

Gainesville City Commission Regional Utilities Committee

2012 Year End Update

GRU Coal Supply and Coal

Procurement Policy

Energy Supply Division

Fuels Management Department

February 19, 2013

Perspective to Guide the Discussion/Update of GRU Procurement Policy

- GRU “dispatch” or commitment of generating units to meet system load is driven by reliability and the cost to generate a Megawatt-Hour (\$/Mwh).
- The dispatch price (\$/Mwh) of a generating unit is composed of its fuel cost (delivered \$/MMBtu), heat rate (MMBtu consumed to generate a kwh or Mwh) and its Operating and Maintenance Cost (O&M).
- The heat rate of a unit varies as a function of the percentage of its maximum operating capacity.

Perspective to Guide the Discussion/Update of GRU Procurement Policy

Select System Fuel Dispatch Prices from 01/29

Unit	Fuel Cost \$/MMBtu	Ht. Rate MMBtu/ Mwh	Gen Price \$/Mwh	Net MW Max
DH2 coal	4.04	10.29	42.01	232
DH2 coal (W gas)	3.93	10.29	41.41	232
Kelly CC1 (gas)	3.39	8.29	28.18	112

Perspective to Guide the Discussion/Update of GRU Procurement Policy

- The same dispatch price economics which kept DH2 costs at an economic advantage to combined cycles running on natural gas for years have reversed to place the unit at an economic disadvantage.
- The result of current market economics have been reduced coal burns at DH2 and increased usage of natural gas in Kelly CC1.
- **Procurement Policy is a tool to acquire the fuel assets required to support economic dispatch and a competitive generating strategy.**

Summary of GRU Coal Procurement Policy

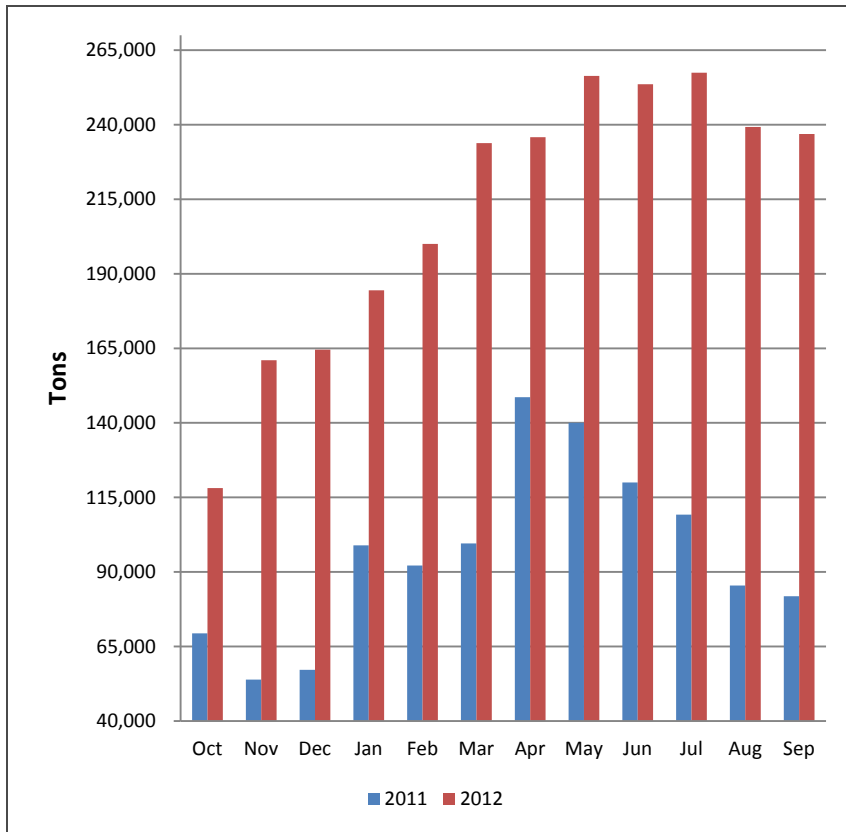
- The objective of all coal procurement processes is to minimize the total cost of Deerhaven #2.
- Procurement processes are designed to maximize competition.
- Procurement processes are also intended to enhance system and plant reliability.
- Selection of suppliers is driven by economic analysis of \$/MMBtu for :
 - fob mine coal commodity cost
 - rail transport cost
 - typical heat content for shipments
 - pebble lime consumption required to process SO₂ emissions
 - urea consumption required to process NO_x emissions
 - replacement power for projected derates
 - projected incremental maintenance costs due to corrosion, slagging, fouling,
 - projected replacement power expense for incremental increases in forced outages
 - projected increases/decreases in SCR catalyst life.

