

Big Sandy Plant, Catlettsburg, KY







Calgon Carbon has an ongoing program to significantly reduce overall production costs over the next few years. These savings are critical to remain competitive in the global market place.



- Big Sandy Plant Started in 1961
- Worlds largest granular activated carbon facility producing ~100,000,000 lbs. annually
- 204 employees
- Key Products
 - Granular Activated Carbon
 - FluePAC
 - Industrial Water Treatment
 - Carbon Reactivation



Awarded KAM Manufacturer of the Year – Mid-Size Company





Facility Energy Assessment

- Conducted an energy walk through with a 3rd party energy solution provider.
- Identified the following energy and cost reduction opportunities:
 - Consolidation of Satellite Air Compressors.
 - Reduction of Compressed Air System Pressure.
 - Warehouse Lighting Retrofit.
 - Outdoor Lighting Retrofit.
 - Replacement of Lab HVAC System.
 - Process Waste Heat Boiler.
 - Excessive Power Outages.
- Leveraged finding at the Catlettsburg facility to conduct a similar walk through at the Pearlington, MS facility.



Consolidation of Compressed Air Systems

- Consolidation of 4 outdated inefficient satellite air compressors to a centrally located 2 stage high efficiency air compressor.
- Estimated kWh Saved: 523,443 per year.
- Estimated Cost Savings: \$32,000 per year.
- Estimated Maintenance Savings \$50,000 per year.
- Simple Payback: 3.1 years.





Reduction of Compressed Air System Pressure

- Installation of a compressed air monitoring system.
- Reduction in compressed air distribution from 100psi to 80psi.
- Elimination of leaks.
- Estimated kWh Saved: 614,887 per year.
- Estimated Cost Savings: \$34,000 per year.
- Simple Payback: 1.95 years.





Warehouse Lighting Retrofit

- 72,000 sq. ft. warehouse facility.
- Replacement of 400 175 watt high pressure sodium fixtures with high efficiency T5 lighting.
- Estimated kWh Saved: 463,159 per year.
- Estimated Cost Savings: \$27,000 per year.
- Simple Payback: 6.6 years.





Funding Opportunities

- TVA Environmental Mitigation Grant
 - Submitted proposal that included funding requests for compressed air and lighting projects.
 - Grant could potentially finance 75% of the project costs.
 - Proposal still under evaluation by the Kentucky Energy and Environmental Cabinet.
- Investigating potential rebates from our utility providers.









Payback Leveraging Grant Funding

- Consolidation of Compressed Air System & Reduction of Compressed Air System Pressure
 - Simple Payback 2.8 Years
 - Simple Payback with Potential Grant Funds .70 Years
- Warehouse Lighting Retrofit
 - Simple Payback 6.6 Years
 - Simple Payback with Potential Grant Funds 1.93 Years
- Total Project Simple Payback
 - Without Grant Funding 3.65 Years
 - With Potential Grant Funds .91 Years









Questions

