



Powering the economy of Ghana and setting the standard for public sector excellence in Africa.

# 6<sup>TH</sup> ANNUAL STAKEHOLDERS INTERFACE

## CHIEF EXECUTIVE'S PRESENTATION

### SEPTEMBER 6, 2015

# Executive Summary

- 2014 was a financially challenging year with uncertainties in economic and energy environment
  - Revenue of **GHS 2.230.75** million. No Government subsidies to VRA in lieu of tariff shortfall compared to a subsidy of **GHS 644.27** million extended to VRA in 2013.
  - Operational loss of **GHS 74.13** million in 2014 compared to a profit of GHS208.11 in 2013
  - Net loss of GHS 799.93 million (2013: Profit 61.74 million).
- Highest ever peak load of **1,970.9 MW**, signaling continuous increased electricity demand compared to **1,942.9 MW** in 2013.
  - Hydro availability above consolidated target of 90%
  - TTPS posted availability of 56.8%
  - Tema Thermal Complex registered 80% availability.
  - Navrongo Solar Power Plant recorded 100% availability.

## Key Challenges

- Low gas supply from WAPCO.
- Low net inflows into Akosombo reservoir
- 47% depreciation of average GH¢/US\$ exchange rate from GH¢1.9944/US\$ in 2013 to GH¢2.934/US\$1 in 2014.
  - 38% reduction in Crude oil usage.
  - 65% reduction in distillate fuel.
- No increase in tariff to account for higher depreciated currency.

## Some Generation Projects

- Two (2) projects to be commissioned by end of year 2015
  - 220 MW Kpone Thermal Plant expected to be completed by year end
  - 110 MW T2 Project commissioned



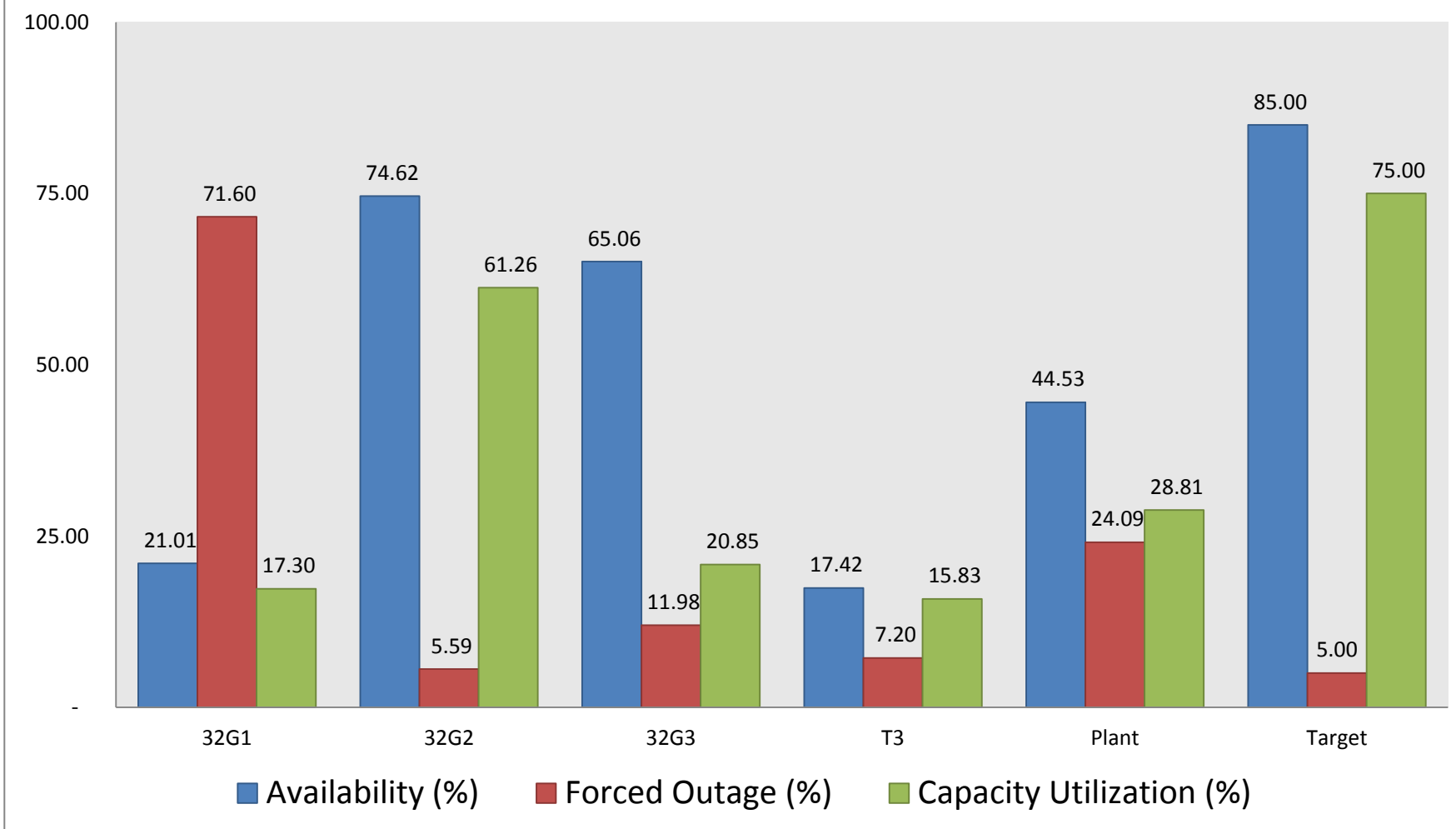
# Presentation Outline

- Review of Technical and Financial Performance for 2014
- Short Term Projects to Help reduce supply shortfall
- Medium term projects
- Challenges

