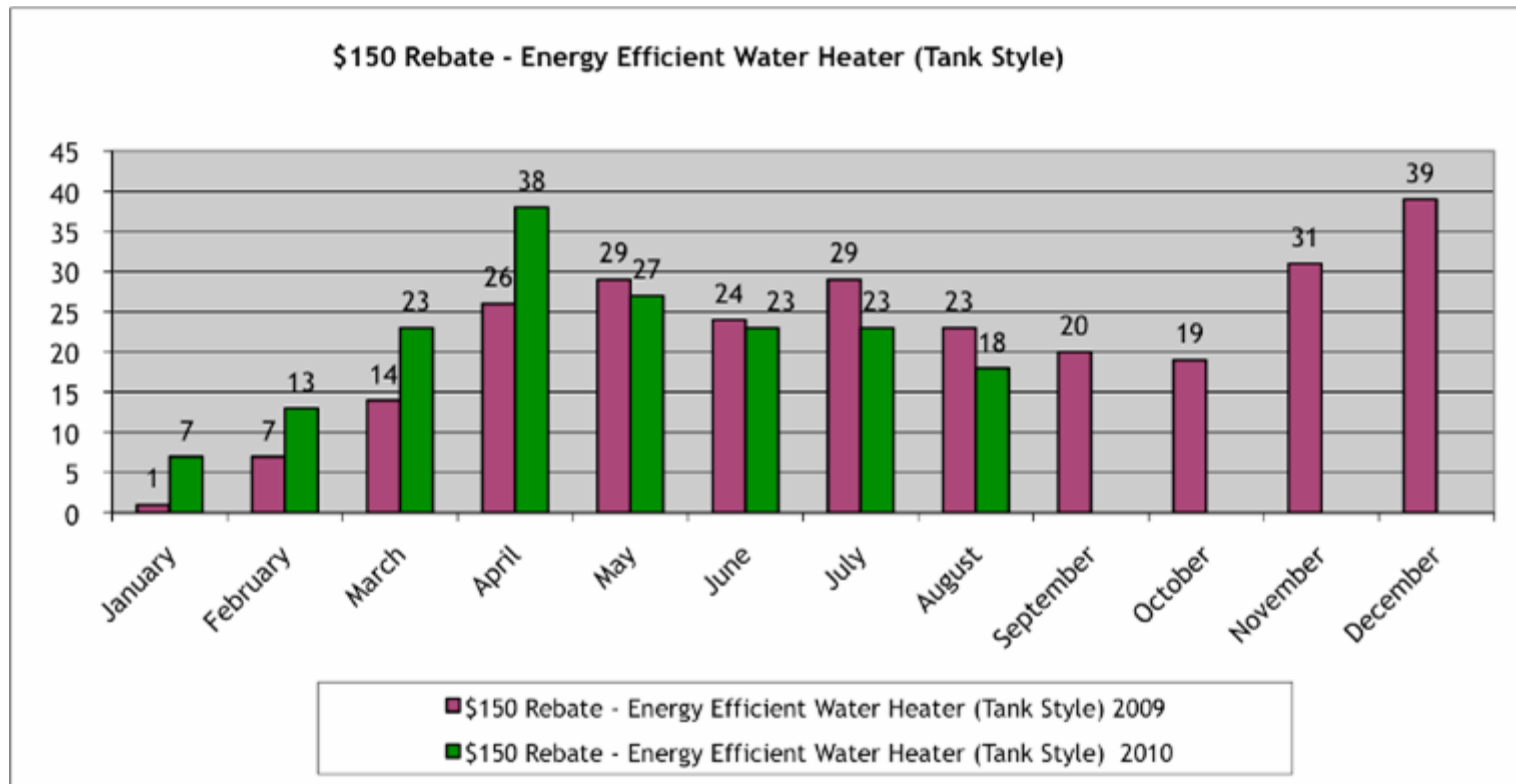
Go to [virginiannaturalgas.com/energysmart](http://virginiannaturalgas.com/energysmart), choose your offer and follow the instructions. If you do not have online access, call 800-427-8876 for assistance.

