



# ENERGY EFFICIENCY CHECKLIST FOR HOT CLIMATES

## ZONES 1, 2, AND 3



### AIR LEAKAGE

- Caulk or foam penetrations to exterior, e.g., electrical service, plumbing lines, telephone/TV cables, ductwork for vents and fans.
- Caulk or foam penetrations to attic and garage, e.g., electrical wiring and fixtures, plumbing supply and waste lines.
- Caulk sill plate around perimeter of house from exterior if accessible.
- Weatherstrip/insulate attic access panel.
- Install foam gaskets behind receptacle and switch cover plates.
- Install exterior air barrier/house wrap during extensive siding replacement.

### WINDOWS

- Replace broken or missing window panes.
- Replace locking hardware.
- Reglaze windows.
- Caulk around exterior frame/interior trim.
- Weatherstrip sashes.
- Repaint exterior wood frames and sashes.
- Install exterior/interior storm.
- If replacing windows, install double-pane windows. (U-value  $\leq 0.50$  SHGC  $< 0.40$ .)
- In hotter regions, install overhangs above south-facing windows, retractable awnings above east and west windows.

### DOORS

- Replace/adjust locksets on exterior doors and doors to unconditioned spaces, e.g., outdoors, attic, garage, to ensure doors close tightly.
- Caulk around exterior door frames; reglaze as needed.
- Replace weatherstripping and install door sweeps on exterior doors or doors that adjoin unconditioned spaces.
- If replacing exterior door(s) use steel doors with polyurethane foam core.

### INSULATION

- Insulate attic (R-20 to R-30 depending on severity of climate). (Make sure that soffit vents are not blocked and that insulation does not contact roof sheathing.)
- Insulate floor above unconditioned crawl space or garage with cooled room above to R-13 to R-15.
- Insulate exterior walls to R-13 when practical, or blow insulation into wall cavities from interior or exterior.

### SPACE HEATING/COOLING EQUIPMENT AND DUCTWORK

- Have heat pump or air conditioner professionally cleaned and serviced.
- Replace heat pump or air conditioner filters with pleated filters.

- Seal ductwork in garages, attics, and crawl spaces with mastic or aluminum tape.
- Insulate ductwork in garages, attics, and crawl spaces.
- Install programmable thermostat.
- Install ceiling fan in main living area or whole house fan.
- If replacing heat pump or air conditioner, install an ENERGY STAR® model.
- If installing or replacing air conditioning, size equipment accurately so home will be dehumidified as well as cooled.

### PLUMBING/WATER HEATER

- Reduce water heater thermostat setting to 120°F or "Medium."
- Flush water heater to remove sediment.
- Install pipe insulation on hot and cold lines within 5' of water heater.
- Install pipe insulation on all cold water pipes in garage or crawl space.
- Replace washers on leaky bath and kitchen sink faucets.
- Install low-flow aerators on bath and kitchen sink faucets.
- Install low-flow showerheads.
- Reduce volume of water in older toilet tanks.
- If replacing water heater, install energy efficient model. (Energy Factors: Gas  $>0.60$ , Electric  $>0.93$ .)

### LIGHTING/APPLIANCES

- Install compact fluorescent bulbs in high-use areas, e.g., kitchen, living area, entryway, porch.
- Install light-/motion-sensitive fixture on main entrance light fixture and spots.
- Vacuum refrigerator coils and clean fan grill.
- Consider replacing refrigerator if it was manufactured before 1990. (ENERGY STAR models will be the most efficient.)
- Clean/replace dryer, range hood, bath fan vents with dampered vents.