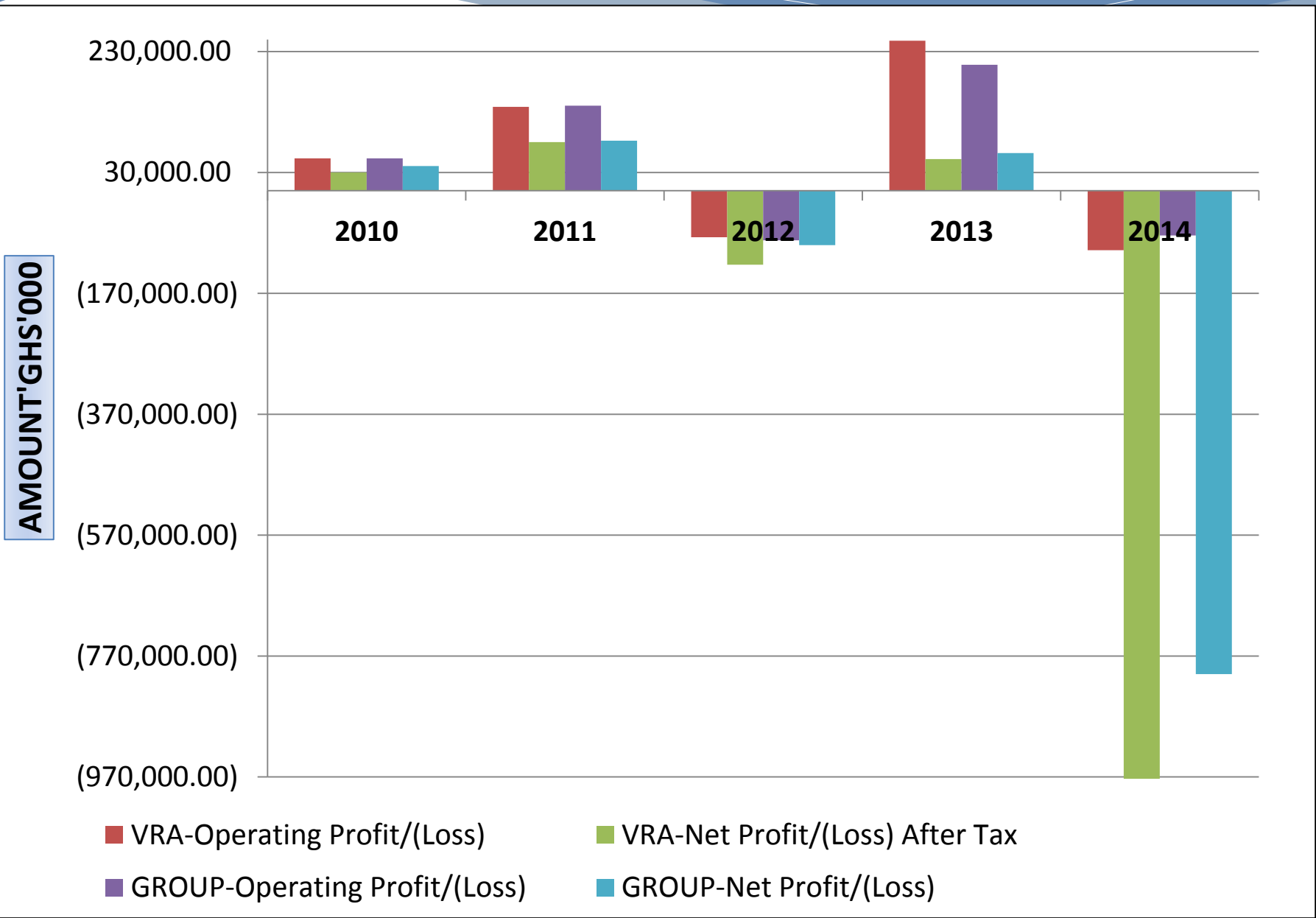
# PERFORMANCE

# THERMAL PLANT AVAILABILITY

TTPS Annual Performance Statistics for 2014



# FINANCIAL SUMMARY (2010 – 2014)



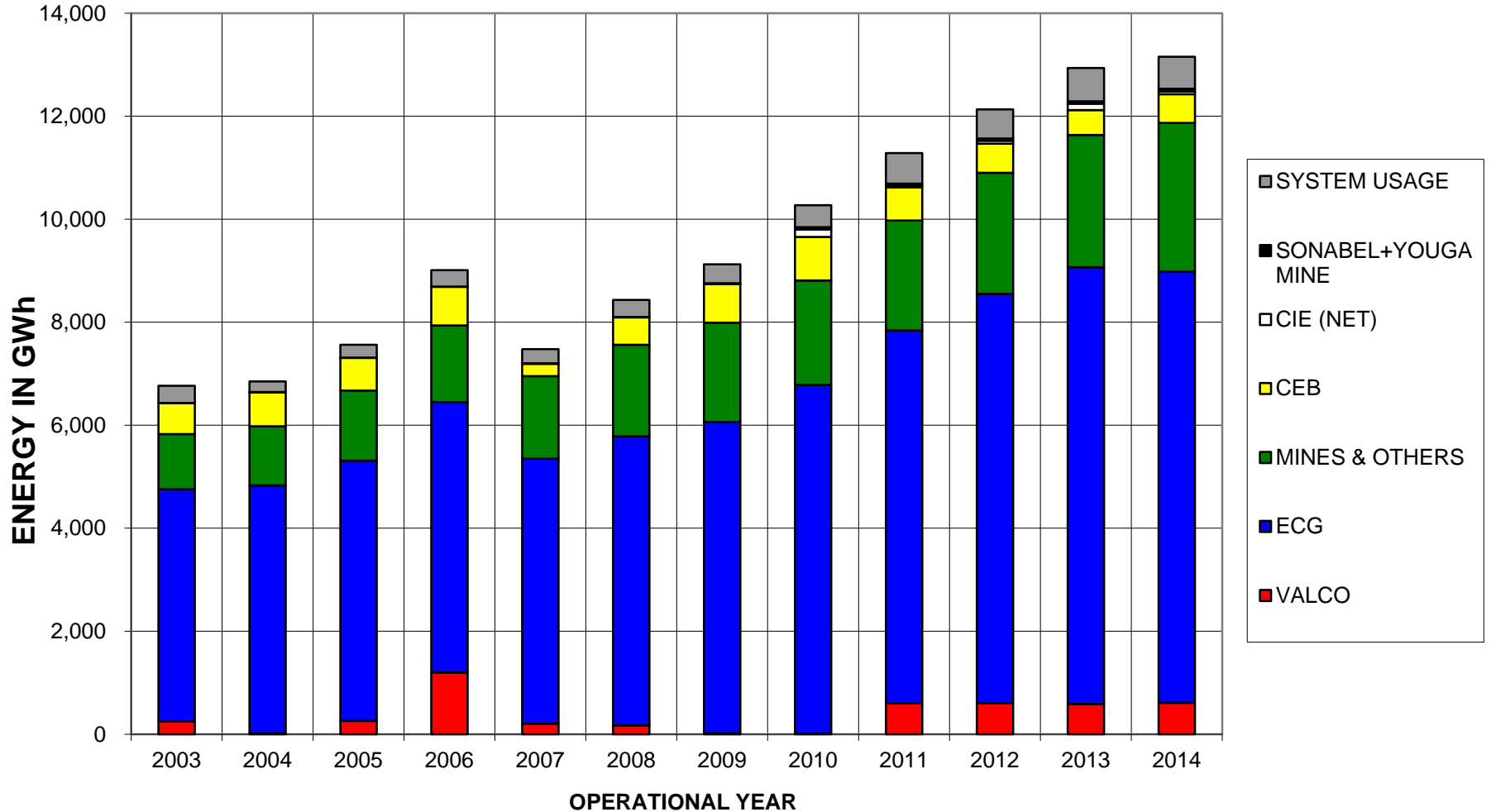
# ELECTRICITY DEMAND AND SUPPLY



- Total energy sold to VRA's customers decreased by 576 GWh (6%) in 2014.
  - Energy sales of **10,325** GWh in 2013 reducing to 9,749 GWh in 2014

