Green Building in the Gulf, Session 1: ENERGY STAR for Homes
Green Building in the Gulf

June 8: Energy Benchmarking
September 14: Enterprise Green Communities Certification
December 7: Green Resources
A holistic approach to building a green community

Integrative Design

Location + Neighborhood Fabric

Site Improvements

Healthy Living Environment

Operations, Maintenance + Resident Engagement

Materials

Water Conservation

Energy Efficiency
ENERGY STAR for New Homes

• Value

• Logistics overview
  • Project Eligibility, Implementation Timeline, Training Requirements

• Building details
  • Mandatory Requirements, Targets, Checklists and Verification

• Resources
ENERGY STAR for New Homes
ENERGY STAR for New Homes

• Single-family homes;
• Units in multi-family buildings that are three stories or less;
• Units in multi-family buildings that are four or five stories and have their own heating, cooling, and hot water systems
ENERGY STAR for New Homes v3.0

• Builder Partnership Agreement
• Builder Training
• Rater Training
• HVAC Training
www.energystar.gov/Homes

For New Home Industry Professionals

We’re celebrating 20 years of ENERGY STAR® certified homes!

PARTNER RESOURCES

Program Requirements
Educational Resources
Marketing and Promotional Resources
Program Updates and Communications
Partner Locator
Information for Home Buyers

LOG IN TO ENERGY STAR

View and manage your organization’s partnership information and access partner-only tools and resources.

MY ENERGY STAR ACCOUNT

username
password

JOIN NOW!

Gain access to partner-only tools and resources and recognition opportunities.

BECOME A PARTNER
## Find Raters Serving Louisiana

<table>
<thead>
<tr>
<th>Name</th>
<th>Partner Since</th>
<th>Homes Certified Jan 2015 - Dec 2015</th>
<th>Homes Certified State Total</th>
<th>Homes Certified Grand Total</th>
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<td>LaGrange Consulting</td>
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<td>22</td>
<td>22</td>
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<tr>
<td>Think Green - Midwest, LLC</td>
<td>2009</td>
<td>23</td>
<td>5</td>
<td>305</td>
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<td>RATERua</td>
<td>2011</td>
<td>285</td>
<td>0</td>
<td>1,182</td>
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<td>Green Coast Enterprises</td>
<td>2016</td>
<td>Homes Pending</td>
<td>Homes Pending</td>
<td>Homes Pending</td>
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</table>
HVAC

- Systems installed according to Quality Installation (QI) guidelines established by ACCA
- Rater Design Review Checklist
- HVAC Design Report
- HVAC Commissioning Checklist
- HVAC Contractor credentialing by an EPA-recognized third-party training and oversight organization (H-QUITO)
HVAC Design and Commissioning for ENERGY STAR

HVAC performance is critical to delivering efficiency, comfort, and durability. That's why HVAC systems in ENERGY STAR certified homes are designed and installed according to industry best-practice standards by expert contractors.

HVAC designers are crucial to the process of delivering a right-sized HVAC system that both saves energy and delivers comfort.

And only contractors who hold EPA-recognized credentials can complete parts of the ENERGY STAR Certified Homes HVAC requirements. HVAC credentialing makes it easy for builders to identify contractors with the capabilities to help them build ENERGY STAR certified homes, for contractors to market best-practice services, and for consumers to be confident in the comfort and performance of their new ENERGY STAR certified homes.

Looking for HVAC Resources to Get Started with ENERGY STAR Certified Homes?

Visit one of the links below to learn about the basics of the credentialing process, how to find a credentialed HVAC contractor, and the requirements and resources for HVAC designers and HVAC contractors working on ENERGY STAR certified homes.
Search for Advanced Energy's Energy Star Credentialed HVAC Contractors

Enter city, state or zip below and click Search.

70112

See all results:

Map

Postal Code * 70112 Search area 100 Miles
Keyword
Reset Submit

Found 20 locations that matched your search

1100 Valwood Pkwy, Ste 110
Carrollton, TX 75006
(860) 863-0560
http://www.advancedenergy.com

M.B. Churchill Consulting L.P.
Approximately 0.8 miles from 70112
1234 N Claiborne Ave
New Orleans, LA 70116
504-264-1545
ENERGY STAR for New Homes v3.0

- Builder Partnership Agreement
- Builder Training
- Rater Training
- HVAC Training
ENERGY STAR v3.0 (Rev 8)

