LOW AND NO-COST WAYS TO SAVE ENERGY

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ADECA
Alabama Department of Economic and Community Affairs
Energy Division

ENERGY STAR

WHO WE ARE

The Energy Division of the Alabama Department of Economic and Community Affairs (ADECA) serves as the State Energy Office. Its mission is to increase energy efficiency and reduce energy consumption, promote energy efficiency and renewable energy technologies, make energy efficiency more affordable for low-income residents, and aid low-income households.

DO YOU UNDERSTAND YOUR UTILITY BILL?

Previous Balance	$7,632.89
+ Current Charges	$3,255.70
+/- Net Adjustments	$0.00
- Total Payments	$0.00
= Total Amount Due	$10,888.59
DUE DATE	

Account Number:
Issue Date:

Bring entire bill when paying in person. Keep this portion for your records.

Contract Number:
Service Location:

Cycle:

Route:

Usage History	KWH	Days	Avg. kWh per Day
Last Month	31,500	30	1,050.0
Last Year			

Billing Period: 04/26/2001 - 05/24/2001 No. Days: 029 Rate Category: LARGE COMMERCIAL GSP L

Mtr. No.	Present Read	Previous Read	Difference	Multiplier	Usage	Usage Type	Amount
618356	13	12	1	10500	10,500	KWH	
	0	0	0	10500	0	KWH SUMMER OFF PEAK	
	0	0	0	10500	0	KWH SUMMER ON PEAK	
	0	0	0	10500	0	KWH SUMMER SUPER PEAK	
	10	9	1	10500	10,500	KWH WINTER OFF PEAK	
	3	3	0	10500	0	KWH WINTER ON PEAK	
	0.003			10500	32	KW MAXIMUM	
	0.000			10500	0	KW SUPER PEAK	
	0.001			10500	11	KV	
POWER FACTOR			0.9457				
POWER FACTOR			0.9457				
ENERGY CHARGE		10,500 WINTER OFF PEAK KWH @			0.053850		565.43
		32 MAXIMUM KW @ 6.650000					49.65

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YOU CAN'T MANAGE WHAT YOU DON'T MEASURE

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THE CASE FOR ENERGY EFFICIENCY

- Increased comfort
- Safety
- Reduced maintenance
- Energy savings
- Cost savings

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KNOW YOUR UTILITY BILLS

- Review your utility bills regularly
- Benchmark and track your energy usage and savings through free tools like ENERGY STAR Portfolio Manager
- Look for better rate structures
- Compare peak times to equipment run times

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ENERGY STAR PORTFOLIO MANAGER

- Track total electricity, natural gas, water, or other utilities in a building
- Include a portfolio of buildings to identify where upgrades are needed most
- Visit **energystar.gov/buildings** to register and input your buildings
- Visit ENERGY STAR's YouTube channel for a playlist of video tutorials about setting up properties, inputting utility data, generating reports, batch uploads, and sharing data.

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WORK WITH YOUR UTILITY

- Help with reviewing your bills
- Rebates / efficiency programs available
- Walkthrough audits
- Best rate structure for your organization
- Educational opportunities for maintenance staff and energy managers

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OPERATIONAL IMPROVEMENTS

- Conduct nighttime audits
- Revise janitorial practices
- Optimize startup and power-down time for equipment
- Perform preventative maintenance
- Visually inspect equipment

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LIGHTING

- Turn off lighting when not in use
- Use natural daylight when available
- Remove unnecessary lamps
- Make sure light levels are accurate
- Clean the fixtures

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LED LIGHTING UPGRADES

- Significant difference in light output and warm up time vs. fluorescent, incandescent, and metal halide lighting
- Bulbs have much longer run time
- Low payback period (generally 1-3 years)
- More light output means possibility for reducing number of light fixtures (delamping)

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LED LIGHTING UPGRADES

Case Study - Mill Creek Elementary School

- LED lighting upgrade for one school
- $19,500 project
- Work completed by maintenance staff (210 hours)
- $19,000 annual savings - just over 1 year payback

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HEATING AND COOLING

- Set back the thermostat in evenings and other times when building isn't occupied
- Regularly change or clean HVAC filters every month during peak cooling or heating season
- Use blinds or shades to control direct sunlight
- Make sure areas in front of vents are clear of furniture and paper
- Weatherstripping, air sealing, duct sealing, and caulking are inexpensive but effective ways to get the most out of heating and cooling
- Keep exterior doors closed while running your HVAC

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HEATING AND COOLING

- Look at mini-split or high efficiency heat pumps as efficient but inexpensive options for classroom wings
- Explore building automation systems, controls, or smart thermostat technologies to better manage heating and cooling