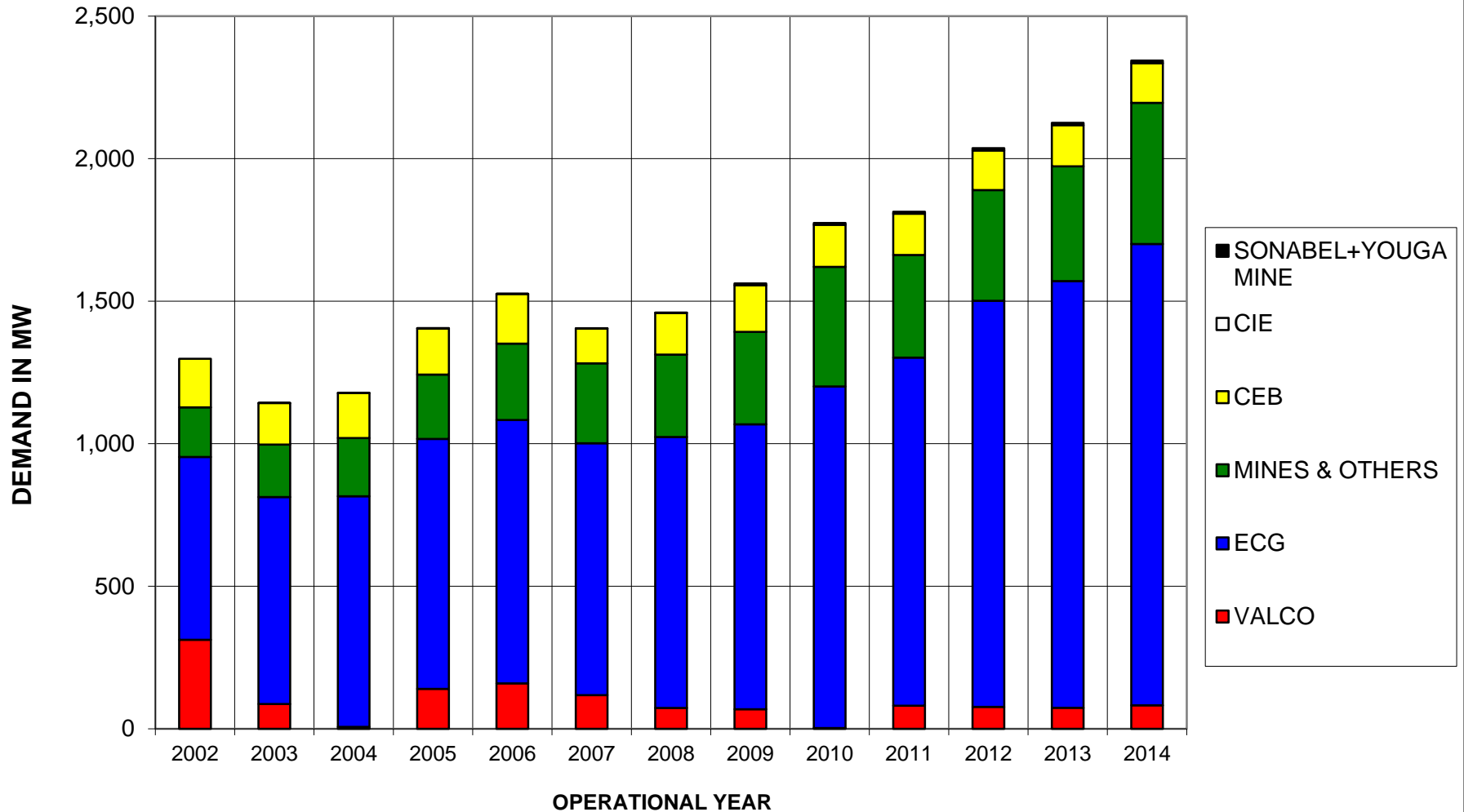
# GHANA ENERGY SALES

## ANNUAL ENERGY CONSUMED (GWh) BY CLASS OF CUSTOMER 2003 -- 2014



# ANNUAL DEMAND

## ANNUAL MAXIMUM DEMAND (MW) BY CLASS OF CUSTOMER (2002 - 2014)



1. The reduction in 1999 demand was due to domestic load curtailment. Also there was load curtailment in 2006 and 2007
2. The maximum demand for 2002 is higher than that of 2003 because Valco's load was curtailed.
3. Supply to SONEBEL (border towns Po and Leo) commenced in 2003 but is insignificant and therefore not visible on the chart. Supply to Sonabel from 2009 includes Youga Mine

# 2014 FINANCIALS

- Energy Sales increased by 0.84% (GH¢18.66 million) to GH¢2,230.73 million over previous year's sales of GH¢2,212.07 million).
- Cost of Sales increased by 11% (GH¢201.29 million) from GH¢1,851.06 million in 2013 to GH¢2,052.34 million in 2014.
- Administrative Costs increased by GH¢169.27 million (63%) to GH¢437.21 million (2013: GH¢267.93 million)
- Operating Loss of GH¢74.13 million compared with a profit of GH¢208.11 million in 2013.

# GENERATION CAPACITY ADDITIONS

# GENERATING STATIONS

## (INSTALLED CAPACITY)

VRA Plants	Installed Capacity (MW)	Dependable Capacity (MW)	Available Units (MW)
AKOSOMBO	1020	900	900
KPONG	160	140	105
TAPCO (T1)	330	300	300
TICO (T2)	330	300	200
T3	132	120	0
TT1PP	110	100	100
TT2PP	49.5	45	33
MRP	80	70	40
SOLAR	2.5	0	2.5
<b>TOTAL VRA</b>	<b>2214</b>	<b>1975</b>	<b>1680.5</b>
SAPP	200	180	135
CENIT	110	100	100
BUI	400	340	260
<b>Total Ghana</b>	<b>2924</b>	<b>2595</b>	<b>2175.5</b>

## VRA Ongoing Short Term Generation Projects to Improve Supply Situation

- Currently the power system of Ghana is experiencing load shedding of up to 700 MW
- The situation has been compounded by low inflows so far into the Akosombo reservoir
- VRA is working on additional generation projects to complement the efforts of government to improve the power supply situation
  - **220 MW K TPP** Project is currently under construction and is expected to be commissioned by the end of the year.
  - The major challenge with this project has been financial and also long years of storage of the plant equipment which rendered some parts faulty
  - **250 MW AMERI** Power project to be commissioned in 2016 depending on how soon financial terms are concluded
  - **38 MW TT2PP** Expansion project to be commissioned by 2016



# VRA Ongoing Short Term Generation Projects to Improve Supply Situation



**KPONE Gas Turbines & Generators**

# VRA Ongoing Short Term Generation Projects to Improve Supply Situation



**AMERI POWER PLANT – Site Preparation of Plant installation**

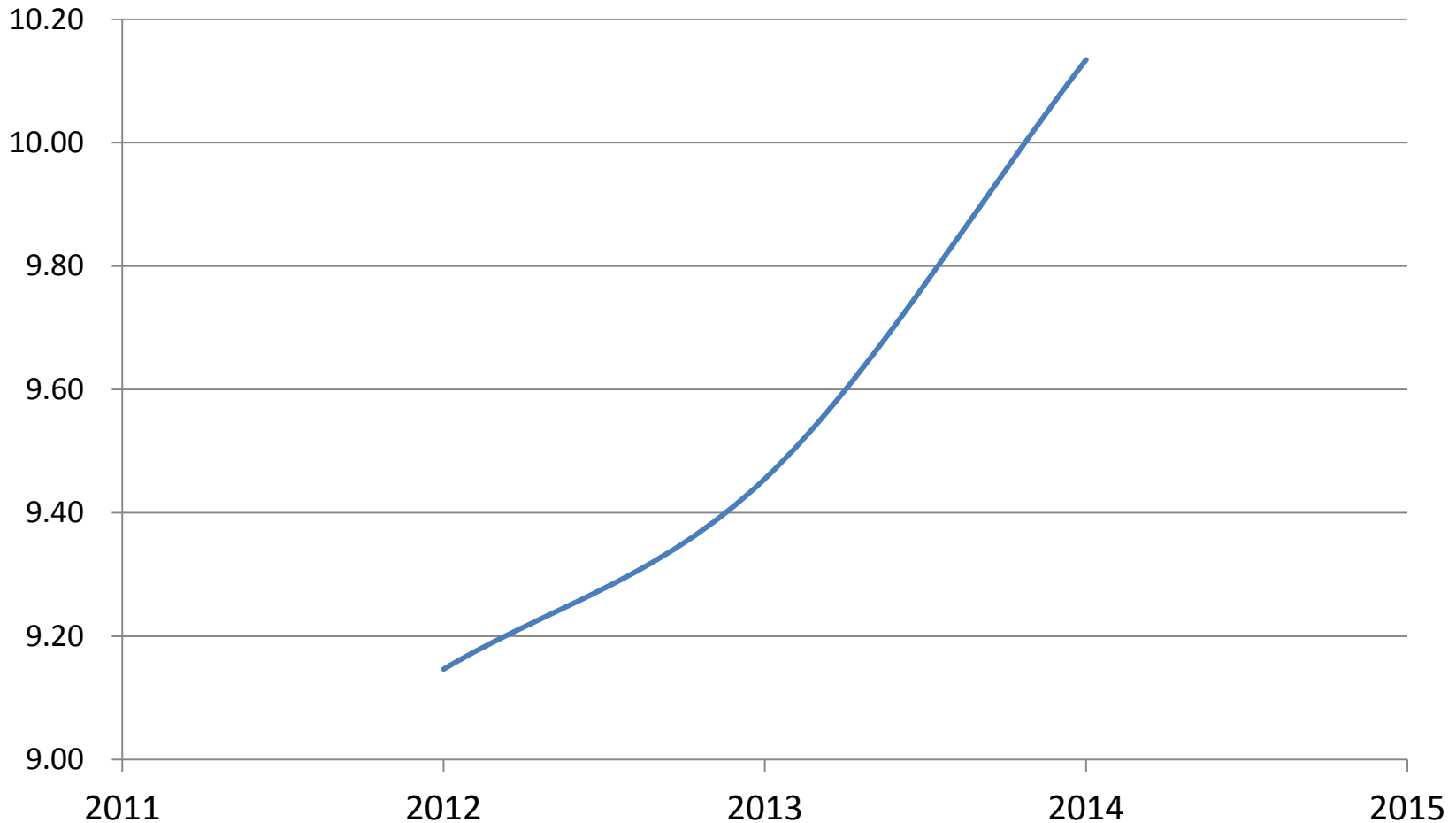
www.vra.co.za **CANDIDATE GENERATION RESOURCES (2017-2022)**

