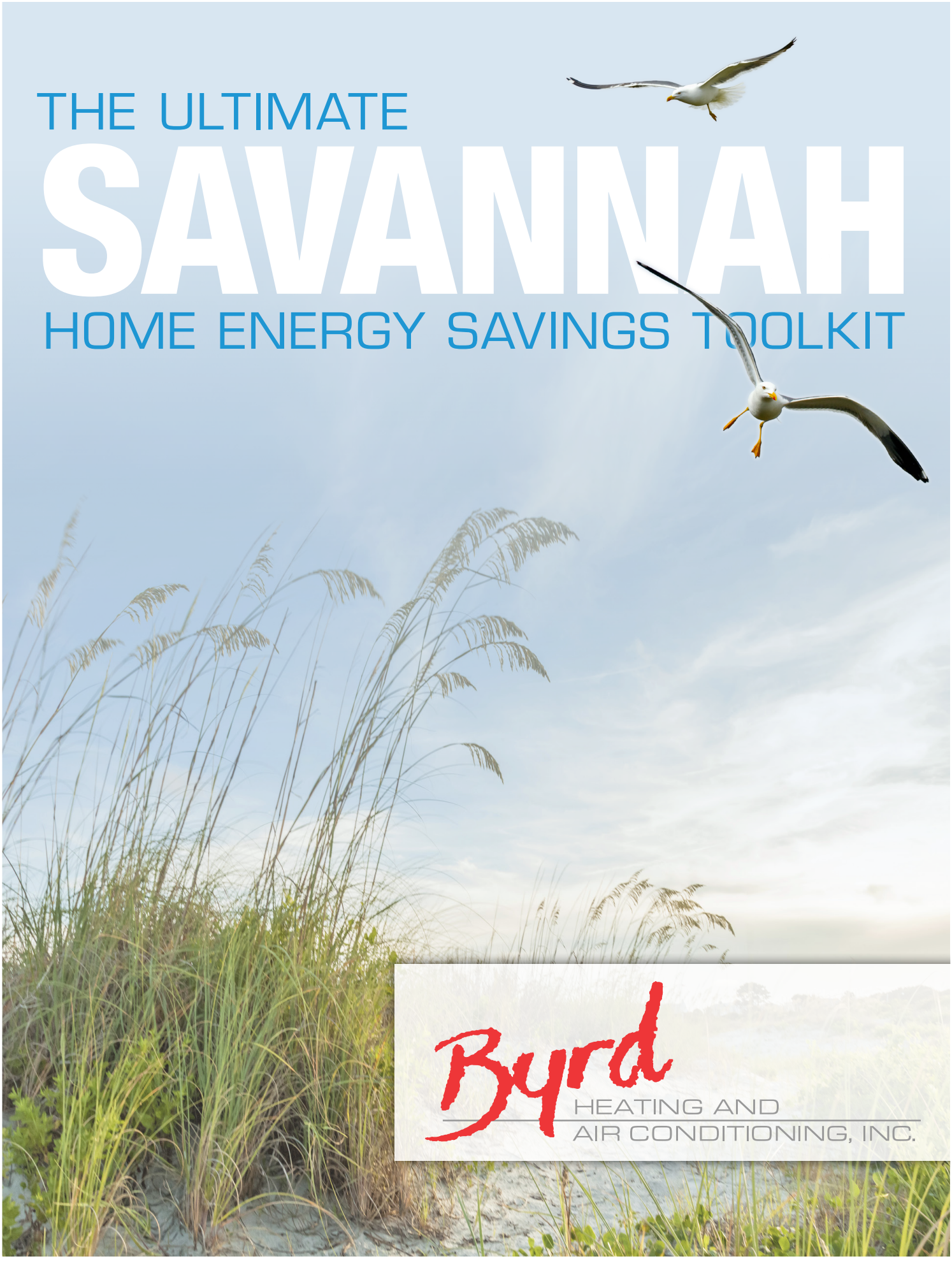

THE ULTIMATE SAVANNAH HOME ENERGY SAVINGS TOOLKIT

Byrd
HEATING AND
AIR CONDITIONING, INC.

Today's 115 million American residences use approximately 22.5% of the country's energy, and each household spends about $2,200 a year on utility bills. If this seems steep, you should know that it doesn't have to be. You can cut a quarter out of your energy expenses simply by utilizing smart energy-saving strategies in your home.

To help you out in your energy-saving endeavors, your good friends at **Byrd Heating and Air Conditioning** have compiled this comprehensive energy saving toolkit. It's packed with everything you need — advanced strategies, tools, and even some special deals — to help you in your quest for home efficiency.

Use these smart suggestions to minimize your energy use and slash those energy bills, then track your progress with our handy worksheet. You can become a part of the movement for a greener future with just a few steps.