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GET STUDENTS INVOLVED

- Set up student-led Energy Patrols doing walkthrough audits
- Older students can input data into Portfolio Manager for their school, tracking energy usage
- Incorporate energy efficiency technology into curriculum
- Department of Energy resources available at **https://www.energy.gov/eere/education**

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LOANS AND GRANTS

Energy-Efficient Retrofit Grants

$15,000 to $20,000 grants to local governments, non-profit organizations, K-12 schools, and wastewater treatment facilities

Local Government Energy Loan Program

Currently not lending and may resume in the next year

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ENERGY-EFFICIENT RETROFITS

Eligible Measures

- Insulation
- LED Lighting Upgrades
- HVAC Upgrades
- HVAC and Lighting Controls
- Alternative Fuels Fleet Conversion
- Idle Mitigation
- Renewable Energy Projects

Grant application opportunities are announced annually. Contact the Energy Division to ensure you are on the distribution list to receive announcements.

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ENERGY-EFFICIENT RETROFITS

Requirements for Application

- Minimum 25% matching funds (may use maintenance personnel installation as match)
- Letter of transmittal
- Building information (address, square feet)
- Quantity and type of current and proposed equipment
- Budget information for project
- Proposed energy and cost savings of new equipment
- Qualifications and experience of applicant
- Timeline of project
- Payback period of 10 years or less

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ENERGY SAVINGS PERFORMANCE CONTRACTING (ESPC)

Procure and finance large capital energy improvement projects for public facilities through guaranteed energy savings

Energy Division provides education and technical assistance at no cost

- RFP or contract review
- Sample documents
- Alabama ESPC Guide available on ADECA website

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VW SETTLEMENT

- Alabama's allocation nearly $25.5 million
- ADECA designated by Governor Ivey as the Lead Agency to administer Alabama's allocation
- Alabama's Beneficiary Mitigation Plan has been submitted for approval
- Up to 80% of government-owned projects can be funded through the Trust

More information available at
www.adeca.alabama.gov/vwsettlement

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VW SETTLEMENT

Alabama's Proposed Funding Allocation

Class 8 Local Freight Trucks and Port Drayage Trucks, $2,165,882
Class 4-8 School Bus, Shuttle Bus, or Transit Bus, $5,424,705
Diesel Emission Reduction Act Option (ADEM Program), $974,647
Freight Switchers, $2,599,058
Ferries and Tugs, $1,516,117
Ocean-Going Vessels Shore-Power, $974,647
Class 4-7 Local Freight Trucks (Medium Trucks), $2,815,646
Airport Ground Support Equipment, $974,647
Forklifts and Port Cargo Handling Equipment, $974,647
Light Duty Zero Emission Vehicle Supply Equipment, $3,248,823

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VW SETTLEMENT

Eligible Buses

- Eligible class 4-8 school buses, shuttle buses or transit buses must have a 2009 engine model year or older and a gross vehicle weight (GVWR) greater than 14,001 pounds
- Eligible buses must be scrapped
- Eligible buses may be repowered with any new diesel or alternate fueled engine or all-electric engine, or may be replaced with any new diesel, alternate fueled or all-electric vehicle with an engine model year of one year prior to applying for funding or newer

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VW SETTLEMENT

Eligible Medium Trucks

- Eligible class 4-7 Local Freight Trucks include engine model years between 1992 and 2009 and have a gross vehicle weight (GVWR) of 14,001 - 33,000 pounds
- Eligible medium trucks must be scrapped
- Eligible medium trucks may be repowered with any new diesel or alternate fueled engine or all-electric engine, or may be replaced with any new diesel, alternate fueled or all-electric vehicle with an engine model year of one year prior to applying for funding or newer

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BUILDING OPERATOR CERTIFICATION

- BOC is a hands-on training and credential program for commercial building operators
- Includes 8 in-person classes, hands-on project assignments, and reference handbooks for each class topic
- Georgia's BOC participants saw a $4,000-$8,000 annual savings per K-12 school in the first year of their program
- Attendees include maintenance technicians and supervisors, electricians, building and facility managers, and energy managers

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BUILDING OPERATOR CERTIFICATION

Course Topics

- BOC 1001 Energy Efficient Operation of HVAC Systems
- BOC 1002 Measuring and Benchmarking Energy Performance
- BOC 1003 Efficient Lighting Fundamentals
- BOC 1004 HVAC Controls Fundamentals
- BOC 1005 Indoor Environmental Quality
- BOC 1006 Common Opportunities for Low-Cost Operational Improvement
- BOC 1007 Facility Electrical Systems

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BUILDING OPERATOR CERTIFICATION

UPCOMING TRAININGS

Trainings for summer and fall are currently being scheduled in Montgomery. Other potential locations for the next two years include Huntsville and Mobile.

Visit **bocalabama.com** to stay up to date on BOC courses and events.

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THANK YOU SO MUCH!

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