# Submission Response for Energy Efficient Furnace

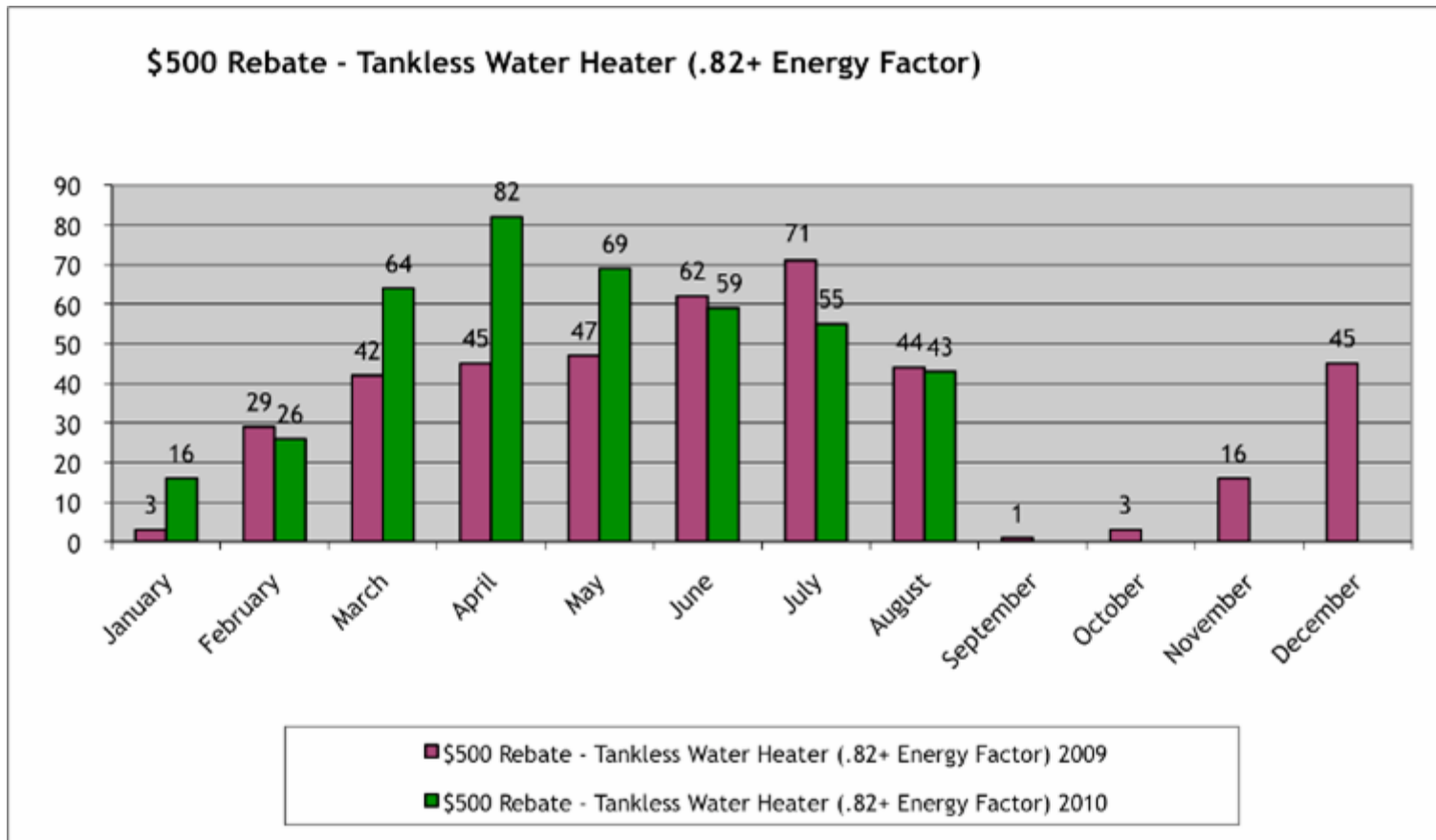