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912-373-8447
byrdheatingandair.com

7 ENERGY-SAVING TIPS for Savannah Homeowners

Read through our advice for making these seven adjustments to your Savannah home, and then see your energy-saving project through using the checklist and worksheet at the end of the book.

Utilize Smart Surge Protectors

Most households have multiple devices that rely on electricity. Nielsen estimates that there are 116.4 million televisions in US homes. In addition, 73% of American adults have a computer, and 40% have a game console. These devices can use energy even when they're not on, through something known as "vampire load."

Using power strips is a common tip to stop this suck, because you can cut off electricity to several devices at once by flipping a single switch. The problem with this strategy is that you have to remember to turn off the power strip. Advanced power strips (APS) offer similar energy-saving benefits with no additional effort on your part. These power strips shut off the electricity to devices that aren't in use, helping you end nearly $200 worth of wasted energy that would typically go to vampire loads.

You have several options to choose from when it comes to APS devices. A timer power strip will automatically cut off power to the designated outlet at a preset time each day. Activity monitor power strips watch for signs of activity such as remote use, and turn your devices off when they're inactive – perfect for users who fall asleep watching television.

A master-controlled power strip will turn off the power when a pre-selected "master" device is turned off. For example, if your television is the master device, the power strip will go ahead and turn off your gaming system, DVD players, and other associated devices as well when you're done with the TV. A masterless power strip monitors power use on all devices and turns the strip off when you're finished with everything. With an option for nearly every lifestyle, your days of ignoring the power strip tip are over.

Use the Right Window Coverings

Homeowners often select window coverings for their aesthetic value. However, if you factor energy savings into this decision, you can earn back some of what you spend on your window treatments. Most types of window coverings can boost energy efficiency when they're used right.

If you prefer shades, use a set of reversible dual shades with a reflective color like white on one side, and a darker heat-absorbing color on the other. During Savannah's summers, you'll want to turn the reflective surface outward to turn away heat. As the weather begins to cool in late fall, you can reverse the direction of the shades so the heat absorbing color faces outward, drawing free heat in toward the home.

A quilted roller shade is another efficient option. Designed with sealed edges, these shades can block airflow so your air conditioning or heating doesn't escape, and outdoor air can't creep in. Designed with multiple layers of batting, these shades also provide welcome insulation.

Are drapes your window covering of choice? Create a sealed barrier with your drapes by securing them to the wall on either side of the window using magnetic tape or Velcro. Install a cornice at the top to keep air from escaping upward, and make sure the drapery falls to the windowsill or floor. These sealing strategies can reduce your heat loss by as much as 25%.

Cover Your Windows in Reflective Film

Reflective window films are ideal for areas like Savannah, where the cooling season is particularly long. These films are especially useful on windows that face east and west, as these have the greatest heat gain. Mirrored films are the best option for truly reflecting heat and sunlight, though some homeowners don't mind sacrificing a bit of efficiency for the more traditional look of a transparent film.

You can apply a reflective film to your windows yourself as a DIY project if you're particularly handy. Reflective glass or professional glazing are efficient choices as well that may give you a more subtle finish.

Consider Heat Pump Technology

Heat pumps are one of the most efficient ways to heat and cool your home, particularly for users who need only moderate temperature changes. Heat pumps simply transfer heat from one space to another. In the cooling season, they pull heat from inside your home and send it out. During Savannah's mild heating season, heat pumps pull heat from the outdoor air and bring it indoors. Heat pumps can reduce electricity usage by as much as 50% when compared to furnaces or baseboard heaters.

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Upgrade to a Reflective Roof

Reflective roofs, also known as "cool roofs," absorb far less heat than traditional roofing, reflecting sunlight away from the house. You can install a reflective roof made from shingles, tiles, sheet coverings, or reflective paint. A dark roof can reach temperatures of as much as 150° in the summer. Meanwhile, a reflective roof will maintain temperatures around 100°.

Reflective roofs do more than just reduce your energy bills by keeping things cooler. They can also extend the life of your roofing. When your roof materials maintain lower temperatures, they're less likely to crack or sustain other types of heat-related damage in the punishing Savannah sun.

Use Argon-Gas Windows

Argon gas windows are an innovative and highly efficient option that you can install in place of traditional window panes. These windows have a sealed unit between two panes of glass that's filled with argon gas. The odorless, non-toxic substance increases soundproofing, prevents frost formation on the window, minimizes heat exchange, and increases R-values. Argon gas windows are thicker than traditional panes, as the ideal distance between the two pieces of gas is ½-inch. The length and width of the pane are easily customizable, however, so you can install these windows in any room of the home.

Keep in mind that argon gas windows are not foolproof, so you should rely on an experienced installer to add them to your home. The window seal must be tight or you will lose the argon gas between the panes of glass. You should install these windows with non-metallic spacers to help prevent leakage, as metal spacers are less secure.