Current Coal Supply Portfolio

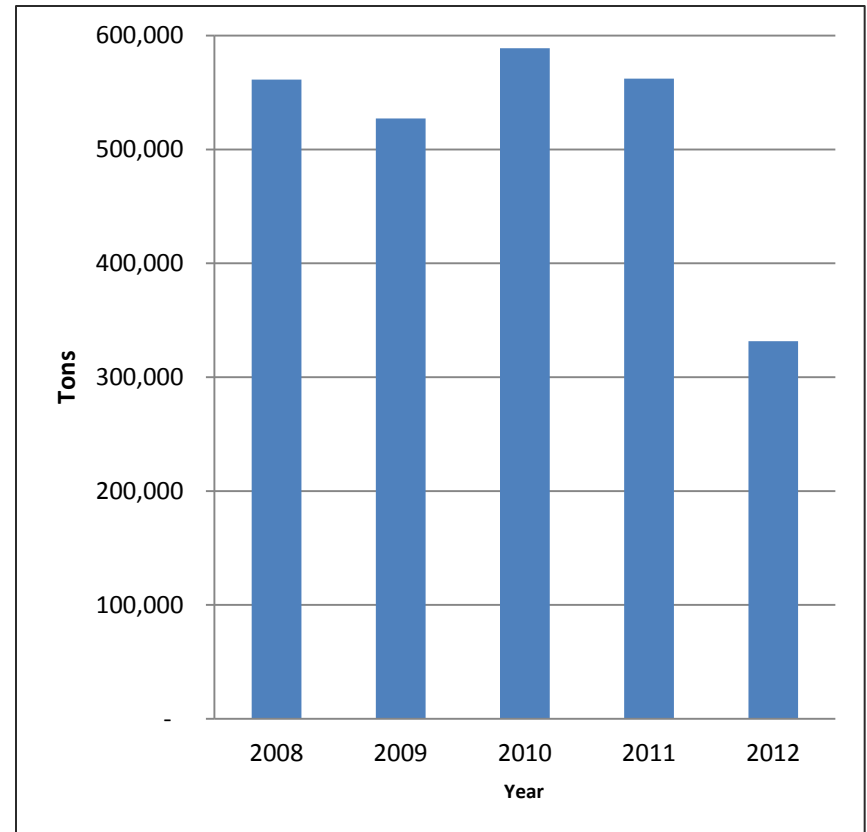
- Inventory is approximately 316K tons
- Three one year term, fixed price contracts that expire in first quarter 2013 (12,200 tons/mo/contract).
- Contracts negotiated at substantially less than market at that time but market has declined below contract prices.
- GRU coal portfolio price is fixed for the remainder of the contract terms. Coal market price is lower than contract.
- Coal contract prices unable to compete with declining natural gas prices.
- No additional contract commitments have been solicited or negotiated for 2013.

Current Situation: Coal Burn and Inventory

Deerhaven Unit #2 Coal Inventory



Deerhaven Unit #2 Coal Burns 2008 - 2012



What is Being Done to Manage the Current Situation?

Remaining 2012/2013 Contract Shipments

- Blackhawk – 2 shipments (complete in February 2013)
- Alpha – 3 shipments (complete in March 2013)
- Peabody – 4 shipments (complete in March 2013)

Management Actions

- Inventory volume is being constrained by delaying or rescheduling deliveries as necessary.
- Accept remaining contract deliveries through March 2013, allows future flexibility to respond to lower priced spot supply in 2013 and 2014.

What is Being Done to Manage Excess Coal Inventory

COAL SALES TO INDUSTRIAL OPERATIONS

- GRU is pursuing coal sales to industrial companies that have the ability to truck coal from the DH2 coal pile.
- Inventory sales from DH2 are an expensive alternative for most industries due to the imbedded cost of both rail and truck transport to the site.
- Completed 5 sales to 2 different companies of approximately 8,000 tons, \$815,000.
- Currently negotiating with two companies for sales of up to 120,000 tons.

Coal Supply Strategy

IMPLEMENTATION OF 2013-2014 COMPETITIVE STRATEGY

1. Five Year Fuel and Generation Plan

- May 2009 Deerhaven Unit #2 was retrofit with an Air Quality Control System (AQCS) that include a circulating dry scrubber for the removal of sulfur dioxide and a Selective Catalytic Reactor (SCR) to control nitrogen oxides.
- Deerhaven Unit #2 is now capable of burning coals from Northern Appalachia, Illinois Basin, and other coal producing regions.
- Draft Five Year Plan Project Outline and Summary - Project approved by Energy Supply Management in 2010.
- Designed to measure and improve the competitive position of all generating units particularly Deerhaven Unit #2 and J.R. Kelly CC1.
- Project was driven by high CAPP coal prices and the anticipated decline in natural gas prices.

Coal Supply Strategy

Phase 1 – Technical Feasibility

2. 2012 Results of Management Initiative

- Contracted for training of engineers and plant operators in quality characteristics of Illinois Basin Coals, low fusion temp combustion, and operating techniques.
- Contracted for engineering support for DH2 test burn.
- Successfully test burned Illinois Basin coal in 20,30, 40, 50 and 60% blends with CAPP coal.
- Plant operators and support personnel controlled unit temperature and excess air to successfully avoid any significant slagging and fouling.
- This project phase was designed to test plant systems, operating techniques and fuel systems to prove that ILLB coal blending was technically feasible without unacceptable risks to unit reliability.

Coal Supply Strategy

3. 2013 Economic Feasibility/Incentive Testing Phase

- Phase One Technical Feasibility Testing proved the technical ability to burn coals other than CAPP in Deerhaven Unit #2.
- Phase Two Economic Feasibility is designed to accurately price ILLB and NAPP coals, non contract rail rates, lime and urea consumption, etc.
- The end result of Phase Two will be an assessment of the total savings available to GRU by moving to the Illinois Basin or Northern Appalachia coal supply.

2013 Summary of Fuel Procurement Plan and Policy

- Phase Two Economic Feasibility testing can be supported by spot purchases of Illinois basin and Northern Appalachia coals.
- Reduced coal burns and limited purchases do not indicate any need to revise procurement policy at this time.
- As previously maintained by Energy Supply, increased regulation, environmental litigation costs, and market economics have greatly constrained strip mining in CAPP.
- GRU is shifting its procurement focus beyond Central Appalachia.
- GRU will not enter into any new coal contracts at this time, due to high inventory level and projected coal burn.