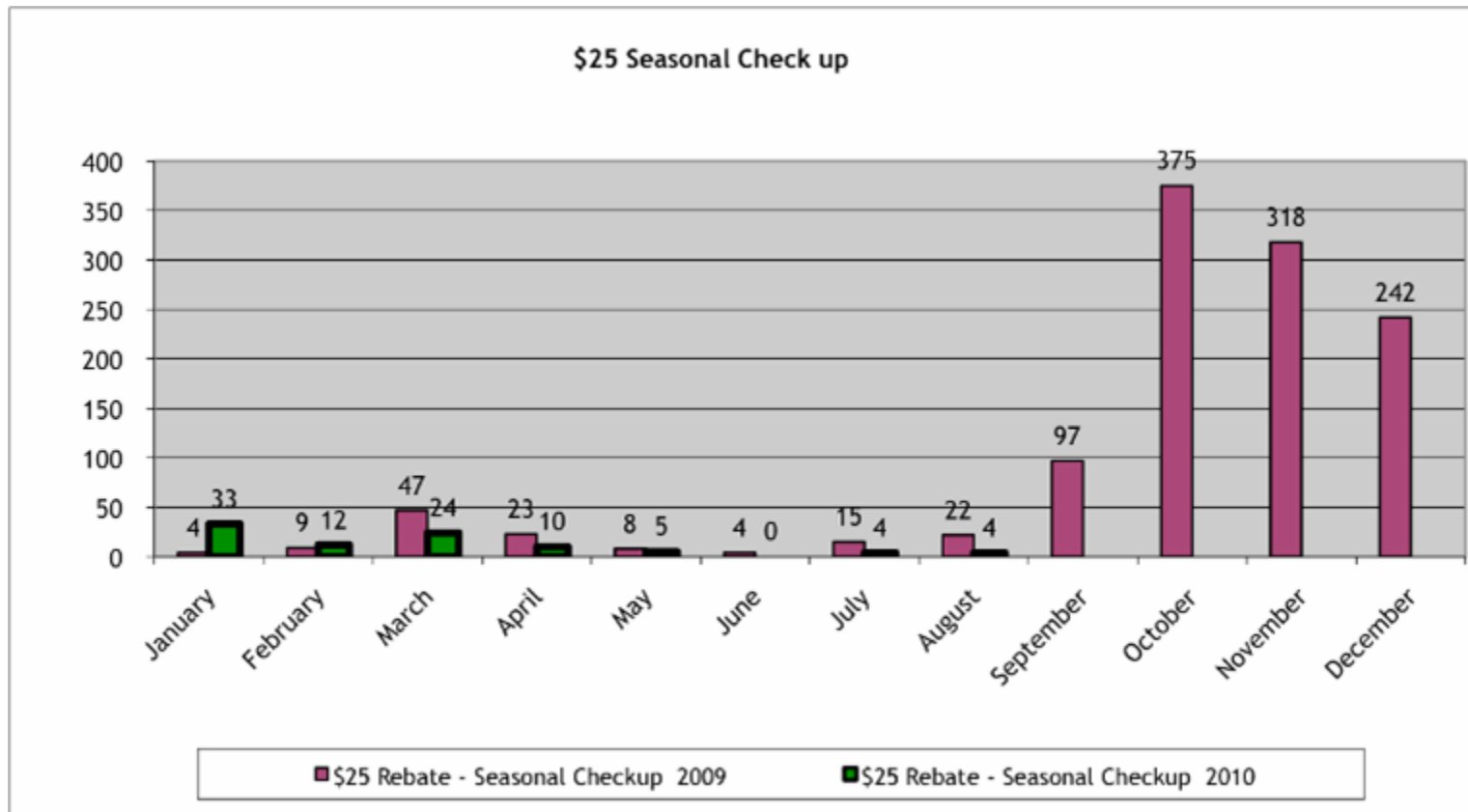
# Submission Response for Tank Style Water Heater