<b>Expected Commissioning Year</b>	<b>Project</b>	<b>Installed Capacity (MW)</b>	<b>Total Installed (MW)</b>	<b>Implementation strategy</b>
2017	T4 (SC)	110	110	VRA ECA-financed
2018	T4 (CC)	60	170	VRA ECA-financed
	KTPP Expansion	110		VRA/JV
2019	KTPP Phase 2	450	800	VRA
	Coal Plant-1	350		VRA/SAPP
2020	Coal Plant-2	350	800	VRA/SAPP
	DTPP	450		VRA/ JV
2022	Pwalugu Multipurpose Project	48	135	VRA –multilateral Debt
	Juale Hydro Project	87		VRA / JV

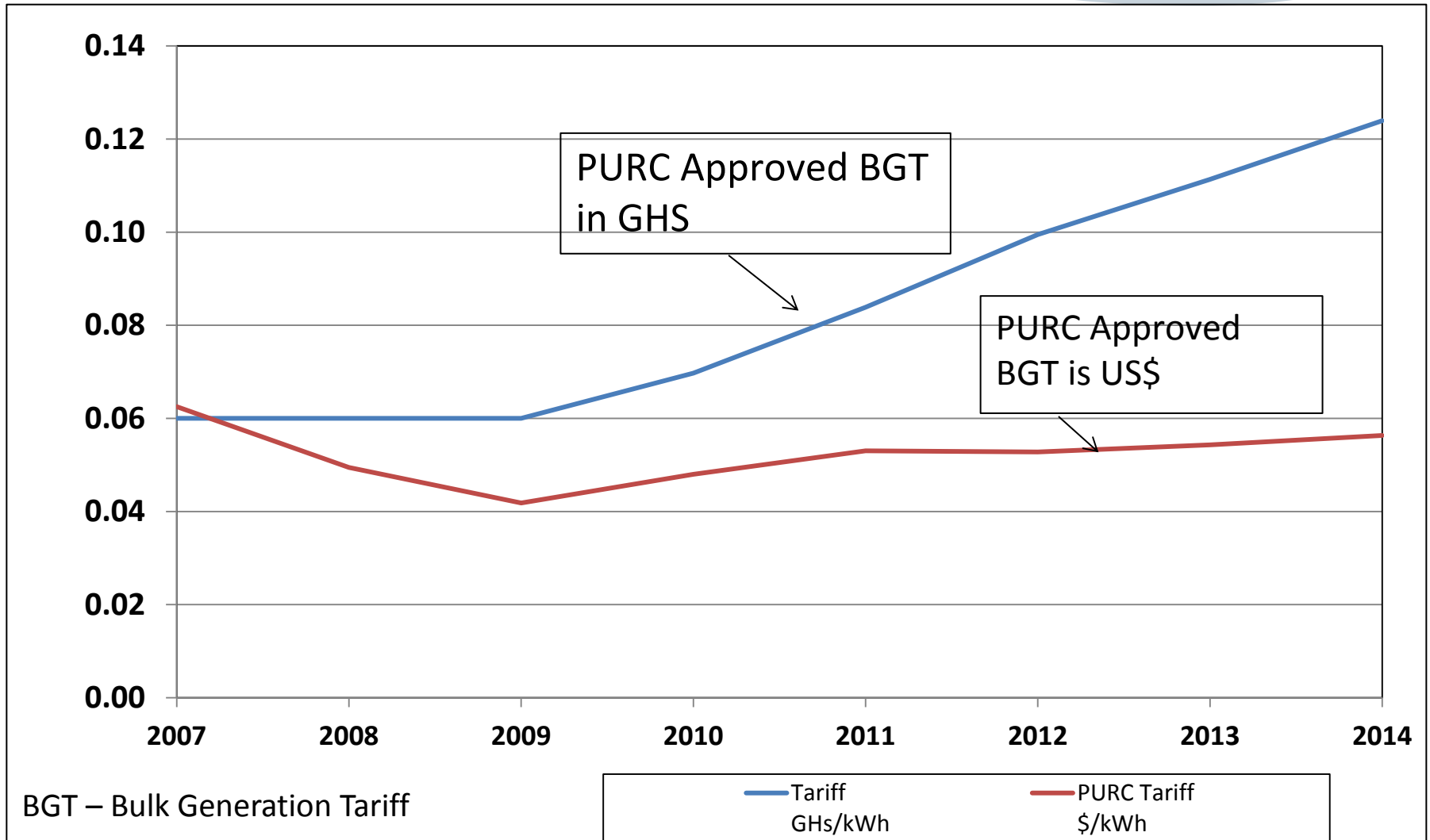
# CHALLENGES

# Rising Cost of Electricity Generation

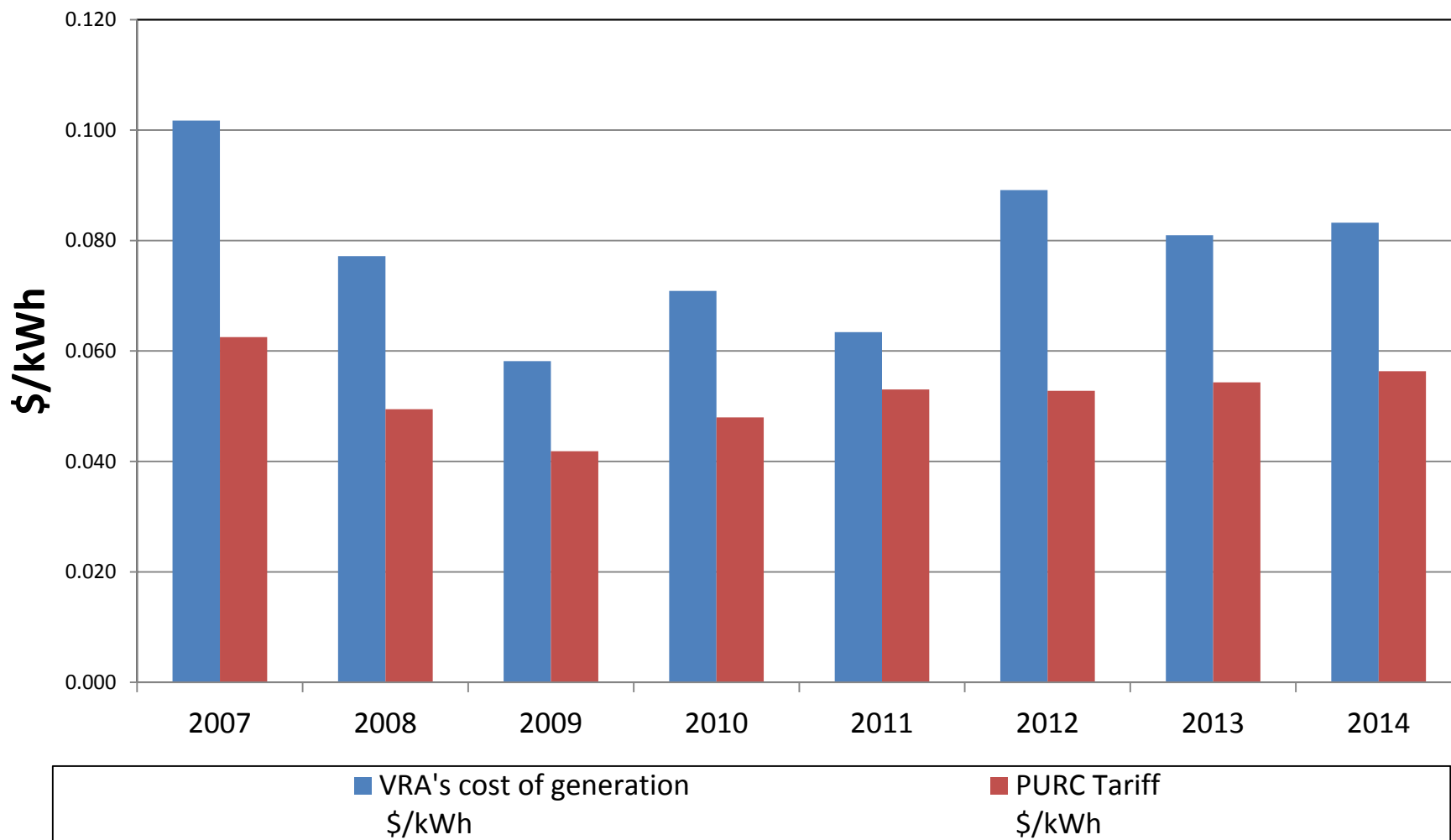