- House size
- Initial requirements confirmed with energy modeling
- Rater Design Review Checklist & Rater Field Checklist
- HVAC Design Report
- HVAC Commissioning Checklist
- Water Management System Builder Requirements
ENERGY STAR v3.0 (Rev 8)

- House size
- Initial requirements confirmed with energy modeling
- Rater Design Review Checklist &
  Rater Field Checklist (thermal enclosure & HVAC system)
- HVAC Design Report
- HVAC Commissioning Checklist
- Water Management System Builder Requirements
Thermal Enclosure
Insulation Specifications & Installation
Thermal Bridging guidance
Framing & Air Sealing
2009 IECC Climate Zones

All of Alaska in Zone 7 except for the following Boroughs in Zone 8: Bethel, Dillingham, Fairbanks, N. Star, Nome North Slope, Northwest Arctic, Southeast Fairbanks, Wade Hampton, and Yukon-Koyukuk

Zone 1 includes: Hawaii, Guam, Puerto Rico, and the Virgin Islands
Roof framing/trusses line up with wall and floor framing.

Single top plate

No cripples under window opening

Two stud corners

Header hangers instead of jack studs

Insulated header sized for actual load

Roof pitch/eave width designed on the 2-foot module

2x2 studs required under point loads. Use solid blocking between joists.
Reduced Thermal Bridging

• Continuous rigid insulation, insulated siding, or combination
  \( \geq R-3 \) in Climate Zones 1 to 4, \( \geq R-5 \) in Climate Zones 5 to 8
• Structural Insulated Panels (SIPs)
• Insulated Concrete Forms (ICFs)
• Double-wall framing
• Advanced Framing, including:
  • Corners, Headers, Framing limited at windows & doors, Interior/Exterior wall intersections, Minimum stud spacing
Corners insulated ≥ to edge

Position clip support for gypsum board so that it does not interfere with trim nailing

Backer support for gypsum board
T-Wall Alternatives
Advanced Framing

2x4 Framing

2x6 Framing

min. 16\,\text{oc}

min. 2\,\text{oc}
Reduced Thermal Bridging

• Continuous rigid insulation, insulated siding, or combination
  ≥R-3 in Climate Zones 1 to 4, ≥R-5 in Climate Zones 5 to 8

• Structural Insulated Panels (SIPs)

• Insulated Concrete Forms (ICFs)

• Double-wall framing

• Advanced Framing, including:
  • Corners, Headers, Framing limited at windows & doors, Interior/Exterior wall intersections, Minimum stud spacing
Framing

• Continuous, tight, shell
• Protecting insulation—Attic Platforms, other details
Thermal Enclosure

• Trades (you cut it, you seal it)
• Air Seal
  • Framing
  • Windows & Doors
  • Subfloor to Bottom Plate
Thermal Boundary
Insulation
Final Air Seal

• Top plane
• Bath fans
• Lights
• Access panels & doors
ENERGY STAR v3.0 (Rev 8)

• House size
• Initial requirements confirmed with energy modeling
• Rater Design Review Checklist &
  Rater Field Checklist (thermal enclosure & HVAC system)
• HVAC Design Report
• HVAC Commissioning Checklist
• Water Management System Builder Requirements
HVAC Design Report

• Design Overview
• Whole-House Mechanical Ventilation Design
• Room-by-Room Heating & Cooling Loads
• Heating & Cooling Equipment Selection
• Duct Design
filter and damper
### Design Conditions

<table>
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<tr>
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<tbody>
<tr>
<td>Elevation: 440 ft</td>
<td>Indoor temperature (°F) 70</td>
<td>Drybulb (°F) 21</td>
</tr>
<tr>
<td>Latitude: 35° N</td>
<td>Design TD (°F) 49</td>
<td>Daily range (°F) 19</td>
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<tr>
<td></td>
<td>Relative humidity (%) 30</td>
<td>Wetbulb (°F) 76</td>
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<table>
<thead>
<tr>
<th>Outdoor: Cooling</th>
<th>Infiltration: Method</th>
<th>Outdoor: Cooling</th>
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<tr>
<td>Wind speed (mph) 15.0</td>
<td>Blower door</td>
<td>Wind speed (mph) 7.5</td>
</tr>
<tr>
<td>Wetbulb (°F) 76</td>
<td></td>
<td>Pressure / AVF 50 Pa / 1047 cfm</td>
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<tr>
<td>Indoor: Heating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor: Cooling</td>
<td></td>
<td></td>
</tr>
<tr>
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### Construction Descriptions