# Submission Response for Tankless Water Heater



# Submission Response for Seasonal Checkup

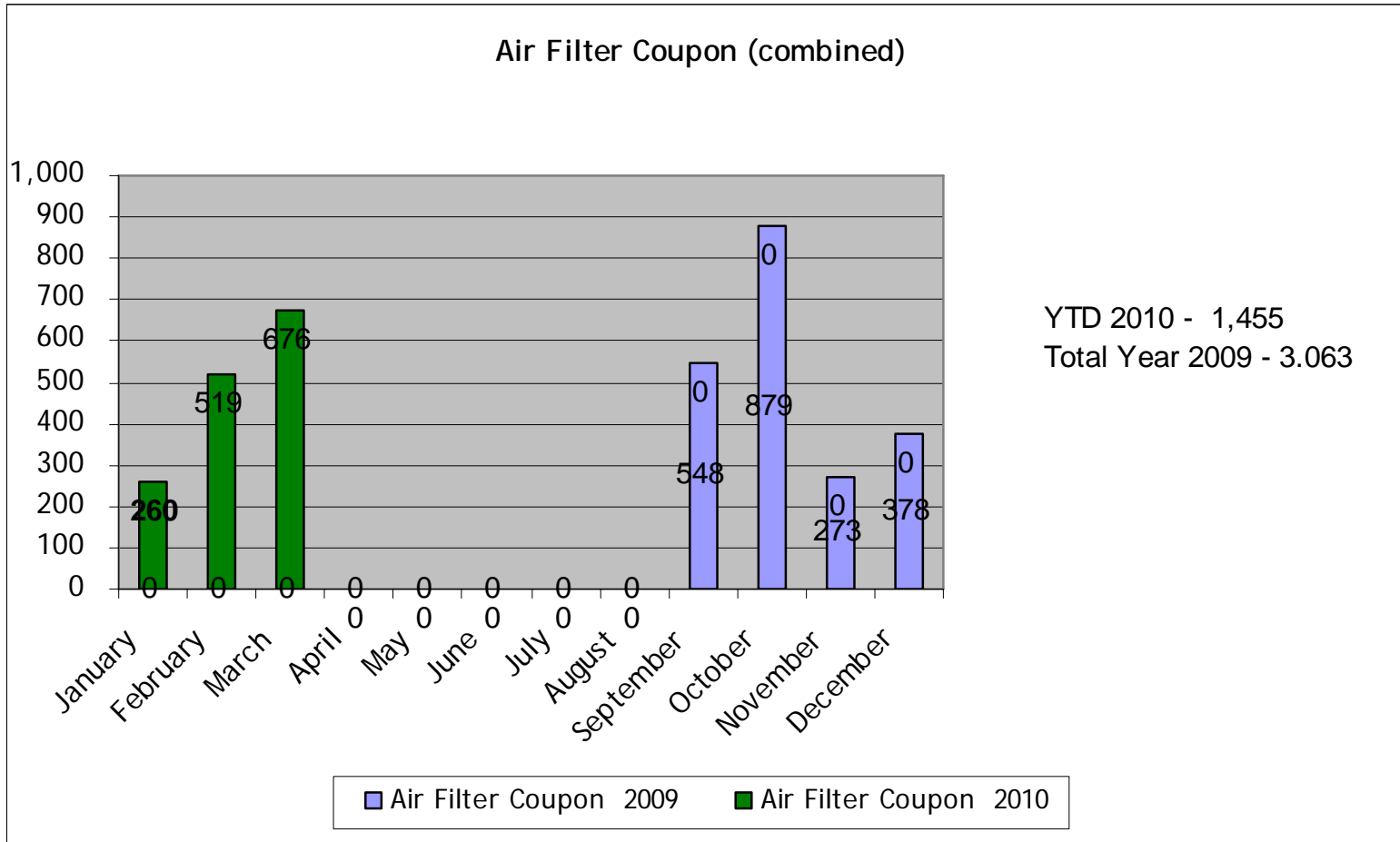