## VRA Cost of Energy-USc/kwh - Thermal & Hydro



# BGT Increases Have Been Marginal In Real Terms Due to Currency Depreciation Despite Regular Adjustments by PURC



# Tariffs Still Remain Below Cost Despite Recent Increases



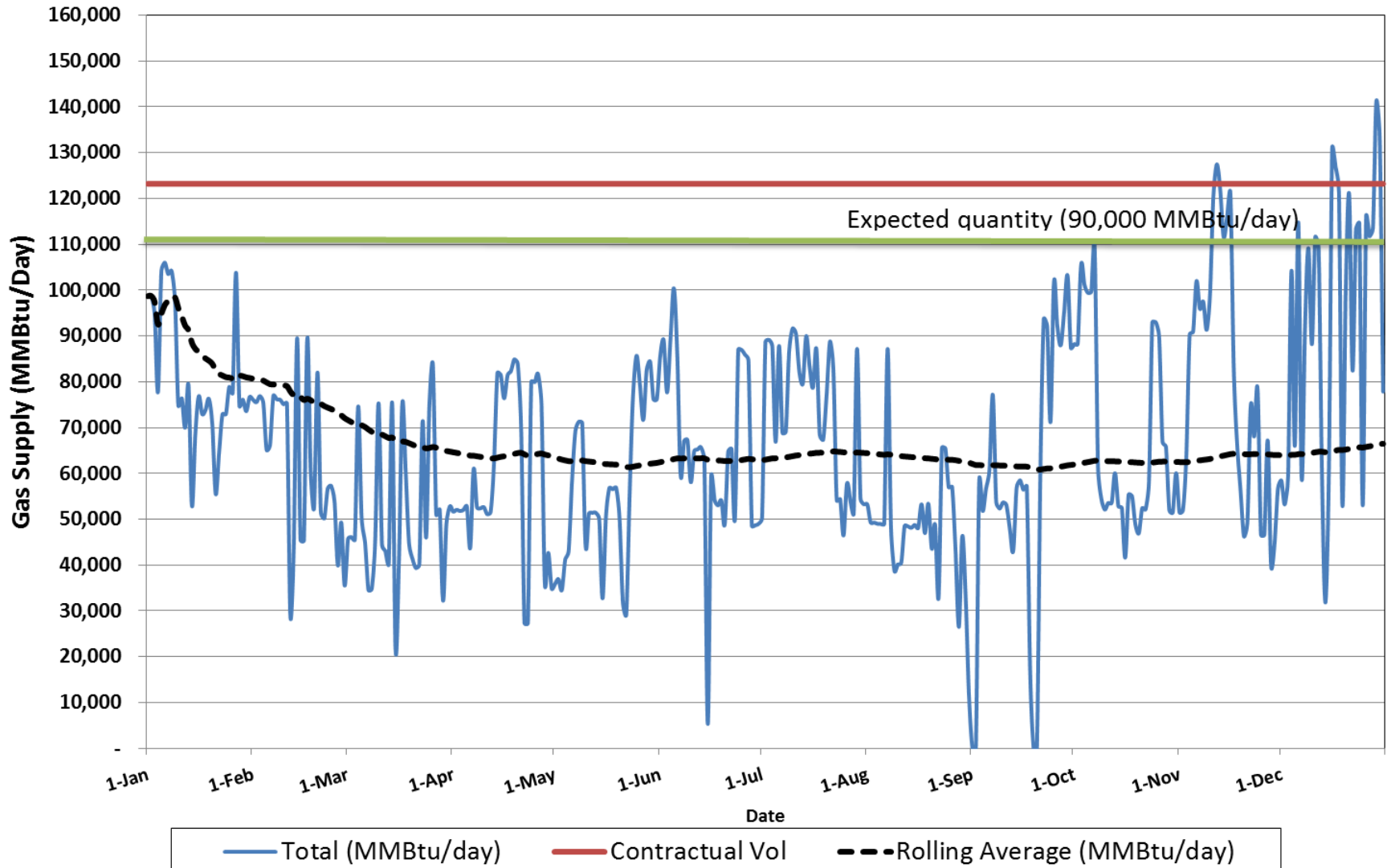
# NIGERIA GAS SUPPLY

- Low gas supply since beginning of the year.
- Gas supply from Nigeria has always been erratic and 2014 was no exception.
- Discussions are on-going for additional gas supplies with potential gas supplies in Nigeria.
- Considering a proposal from Quantum Power Ghana Gas (QPRGG) to deliver re-gasified LNG to our plants in Tema.



