



# **Plan Review Input Form**

#### PLEASE SEND WITH HOUSE PLAN AND LOAD CALC. TO:

Advanced Energy Corporation, Attention: Krista Egger 909 Capability Drive Suite 2100, Raleigh, NC 27606 PH: 919-857-9000 FX: 919-832-2696 E-Mail: <u>kegger@advancedenergy.org</u>

#### PLAN REVIEW AND ENERGY RATING

A Plan Review will be generated as a result of the building plans and information submitted to Advanced Energy. The Plan Review will include a report of EnergyStar compliance based on the current home design plus any needed upgrades and a heating and cooling energy-use projection based on recommended improvements to achieve the program standards. If you proceed with the SystemVision Home Program, the charge for the plan review is included in the per-house fee which is covered by the HFA grant. The turn around time for the Plan Review is approximately three-weeks. Please provide us with all relevant information on this form.

| NONPROFIT DEVELOPER: | <br>CONTACT:             |
|----------------------|--------------------------|
| MAILING ADDRESS:     | <br>                     |
| CITY/STATE/ZIP:      | <br>                     |
| PHONE:               | <br>FAX:                 |
| E-MAIL ADDRESS:      | <br>DATE OF<br>TRAINING: |

| CONSTRUCTION                          | N MANAGER/BUILDER | LOCATION   |  |
|---------------------------------------|-------------------|--|--|
| CONTACT:                              |                   | SUBDIVISION:   |  |
| COMPANY:                              |                   | PLAN NAME/NUMBER:  |  |
| ADDRESS:                              |                   | ADDRESS:   |  |
| CITY/STATE/ZIP:                       |                   | CITY/STATE:  |  |
| PHONE:                                |                   | ZIP CODE:  |  |
| Fax:<br>Modular Home<br>Model Name/#: |                   | NEAREST MAJOR CITY: (For weather data to calculate energy costs) |  |
| MECHANICAL C                          | <u>ONTRACTOR</u>  |  |  |
| Company:                              |                   | Phone:   |  |
| Contact Person:                       |                   | Fax:   |  |

#### **INSULATION INSTALLER**

| General Contractor           | Volunteers      |  |
|------------------------------|-----------------|--|
| Subcontractor:               | Contact Person: |  |
| Phone:                       | Fax:            |  |
| CLOSED CRAWL SPACE INSTALLER |                 |  |
| General Contractor           | Volunteers      |  |
| Subcontractor:               | Contact Person: |  |
| Phone:                       | Fax:            |  |
|                              |                 |  |

### PLAN REVIEWS WILL BE DELAYED IF ANY INFORMATION BELOW IS MISSING.

#### ATTACHMENTS AND PLANS MUST INCLUDE:

|  | One | full | set | of | plans |
|--|-----|------|-----|----|-------|
|--|-----|------|-----|----|-------|

| Floor | plans | with | options |
|-------|-------|------|---------|
|-------|-------|------|---------|

Window specifications including type and dimensions

Exterior door specifications including type and dimensions

- Copy of AHRI Certificate for HVAC units.
- Documentation of Water Heater Efficiency Factor (EF).

For each house, a room-by-room Manual "J" heat loss/heat gain calculation will need to be completed to correctly size the heating and cooling equipment. To get this information, we (the applicant) will:

#### (check one)

Attach a copy of the Manual J print out, including all inputs and outputs (not just the Short Form) and a completed Load Calculation Input Form (page five of this document)

Send in copy of the Manual J print out, including all inputs and outputs (not just the Short Form) and a completed Load Calculation Input Form (page five of this document) to Advanced Energy. Review of load calculation must be complete in order to pass the insulation inspection.

Pay Advanced Energy \$0.15 per square foot to perform this calculation. The Load Calculation Input Form (page five of this document) does not need to be completed.

#### **ENERGY PROVIDERS**

| Electric Utility:    | Phone: |
|----------------------|--------|
| Natural Gas Utility: | Phone: |
| Propane Company:     | Phone: |
| Other Company:       | Phone: |

