



**FDC Enterprises, Inc.**  
Conservation & Bioenergy

# FDCE 2003-2018

- 15 years conservation establishment experience
- 390,000+ acres conservation established-26 states
- 14 planting units, 2 broadcast\roller units- 4 crews







## **FDCE 2006-2018**

- 12 years bioenergy experience**
- 3300 acres purpose grown (switchgrass) bioenergy crops (Va) 300 acres (Macadonia)**
- unsubsidized for profit processed RTU biofeedstock for power generation**

## 2011-18 Intermittent Use Cumulative

SG- 1,062,982 gal fuel oil offset  
SG- \$1,031,249 savings vs fuel oil  
SG- 17,256 metric tons CO<sub>2</sub> avoidance

## 2017-18 Heating Season (New Boiler)

Start 7\1\17 through 6\30\18  
SG- 332 days  
SG- 3,914.87 tons consumed  
SG- 49,497,901 lbs. steam produced  
SG- 14,565,382 btu\ton  
SG- 415,180 gal fuel oil offset  
SG- \$344,347.81 savings vs fuel oil  
SG- 4,188 metric tons CO<sub>2</sub> avoidance






**One of 2 Va harvest crews. Redundancy is critical for QC (consistency) of harvested biofuel . Redundancy is critical to meet contract obligations**







**Benefits to the local community include-**

- new business income taxpayer (FDCE & LO)
- local business impact- over \$200,000\yr spent
- jobs for 3 individuals
- soil erosion reduction- not an annual crop
- water quality improvements – not an annual crop
- wildlife habitat improvement over tradnl crops
- new income stream for local landowners
- improved air quality for local residents\animals
- budget stabilizer for Commonwealth- fixed pricing
- budget reallocation for Commonwealth



**TBL- Triple Bottom Line**

**Profit- for all direct stakeholders- landowner, processor, consumption entity, vendors, govt**

**Environment- water, soil, air, carbon, wildlife**

**Social- community benefits**



## Success Lessons

- Feedstock provider must be at engineering table when project planning starts
- Purpose grown bio feedstock SG must have at least 10 year contracts to amortize\cash flow
- Energy crops must have a 2 year head start to mature and to build adequate end user inventories
- QC generally is much tighter than other ag use -efficiencies
- There must be adequate non volatile pricing\profit opportunity for all stakeholders
- There must be adequate dry storage to minimize losses\maintain quality
- Ancillary benefits are important- need to promote all value props to interested parties





**To date- The Commonwealth's Piedmont Geriatric Hospital is the only facility in America utilizing SG as its primary fuel source.**

“This project is an example of how properly planned and executed community based and community sized power generation can enhance local community economies, utilizing locally produced biofuel and, at the same time, enhance water quality, wildlife habitat and land conservation.” Steven Thomas USDOE