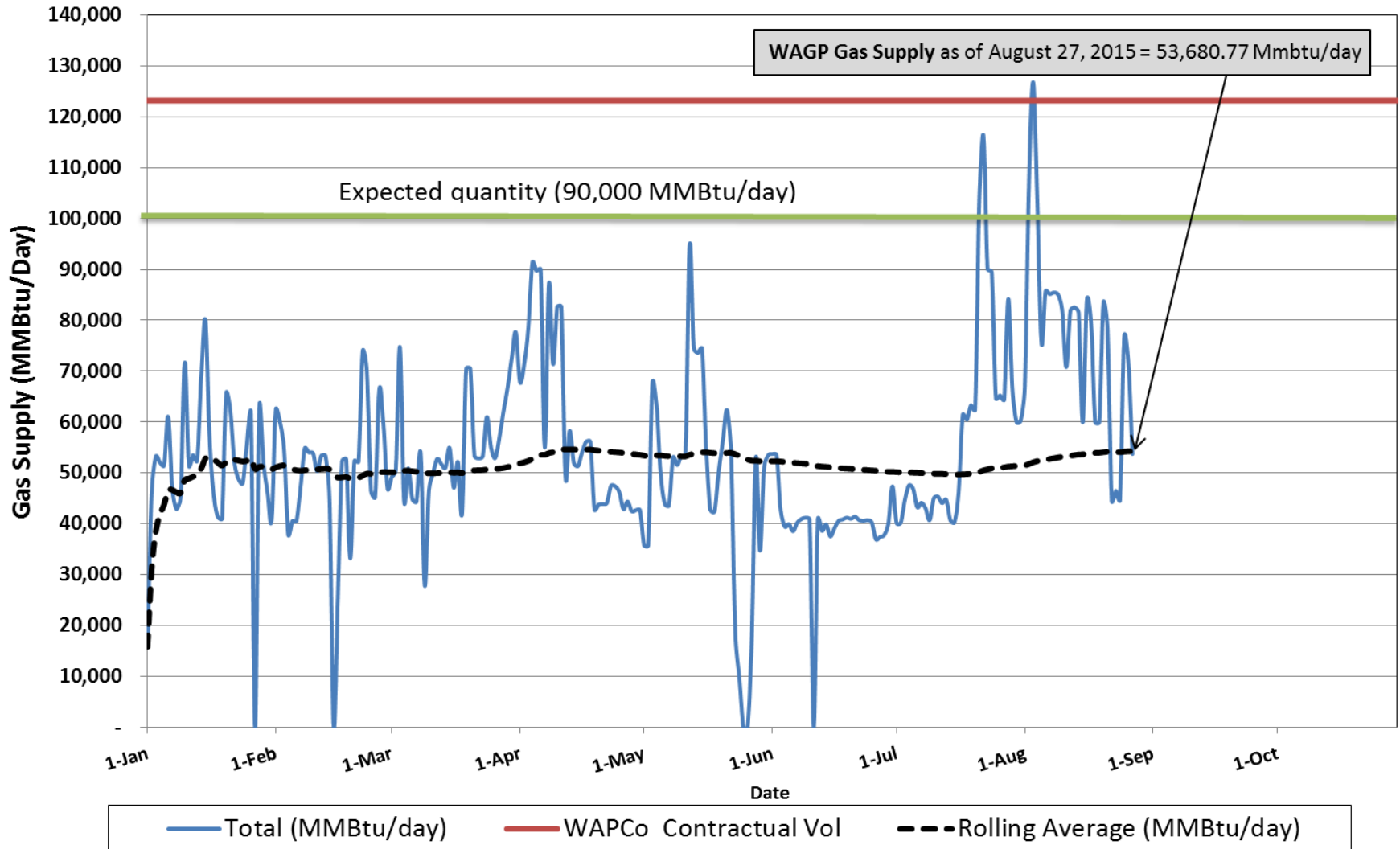
# NIGERIA GAS SUPPLY

## 2014 Gas Supply



# NIGERIA GAS SUPPLY

## 2015 WAGP Gas Supply - Up to August 27, 2015

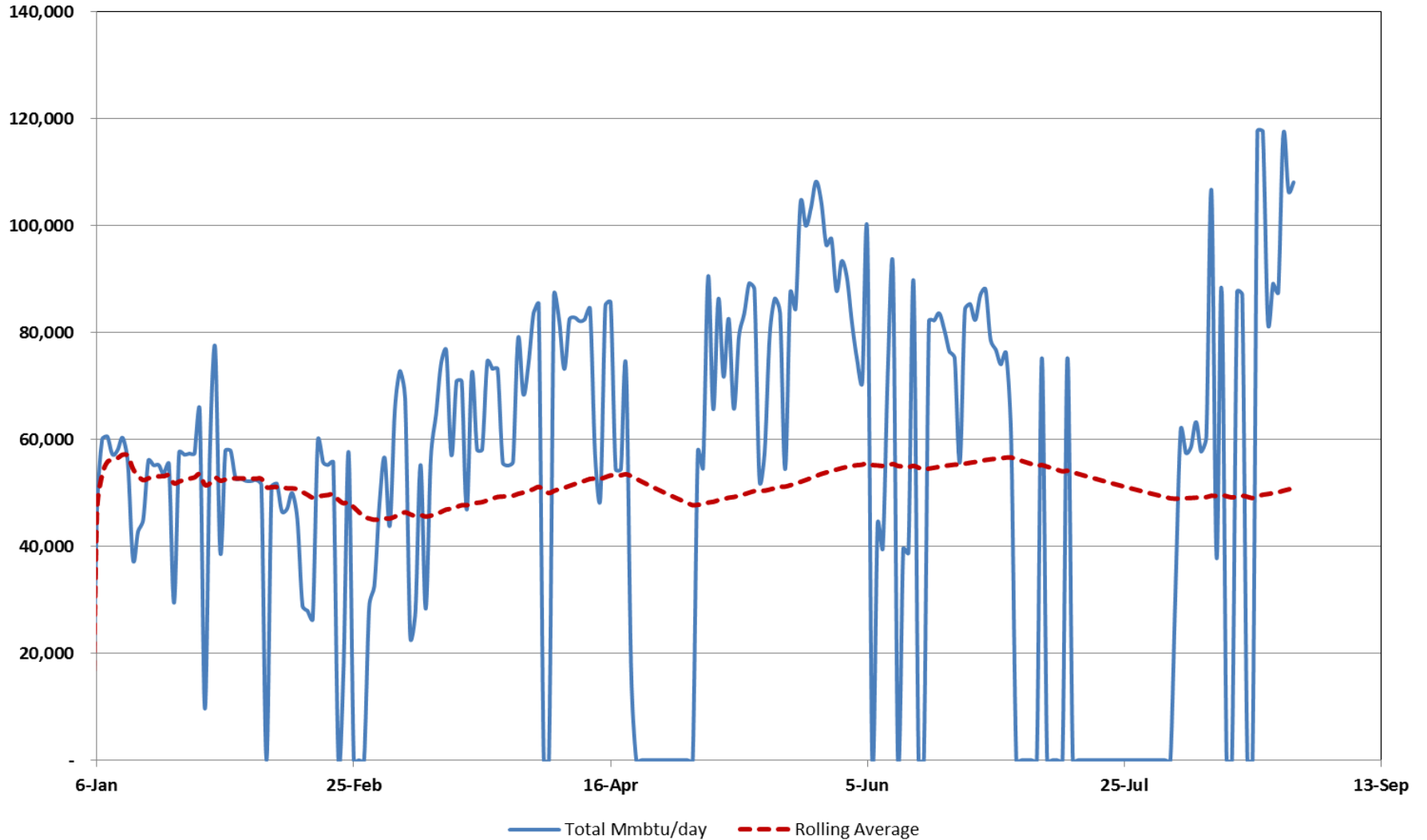


# GAS SUPPLY FROM GHANA

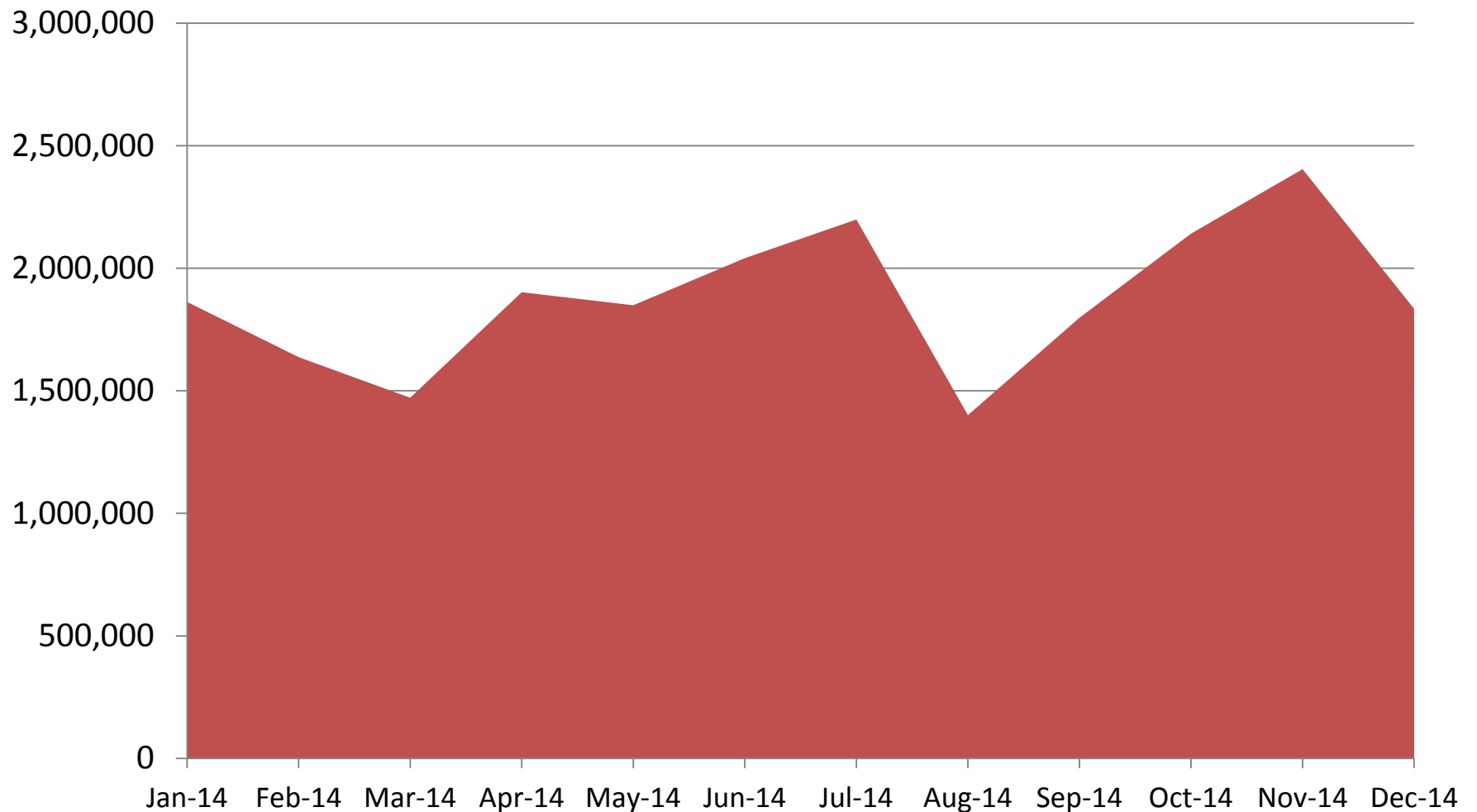
- Jubilee gas production started late 2014 with frequent interruptions, mainly as a result of unavailability of enough thermal generation units or fault at gas supply facility
- Need for additional gas supplies because of inadequacy of gas supply from Ghana Gas Company & Nigeria to meet the national gas demand