<table>
<thead>
<tr>
<th>Walls</th>
<th>Or</th>
<th>Area ft²</th>
<th>U-value</th>
<th>Insul R</th>
<th>Htg HTM</th>
<th>Col HTM</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>12D: Drywall, vinyl ext, 1/2&quot; wood shipl, r-15 cav ins, 1/2&quot; gypsum board int finish, 2&quot;x4&quot; wood trim</td>
<td>n</td>
<td>240</td>
<td>0.085</td>
<td>15.0</td>
<td>4.20</td>
<td>1007</td>
<td>1.83</td>
</tr>
<tr>
<td></td>
<td>e</td>
<td>270</td>
<td>0.085</td>
<td>15.0</td>
<td>4.20</td>
<td>1172</td>
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<td></td>
<td>s</td>
<td>184</td>
<td>0.085</td>
<td>15.0</td>
<td>4.20</td>
<td>772</td>
<td>1.83</td>
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<tr>
<td></td>
<td>w</td>
<td>315</td>
<td>0.085</td>
<td>15.0</td>
<td>4.20</td>
<td>1322</td>
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<tr>
<td></td>
<td>all</td>
<td>1036</td>
<td>0.085</td>
<td>15.0</td>
<td>4.20</td>
<td>4274</td>
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<table>
<thead>
<tr>
<th>Partitions</th>
<th>Or</th>
<th>Area ft²</th>
<th>U-value</th>
<th>Insul R</th>
<th>Htg HTM</th>
<th>Col HTM</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>12D: Drywall, vinyl int, r-13 cav ins, 2&quot;x4&quot; wood trim</td>
<td>104</td>
<td>0.091</td>
<td>13.0</td>
<td>4.44</td>
<td>462</td>
<td>1.21</td>
<td>120</td>
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<table>
<thead>
<tr>
<th>Windows</th>
<th>Or</th>
<th>Area ft²</th>
<th>U-value</th>
<th>Insul R</th>
<th>Htg HTM</th>
<th>Col HTM</th>
<th>Gain</th>
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<tbody>
<tr>
<td>01A: System Vision, NFRC rated (SHOC=0.38); 50% blinds 45°, medium</td>
<td>50</td>
<td>0.350</td>
<td>0</td>
<td>17.1</td>
<td>659</td>
<td>37.3</td>
<td>1874</td>
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<td></td>
<td>49</td>
<td>0.350</td>
<td>0</td>
<td>17.1</td>
<td>634</td>
<td>27.3</td>
<td>1818</td>
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<tr>
<td></td>
<td>all</td>
<td>99</td>
<td>0.350</td>
<td>0</td>
<td>17.1</td>
<td>1692</td>
<td>37.3</td>
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<tr>
<td>01A: System Vision, NFRC rated (SHOC=0.38); 50% blinds 45°, medium, 5.3 ft overhang (5.17 ft window ht, 1.5 ft sop)</td>
<td>14</td>
<td>0.350</td>
<td>0</td>
<td>17.1</td>
<td>235</td>
<td>23.1</td>
<td>318</td>
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<table>
<thead>
<tr>
<th>Doors</th>
<th>Or</th>
<th>Area ft²</th>
<th>U-value</th>
<th>Insul R</th>
<th>Htg HTM</th>
<th>Col HTM</th>
<th>Gain</th>
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<tr>
<td>11LE: Door, ret prp hrymab type</td>
<td>21</td>
<td>0.560</td>
<td>3.0</td>
<td>27.3</td>
<td>574</td>
<td>15.8</td>
<td>332</td>
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<tr>
<td></td>
<td>21</td>
<td>0.560</td>
<td>3.0</td>
<td>27.3</td>
<td>574</td>
<td>15.8</td>
<td>332</td>
</tr>
<tr>
<td></td>
<td>all</td>
<td>42</td>
<td>0.560</td>
<td>3.0</td>
<td>27.3</td>
<td>1148</td>
<td>15.8</td>
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<table>
<thead>
<tr>
<th>Ceilings</th>
<th>Or</th>
<th>Area ft²</th>
<th>U-value</th>
<th>Insul R</th>
<th>Htg HTM</th>
<th>Col HTM</th>
<th>Gain</th>
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</thead>
<tbody>
<tr>
<td>10B: Slab, attic ceiling, asphalt shingles roof mat, r-30 cell ins, 1/2&quot; gypsum board int finish</td>
<td>635</td>
<td>0.025</td>
<td>36.0</td>
<td>1.27</td>
<td>1059</td>
<td>1.35</td>
<td>1123</td>
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<tr>
<td>17B: Cat, r/f/gd ceiling, asphalt shingles roof mat, wd cans, r-6 deck ins, t. trunks</td>
<td>240</td>
<td>0.105</td>
<td>6.0</td>
<td>5.12</td>
<td>1271</td>
<td>4.49</td>
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<table>
<thead>
<tr>
<th>Floors</th>
<th>Or</th>
<th>Area ft²</th>
<th>U-value</th>
<th>Insul R</th>
<th>Htg HTM</th>
<th>Col HTM</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>10A-16cy: Flr floor, frm fl, 8&quot; trunks, vinyl fl frsh, r-10 cav ins, leaky cnl cvr</td>
<td>1075</td>
<td>0.049</td>
<td>19.0</td>
<td>1.67</td>
<td>2014</td>
<td>0.83</td>
<td>673</td>
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## Manual J