**2009 Total – 1164**

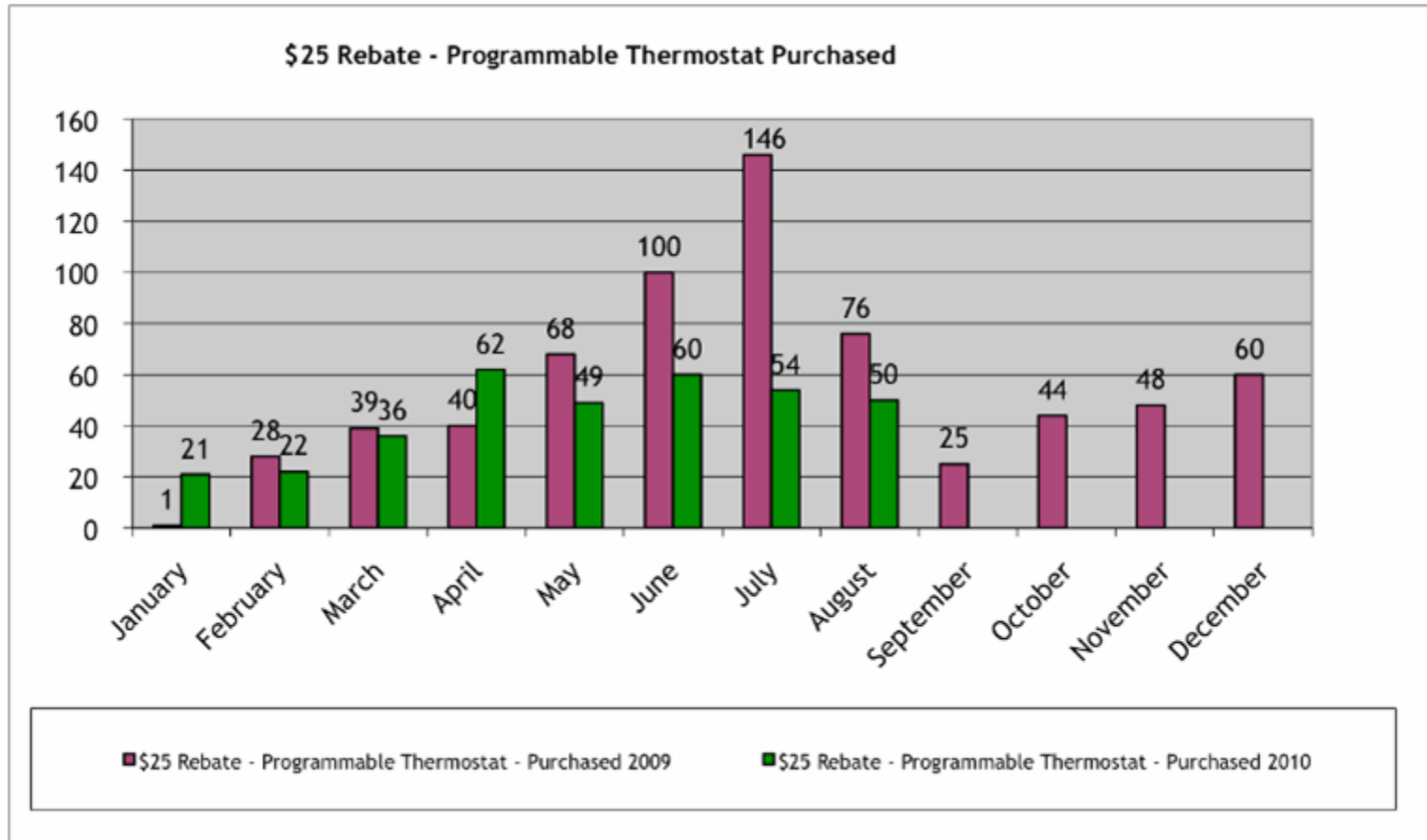
**2010 YTD – 92**

Note: Seasonal Checkup Rebates Issued at Original Rate of \$25 / Rebate will now be \$50

