

Energy Efficient Checklist

- The longest axis of the house is oriented to face within 25 degrees of solar South
- Windows facing within 25 degrees of South are at least 20% of the floor area of the room
- The sunlight through the South facing windows is unobstructed for at least 6 hours during the day of the winter solstice
- Windows to all other directions total less than 10% of their combined wall area
- Thermopane windows used throughout project
- Low E windows used throughout project
- No metal framed windows used, including basement
- Provision is made to insulate at least 50% of the glass at night
- South-facing windows are shaded either by overhangs, wall thickness, or other shading devices for high summer sun angle
- An attached greenhouse is utilized as part of the solar design strategy
- Active solar heating system is designed to provide at least 50% of space heating
- Sufficient thermal mass is incorporated into the design to the heat over-night
- Adequate ventilation is provided to prevent over-heating
- South roof area is designed for future solar collector use (within 20degrees of South)
- Earth berm covering at least 20% of exterior wall area
- Earth sheltered or green roof design that provide at least 50% of the roof area covered with at least 6" of soil
- Any project that requires no fill to be brought to the site for preparation of the building pad
- project uses Tyco wrap, or similar exterior air infiltration barrier on the envelope
- All appliances installed are rated as Energy Star appliances
- CFL bulbs installed for at least 50% of the lighting
- Use of non-electric heating system
- Use of radiant floor heating system
- 90% or higher energy efficiency furnace with sealed combustion air
- Central location of mechanical systems
- sealed ductwork
- All hot water pipes are insulated
- Water heater within 20' pipe feet of dishwasher and clothes washer
- Use of renewable electric energy (solar panels, wind generator, etc.)
- Installation of solar water heating system
- rough-in for solar water heating system
- any residential building designed at less than 1000sqft
- Any residential building designed at less than 1500sqft
- Any project that is composed of domes for at least 50% of the space
- Use of at least \$1000 worth of recycled materials, based on cost of the materials purchased new
- Recycled and/or recovered -content wall board used
- Adequate trash and recycled materials bays are provided in house design
- Minimum of 50% of wood used is certified as sustainably harvested

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- Engineered lumber products used for window and door headers
- Decking or landscaping materials with at least 50% recycled content
- Use of non-industrial, natural, fairly local materials for at least of the building envelope
 - Such as adobe, cordwood or strawbale
- Use of natural insulation for at least 50% of total envelope
- Permeable materials comprise at least 50% of areas for all walkways and driveways
- Minimum 30yr roofing material used, including concrete, slate, metal or clay
- Any foundation designed for 50% or more savings of concrete over conventional continuous perimeter foundation
- insulated foundation with ICF or other insulation system
- Use of round (un-milled) wood, either structurally or decoratively
- Use of SIP's (structural insulated panels) for at least 30% of the envelope
- Some form of cool pantry that is designed according to the guidelines listed above
- Radon gas mitigation employed
- Exterior of house is composed of fire-safe materials (metal, stucco or tile roof)
- Fire shutters or drapes are installed on all vulnerable windows
- fire mitigation according to guidelines presented in Design Guidelines is employed around the entire house
- The house is marked with house numbers that are clearly visible from the road