Argon gas does dissipate over time. It's estimated that these windows lose about 1% of their gas each year. However, argon gas windows are effective with as little as 80% of the gas remaining, so at the average rate of dissipation, the windows still enjoy a 20-year lifespan.

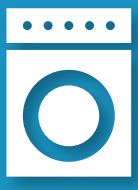
Invest in a WiFi Thermostat

WiFi thermostats give you remote control over your home, so you can adjust the settings on your HVAC system even when you're away. Some of the more innovative solutions on the market, like the **Carrier® Côr™ WiFi Thermostat**, offer tools for managing air conditioning, hybrid heat systems, humidity systems, and multiple zones.

If you don't keep to a traditional Monday through Friday work schedule, a smart thermostat with seven-day programming is the best option. This lets you input unique settings for every day of the week, so you can cool down the home just when you're getting back from work, school, or other activities. Wake, home, away, and sleep settings let you adjust your home's temperatures to coincide with all your activities.

Local weather reports are included with some systems, so you don't have to look up the forecast separately to decide how you want to manage things. Smart setback settings learn how long it takes the system to reach your preferred temperature and manage the programming intelligently so you enjoy maximum energy savings and optimum comfort levels. The right thermostat will give you unparalleled levels of control over your home's climate.

Easy **Energy-Saving** Lifehacks



Only wash full loads of laundry – gather same-colored clothing from all family members before running a load.

Adjust your thermostat up or down by 5° in the summer and winter respectively.

Run your ceiling fan clockwise in winter and counterclockwise in summer.

Unplug any electronics that aren't plugged into a smart surge protector when you aren't using them.

Home Energy Savings Checklist

Use the checklist below to ensure you aren't missing any steps in your quest for home energy savings. Once you've completed these basic tasks, move on to the **Energy Savings Worksheet** to track larger projects like the ones outlined in the previous section.

By the End of the Day

- ☐ Adjust your water heater to the warm setting.
- ☐ Replace all incandescent lights with CFLs or LEDs.
- ☐ Shut off all lights/electronics in unoccupied rooms.
- ☐ Open curtains on south-facing windows (winter).
- ☐ Replace the filters in your AC, furnace or heat pump.
- ☐ Check all appliances to see which ones are ENERGY STAR labeled.

By the End of the Week

- ☐ Buy a water-heater blanket, CFLs, low-flow showerheads, faucet aerators, etc. and install them accordingly.
- ☐ Check your windows for air leaks. Use rope caulk or add film to the ones that have leaks.
- ☐ Review the age of your heating and cooling systems. Typically you'll want to replace systems that are older than 10 years.

By the End of the Month

- ☐ Review your energy bills and identify the largest culprits. Focus your efforts on tasks that reduce the largest bill first and start using the worksheet to track them.
- ☐ Insulate hot water pipes and any heating ducts located in attics or crawlspaces.
- ☐ Check your home for utility cut-throughs, air gaps around recessed lighting and chimneys, and unfinished spaces. These will be your largest air leaks to target.
- ☐ Install a programmable thermostat.
- ☐ Schedule an energy audit. Ideally look for one that does blower door tests.

By the End of the Year

- ☐ Insulate your attic, crawlspaces, and walls.
- ☐ Replace all your old, inefficient appliances with efficient ENERGY STAR models.
- ☐ Upgrade all your windows (possibly with the Argon gas-filled variety mentioned above).
- ☐ Replace your computer and monitor if they're older than 3 years. Notebook computers and LED monitors are good energy-efficient replacements for the typical consumer.
- ☐ Plant foliage around the house to reduce AC costs, particularly on the Western side of your home.

Home Energy Savings Worksheet

Use this chart to keep track of all your energy saving efforts, including what the estimated savings are (you can use one of Energy.gov's cost-savings calculators to figure this out), what the actual savings are, and whether your goal has been achieved. When you're done, you'll be able to determine the effectiveness of your energy savings efforts, and determine if you need to take more action to achieve the savings you desire.

Energy Savings Task	Savings Goal (in kW or $)	Actual Savings (in kW or $)	Savings Achieved?	
			YES	NO

Home Energy Savings Are Just Around the Corner...

For Savannah homeowners, we know that every cent counts. Unnecessary energy costs are the last place where you should be spending your money.

The more ways you find to reduce energy usage throughout your Savannah home, the greater financial rewards you'll reap for your efforts. Follow the tips in this toolkit and track your progress with our energy saving worksheet. You can watch the dollars add up as your energy use falls off.

Byrd
HEATING AND
AIR CONDITIONING, INC.

4131 Ogeechee Road, Suite 131
Savannah, GA 31405

912-373-8447

byrdheatingandair.com

Lic #: CN208277