# Submission Response for Air Filter Coupon



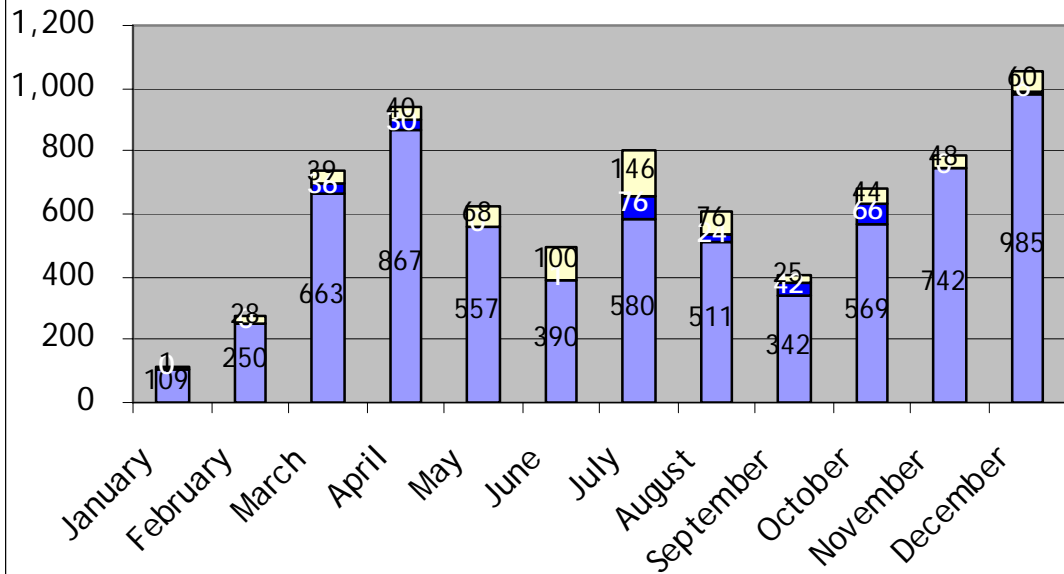
# Submission Response for Thermostat Rebate