### MOISTURE CONTROL

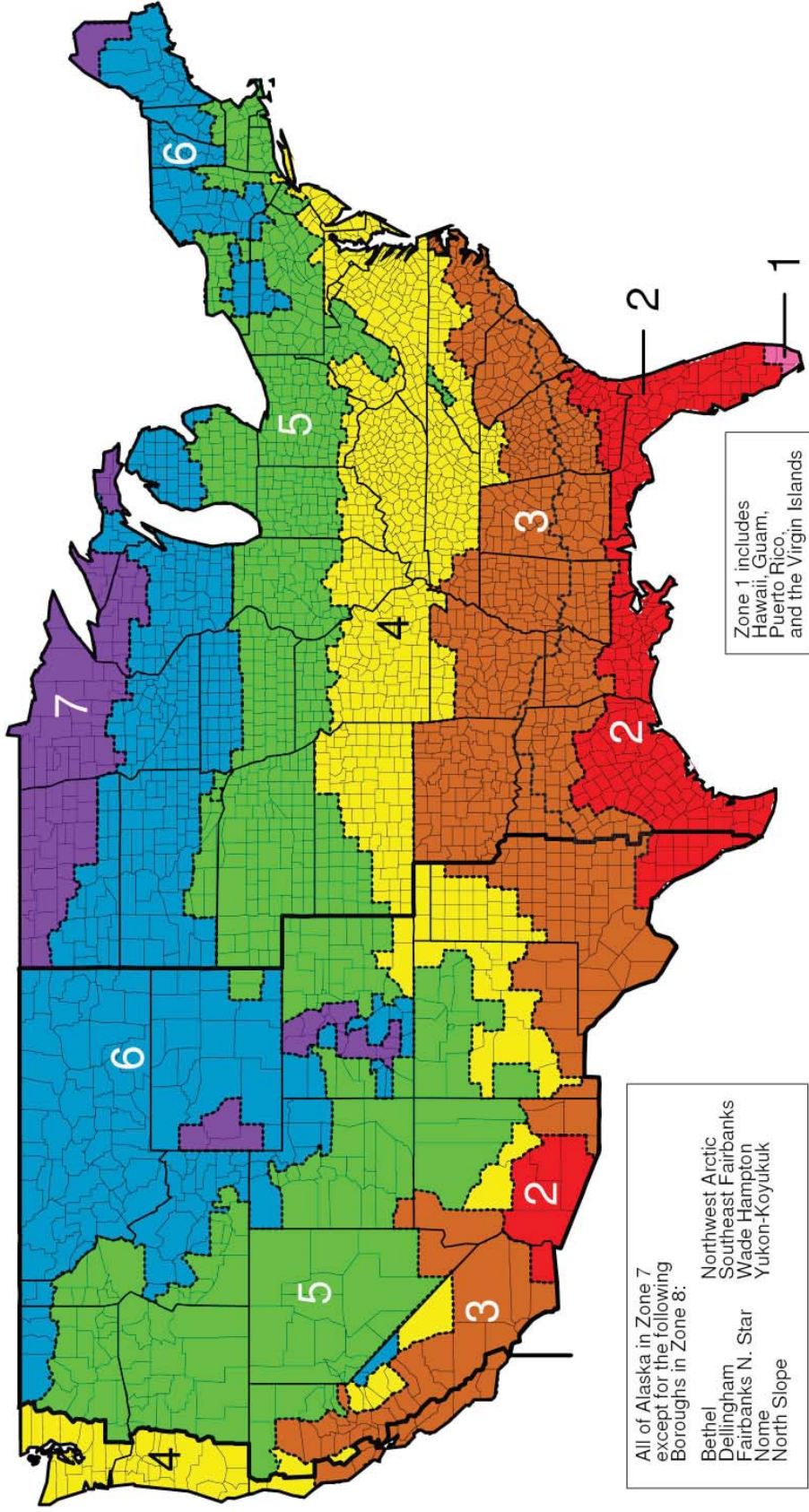
- Replace fixed crawl space vents with operable vents that can be closed during hot, humid periods.
- Install 6-mil (or heavier) poly on dirt crawl space floors and seal to foundation walls with caulk.
- Do not install vapor barriers such as vinyl wallpaper or poly on interior of exterior walls.
- Rake soil away from exterior of foundation if it is closer than 6" from wood framing or siding.
- Ensure grade slopes away from the house at a 5% slope.
- Install gutters and downspouts, especially in regions receiving more than 30" rainfall annually.

### MISCELLANEOUS

- In very heavy termite areas, have professional company provide protection. Check with homeowner about concerns or allergies if chemicals are to be used.

## Climate Zones

FOR THE 2004 SUPPLEMENT TO THE IECC, THE 2006 IECC, THE 2006 IECC, AND ASHRAE 90.1-2004.



Source: [http://resourcecenter.pnl.gov/cocoon/morf/ResourceCenter/graphic/973&datasource\\_name=EnergyDS](http://resourcecenter.pnl.gov/cocoon/morf/ResourceCenter/graphic/973&datasource_name=EnergyDS)

For more information about energy efficiency home improvements, see [www.rebuildingtogether.org](http://www.rebuildingtogether.org)