### HEATING EQUIPMENT
- **Make:**
- **Trade:**
- **Model:**
- **GAMA ID:**
- **Efficiency:** 80 AFUE
- **Heating input:** 0 Btuh
- **Heating output:** 0 Btuh
- **Temperature rise:** 0 °F
- **Actual air flow:** 687 cfm
- **Air flow factor:** 0.038 cfm/Bluuh
- **Static pressure:** 0 in H2O
- **Space thermostat:**

### COOLING EQUIPMENT
- **Make:**
- **Trade:**
- **Model:**
- **Cond:**
- **Coil:**
- **ARI ref no.:**
- **Efficiency:**
- **Sensible cooling:**
- **Latent cooling:**
- **Total cooling:**
- **Actual air flow:**
- **Air flow factor:**
- **Static pressure:**
- **Load sensible heat ratio:** 0.84

### ROOM NAME

<table>
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<tr>
<th>ROOM NAME</th>
<th>Area (ft²)</th>
<th>Htg load (Bluuh)</th>
<th>Clg load (Bluuh)</th>
<th>Htg AVF (Bluuh)</th>
<th>Clg AVF (cfm)</th>
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<tbody>
<tr>
<td>Bed 2</td>
<td>131</td>
<td>2297</td>
<td>1293</td>
<td>87</td>
<td>62</td>
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<tr>
<td>Bed 3</td>
<td>131</td>
<td>2297</td>
<td>1395</td>
<td>87</td>
<td>67</td>
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<tr>
<td>M Bath</td>
<td>48</td>
<td>807</td>
<td>527</td>
<td>31</td>
<td>25</td>
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<tr>
<td>Bath</td>
<td>40</td>
<td>142</td>
<td>75</td>
<td>5</td>
<td>4</td>
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<td>Master</td>
<td>182</td>
<td>2229</td>
<td>1796</td>
<td>84</td>
<td>86</td>
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<tr>
<td>Family/Hall</td>
<td>255</td>
<td>4666</td>
<td>3762</td>
<td>177</td>
<td>181</td>
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<td>Kitchen/Entry</td>
<td>255</td>
<td>5697</td>
<td>5471</td>
<td>216</td>
<td>263</td>
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<tr>
<td>Entire House</td>
<td>1075</td>
<td>18134</td>
<td>14319</td>
<td>687</td>
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#### Other equip loads:
- **Equip. @ 1.00 RSM:**
- **Latent cooling:**

#### TOTALS:
- **1075**
- **20300**
- **17803**
- **687**
- **587**
HVAC Commissioning Checklist

• Commissioning Overview
• Refrigerant Charge
• Indoor HVAC Fan Airflow
• (Air Balancing of Supply Registers & Return Grilles)
ENERGY STAR v3.0 (Rev 8)

• House size
• Initial requirements
• Rater Design Review Checklist & Rater Field Checklist
• HVAC Design Report
• HVAC Commissioning Checklist
• Water Management System Builder Requirements
Water Management System

- Site & Foundation
- Wall Assembly
- Roof Assembly
- Building Materials
ENERGY STAR v3.0 (Rev 8)

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Next Steps

• Home Energy Rater
• Builder Partnership & Training
• Credentialed HVAC Contractor
• Framing plans, HVAC design, Ventilation design
Resources

  - Partner Locator tool for Builders and Raters

- [www.ACCA.org/qa/directory/new-homes](http://www.ACCA.org/qa/directory/new-homes)

  - Credentialed HVAC contractors
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December 7: Green Resources