# Submission Response for Thermostat Programs 2009

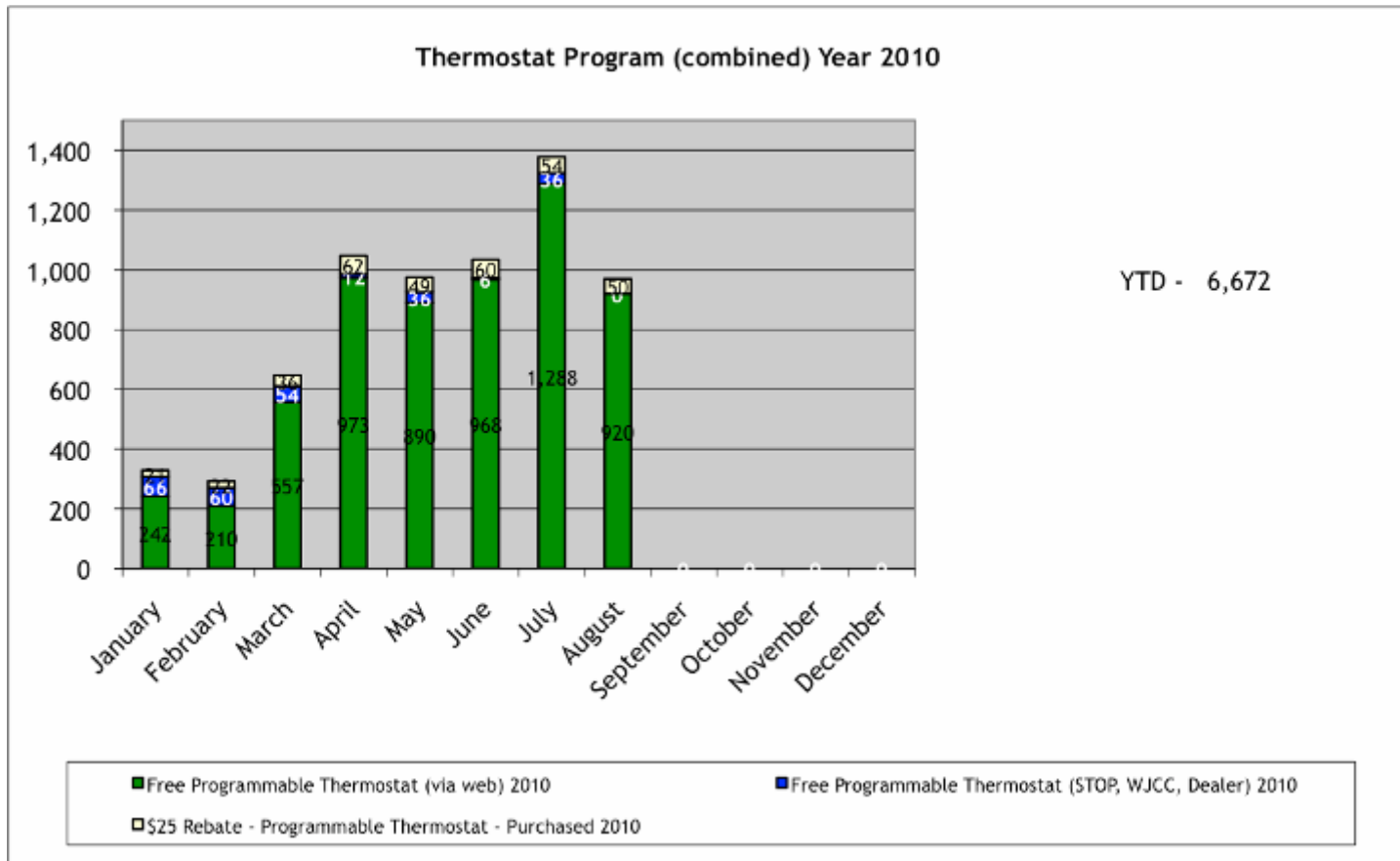
Thermostat Program (combined) Year 2009



Total Year : 7,521

- Free Programmable Thermostat (via web) 2009
- Free Programmable Thermostat (STOP, WJCC, Dealer) 2009
- \$25 Rebate - Programmable Thermostat - Purchased 2009

# Submission Response for Thermostat Programs 2010



## Low Income Weatherization as of 8/31/10

- **Southeastern Tidewater Opportunity Project (STOP) has served 89 customers - \$102,818.17 total / average per customer = \$1155.26**
- **Williamsburg James City County Community Action Agency has served 19 customers - \$23,098.28 total / average = \$1215.70**

# Customer Survey

“How did you hear about the energySMART program and offers?”

VNG EnergySMART Media Response		
Heard From	Total	Percent
Virginia Natural Gas Bill	1,460	19%
Radio	1,185	15%
Television	1,185	15%
Virginia Natural Gas Website	1,010	13%
More than 1	859	11%
Other	857	11%
No Response	572	7%
Heating & Air Contractor	249	3%
Newspaper	160	2%
Customer Service Representative	104	1%
Plumber	99	1%
Community Event	58	1%
Grand Total	7,798	100%

# Online Tools

With our new, FREE online bill analysis and energy audit tools, managing your Virginia Natural Gas bill just got easier!



**Try our personalized audit and bill analysis tools.**

Better understand how your home uses energy.

**Start saving energy and money.**

[Learn more](#)

**energySMART**  
A Virginia Natural Gas program



# Online Energy Audit


## My Home Energy Center:

- Learn where you're using the most energy in your home
- Do an appliance analysis
- Compare your use to that of similar-sized homes
- Learn ways to save energy and money in specific areas of your home

Be energySMART


Online Energy Audit

Understand your home's energy consumption more thoroughly and learn how to be more energy efficient.



Energy conservation made simple.

Read about ways to reduce your energy consumption.




My Home | Find Ways to Save | Improve My Home | Learn About Energy

Home Profile | My Appliances | My Energy Bills | My Report

### My Home Energy Center

To maximize your savings, continue analyzing by going to [Find ways to save](#). You will find detailed savings opportunities for your entire home.

**1** Home Profile | **2** Appliance Analysis | **3** Find Savings | [Don't show me this panel again](#)

 Find out how you can save energy and reduce your bills.