# GAS SUPPLY FROM GHANA

## 2015 GNGC Gas Supply - Up to August 27, 2015

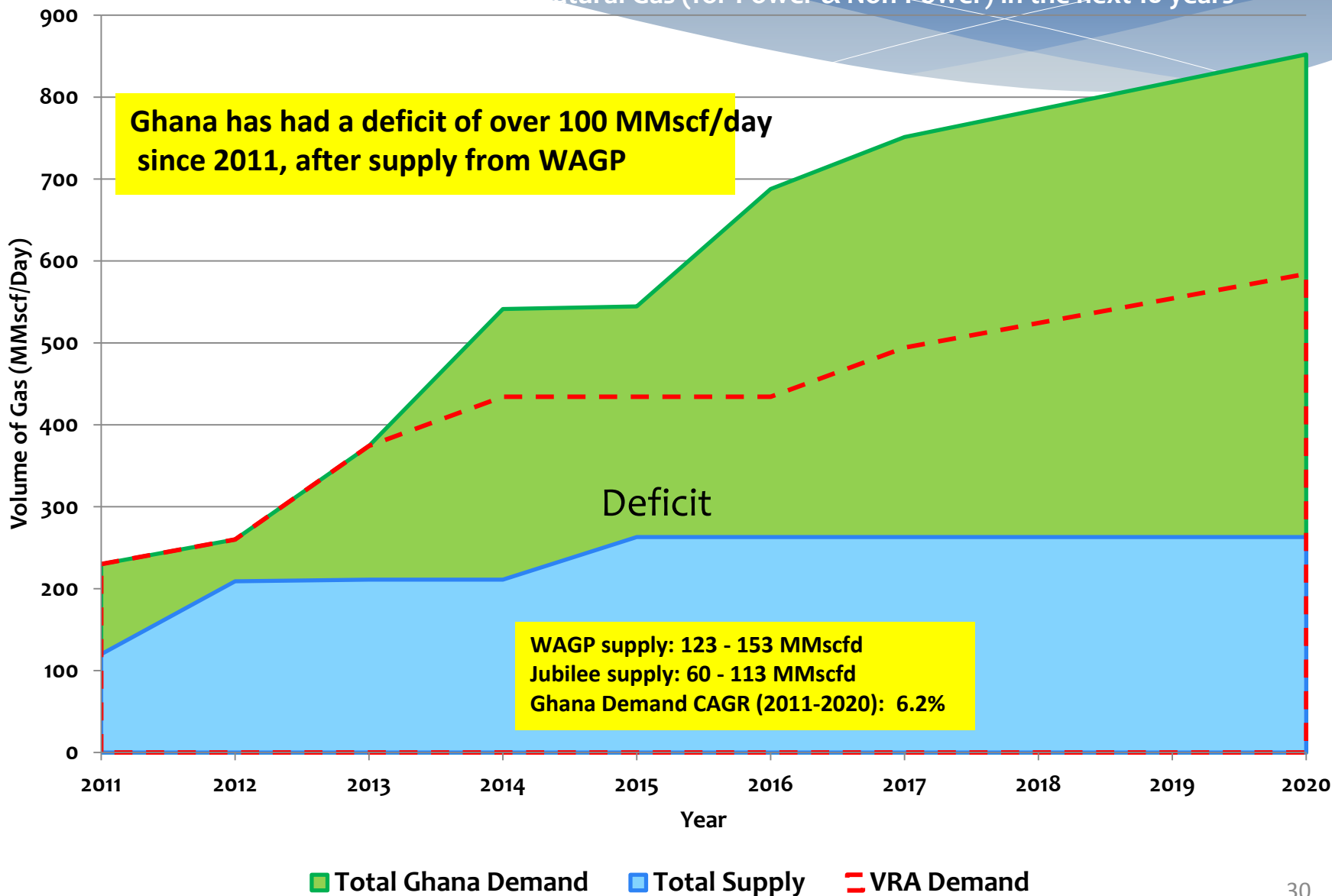


## Gas Consumed (2014) - MMBtu(NGAS)



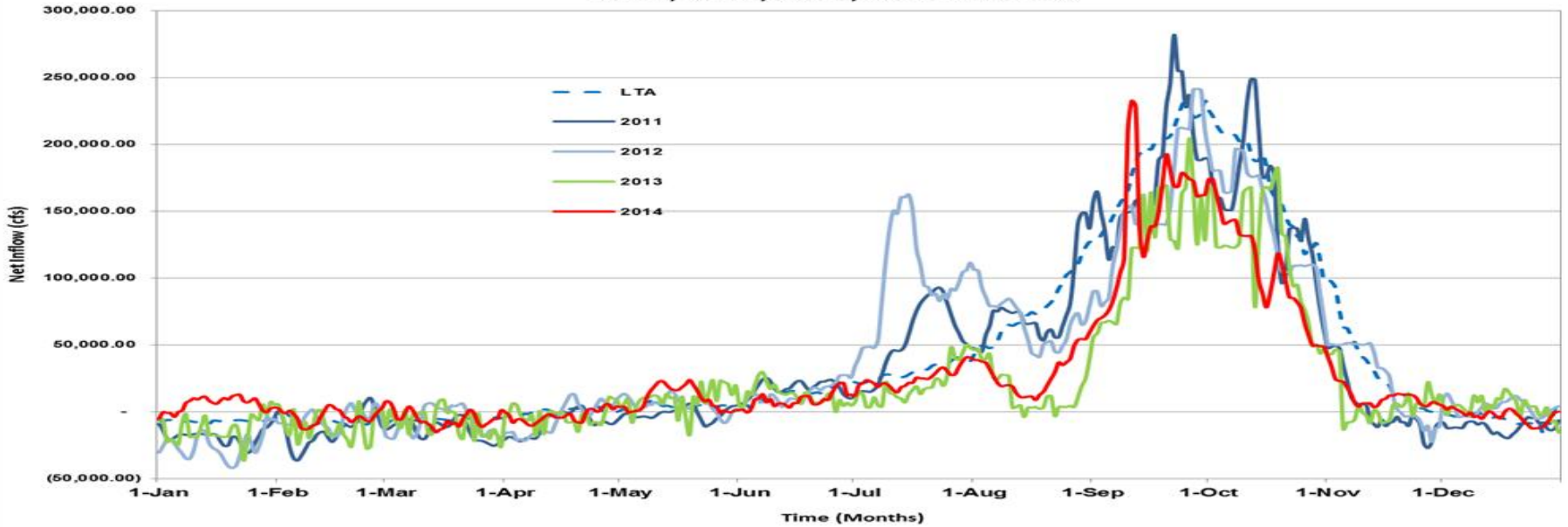
# GHANA'S NATURAL GAS NEED PER DAY FOR THE NEXT 10 YEARS

Ghana will need between 230 MMscf/day and 850 MMscf/day of Natural Gas (for Power & Non-Power) in the next 10 years

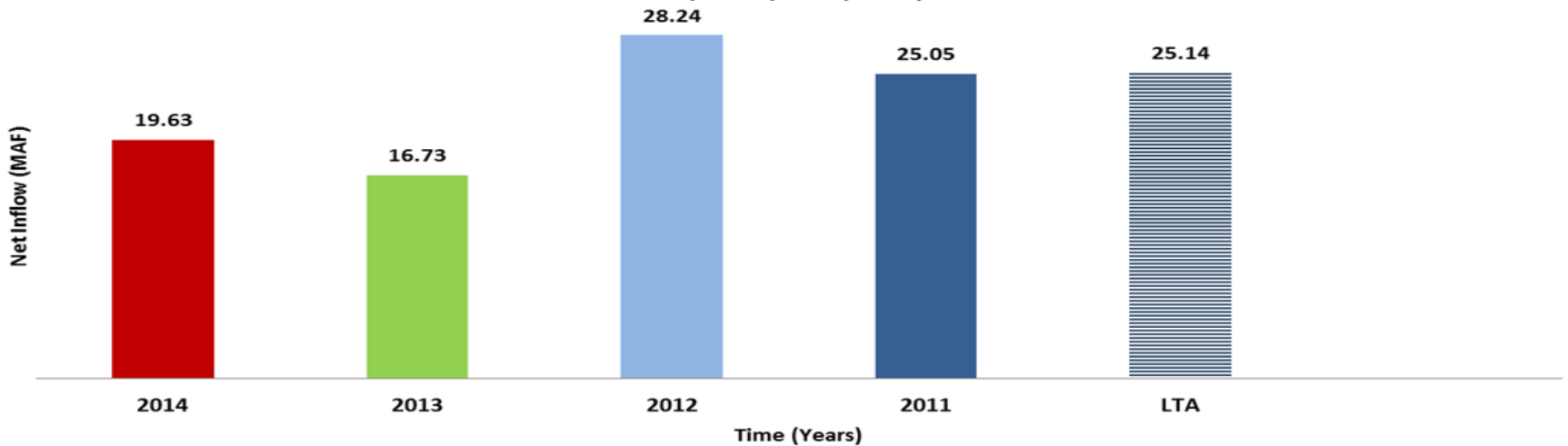


# INFLOW FOR HYDRO GENERATION

**Akosombo Net Inflow (cfs) :  
2014, 2013, 2012, 2011 and LTA**



**Net Inflow LTA from January to December ending  
for 2014, 2013, 2012, 2011, and the LTA**



**Below average inflows recorded in 2013 and 2014 resulting in low hydro generation**

# Alternative fuels being explored to provide security through diversification

## Liquefied Natural Gas (LNG):

VRA is exploring the use of LNG that will be re-gasified on a Floating Storage Re-Gasification Unit (FSRU) to supply gas directly to the Power Plants through a pipeline

## Clean coal:

Investigations have started into the development of a CLEAN COAL power plant. This is expected to play a dominant role in the national energy mix.





# Payment performance of major customers critical to VRA's financial health

## Payment Performance of Major customers

- \* ECG purchases about 65% of the power generated by VRA.
- \* Payments from ECG has been erratic.
- \* VALCO unable to pay fully for power
- \* Weak financial health of the sector the biggest impediment to investment
- \* Situation will improve with arrangement to finance existing ECG receivables
- \* Long term solution needed to improve performance of distribution sector

# SUMMARY

- 2014 was a financially challenging year even though we kept open real possibilities for continued growth and development
  - No Government subsidy to shortfall in lieu of tariff shortfall.
- Stable supply of gas remains highest priority.
- Regulatory framework to promote sustainable capacity additions also critical.
- Ghana's geographic position and political and economic stability position must be properly leveraged.

# CONCLUSION

- 2014 was a financially challenging year even though we kept open real possibilities for continued growth and development
  - No Government subsidy to shortfall in lieu of tariff shortfall.
- Stable supply of gas remains highest priority.
- Supply situation to improve as short term generation projects come online
- VRA's financial health is critical to its ability to raise funding for new projects to meet demand growing at 150-200 MW per year at an estimated cost of US\$200-250 million/year
- Regulatory framework to promote sustainable capacity additions is critical.
  - Full implementation of Automatic Adjustment Formula required to ensure full cost recovery



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# Thank You