[Find Savings](#)

---

#### What are my top ways to save?

Savings Opportunities	Annual Savings
<b>Weatherization</b>	
<a href="#">Control air leakage</a>	\$246 - \$410
<b>Water Heating</b>	
<a href="#">Install efficient showerheads</a>	\$73 - \$39
<b>Lighting</b>	
<a href="#">Use compact fluorescent bulbs in recessed fixtures</a>	\$26 - \$31
<a href="#">Use compact fluorescent bulbs in high-use lamps</a>	\$20 - \$25
<b>Heating and Cooling</b>	
<a href="#">Install a programmable thermostat</a>	\$100 - \$187
<a href="#">Seal leaks in ducts</a>	\$112 - \$106
<a href="#">Rebuild your heating system</a>	\$708 - \$348

**Detailed Analysis**  
Find more ways to save

---

#### Seasonal Tips and Tools

**Thermo Calc**  
Find out how much you can save by simply adjusting your thermostat.

**Quick Tips**  
[How to program your thermostat](#)

---

#### How does my home compare?

Annual Electricity Energy Use  
\$1,641  
Avg. Home

Uses Least Energy | Uses Most Energy


Electricity | Gas

**My Energy Bills**  
Enter your energy bills to find out how your home's energy use compares.

---

#### How does my home use energy?

Annual Total Cost



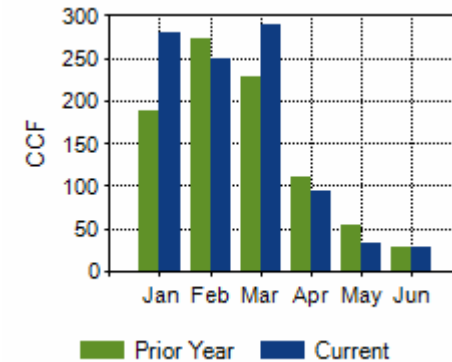
■ Heating \$1,070  
■ Cooling \$762  
■ Other \$539  
■ Hot Water \$379  
■ Food Storage \$146  
■ Lighting \$105  
■ Cooking \$76

Total | Electricity | Gas

**My Appliances**  
Heating is your highest energy expense. Click [Find](#)

# Online Bill Analysis

- View and compare your usage and billing history



Gain a greater understanding of different factors that impact both

# energySMART Website

[www.virginianaturalgas.com/energysmart](http://www.virginianaturalgas.com/energysmart)



## How energySMART Are You?

Take the energySMART quiz and test your energy IQ [Start the quiz >](#)



## Learn the Lingo!

Check out our energySMART conservation glossary. [Learn more >](#)



## energySMART Conservation Tips

Here are some simple steps you can take to Save Money and Resources Today.

[Go to tips >](#)



## Save Money and Protect the Environment

Get information on energy efficient products and practices from [ENERGY STAR >](#)

# Columbia Energy Conservation Programs

## Home Program

Rebates for:

- Energy Star Gas Water Heaters and Tankless Water Heaters
- Energy Star Gas Furnace
- High Efficiency Windows
- Attic and Floor insulation
- Duct sealing and insulation

## Business Program

Rebates for:

- Energy Star Gas water heaters and Tankless water heaters
- Direct contact gas water heaters
- Energy Star gas and steam boilers
- High efficiency gas furnace
- Infrared heaters
- Boiler Tune-ups
- Outside air reset controls
- Custom program (year 2)

## Web-based Home Audit Program

Allows customers to complete their own energy analysis, generating a custom report recommending improvements to reduce natural gas usage. By participating, customers are also eligible to receive “free” efficiency measures including:

- Water heater blankets
- Low-flow showerheads
- Faucet aerators
- Hot water pipe insulation

# Washington Gas Programs

- **Heating system checkup with programmable thermostat option:** Provides a \$30 incentive toward a season heating system checkup or toward the purchase and installation of a programmable thermostat.
- **Low income energy efficiency program:** Washington Gas will provide funding to the Community Housing Partners Corporation to offset the costs of training energy auditors to work with low income customers.
- **Boiler/Furnace replacement:** Provides a \$250 incentive toward the purchase and installation of a boiler or furnace of 85% efficiency or greater.
- **Water heater replacement:** Provides a \$50 or \$250 incentive toward the purchase and installation of a natural gas water heater of .62 and .82 energy factor respectively.
- **New homes with EnergyStar:** Provides a \$250 credit toward the cost of getting a new construction home EnergyStar certified, plus the use of the boiler/furnace and water heating incentives.
- **Energy efficiency education:** Provides funding to raise the general awareness of the importance of energy efficiency and to educate customers as to the existence of these incentive programs.