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| HOUSE TYPE   |   |  |                                      |
|--|---|--|--------------------------------------|
| Single Family Detached   | Duplex  | Townhouse:   | End unit Middle unit                 |
| FOUNDATION Check all ap  | plicable foundation types for this  | house  |                                      |
| Slab on grade  |   |  |                                      |
| Full basement:   | Conditioned   |  |                                      |
| Walk-out basement:   | Conditioned   | Unconditioned  |                                      |
| Closed crawl space:  | Means of dehumidific  | cation:  |                                      |
| Open piers   |   |  |                                      |
| THERMAL ENVELOPE   |   |  | Program Standards                    |
| Attic Insulation   | Insulation Type*  | R-Value  | Min R-38                             |
| Kneewall Insulation  | Insulation Type   | R-Value  | Min insulation                       |
| Exterior Wall Cavity Insulation  | Insulation Type   | R-Value  | Levels must meet                     |
| Exterior Wall Continuous Insula  | tion Insulation Type  | R-Value  | 2009 IECC                            |
| Floor Insulation   | Insulation Type   | R-Value  |                                      |
| Slab Insulation  | r Insulation Type   | R-Value  |                                      |
| 🗌 Under-sla  | ab  |  |                                      |
| Crawl Space Wall Insulation  | Insulation Type   | R-Value  |                                      |
| Basement Wall Insulation<br>* Insulation Types: (1) Fiberglas<br>(5) Rigid Foam (6) Spray Foam | Insulation Type<br>s Batts (2) Blown Fiberglass (3) I<br>(7) Other: (specify in table above | R-Value<br>3Iown Cellulose ( <b>4</b> ) Blown Ro<br>)  | ckwool                               |
| FRAMING TECHNIQUES   | (Check all that apply)  | 7  | —                                    |
| Continuous Rigid Insulation  | Advanced Framing  | Structural Insulated Panels                            | Insulated Concrete Forms             |
| RADIANT BARRIER  |   |  | Program Standards                    |
| Radiant Barrier  |   | Require  | d if more than 10' ductwork in attic |
|  |   |  | Program Standards                    |
| Double -paned/Low E glas   | S   |  | Double-paned/ Low E                  |
| Whole-Window U-Value:  | SHGC-Value:   | U: (   | 0.35 or Less, SHGC: 0.30 or Less     |
| DOORS  |   |  |                                      |
| Front Door T   | ype* R-v  | alue 🗌 U-value:  |                                      |
| Rear Door  | Гуре П К-v  | alue 🗌 U-value:  |                                      |
| Side Door  | Гуре 🗌 R-v  | alue 🗌 U-value:  |                                      |
| To Garage Door   | Гуре 🗌 R-v  | alue 🗌 U-value:  |                                      |
| Other Door <sup>-</sup><br>* Door Types: (1) 1 3/4" wood                                       | ∑ype R-v<br>d solid core ( <b>2</b> ) 2 1/4" wood solid                                     | alue 🗌 U-value:<br>core ( <b>3</b> ) 1 3/4" wood panel |                                      |

(4) Steel-clad, polyurethane core & thermal break (5) Other: (specify in table above)

## PLAN REVIEWS WILL BE DELAYED IF ANY INFORMATION BELOW IS MISSING.

| DUC            | <u>r sys</u> | TEN            | I LOCATION                     |            |            |                    |                         |                               |
|----------------|--------------|----------------|--------------------------------|------------|------------|--------------------|-------------------------|-------------------------------|
| Cr             | rawl Sp      | ace            | Attic                          |            | Con        | ditioned space     | Other:                  |                               |
| VENT           | ILAT         | ION            |                                |            |            |                    |                         | Program Standards             |
| Kit            | chen e       | xhau           | st Duct Typ                    | be*        |            | CFM:               | Pull min. of 100 CF     | M to outside, Type 1, 2, or 3 |
| 🗌 Ba           | throom       | n exha         | aust 1 Duct Ty                 | pe         |            | CFM:               | Pull min. of 50         | CFM to outside, Type 2 or 3   |
| 🗌 Ba           | throom       | n exha         | aust 2 Duct Ty                 | ′pe        | _          | CFM:               | Pull min. of 50         | CFM to outside, Type 2 or 3   |
| Ot             | her          |                | Duct Ty                        | ′pe        | _          | CFM:               |                         | To outside, Type 2 or 3       |
| * Duct         | Types:       | ( <b>1</b> ) F | tigid metal ( <b>2</b> ) Rigid | Metal w/ I | nsulation  | (3) Insulated flex | duct                    |                               |
| HVAC           | CSYS         | TEN            | All systems must               | be sized   | within a ½ | 2 ton of the ACCA  | A Manual J; see page 2. | Program Standards             |
| - H            | Heat pu      | ımp, (         | central system                 |            |            |                    |                         |                               |
| E              | Efficien     | су: _          |                                | SEER:      |            |                    |                         | 8.2 HSPF, 14 SEER             |
|                | Natura       | l gas          | furnace with cen               | tral A/C   |            |                    |                         |                               |
| E              | Efficien     | су: _          |                                | SEER:      |            |                    |                         | 90% efficient, 13 SEER        |
| E F            | Packag       | e Uni          | t furnace with centr           | al A/C (Na | tural Gas  | OR Propane)        | )                       |                               |
| E              | Efficien     | су:            | S                              | EER:       |            |                    |                         | 90% efficient, 13 SEER        |
|                | Other:       |                |                                |            |            |                    |                         |                               |
| E              | Efficien     | су: _          |                                | EER:       |            |                    |                         |                               |
|                |              |                |                                |            |            |                    |                         |                               |
|                | <u>. 515</u> |                | LOCATION                       | _          |            |                    |                         |                               |
|                | Attic        |                | 1                              |            | Closed     | crawl space        |                         |                               |
|                | Condi        | lione          | space                          |            | Garage     |                    |                         |                               |
|                | Uncor        | ditior         | ned basement                   |            | Outside    | •                  |                         |                               |
|                | Other        |                | _                              |            |            |                    |                         |                               |
| DOM            | ESTIC        | с но           | DT WATER                       |            |            |                    |                         |                               |
| Type:          |              |                | Conventional tank              |            | Other      | r (please list)    |                         |                               |
| Size:          |              |                | 40 gallon                      |            | Other      | r (please list)    |                         |                               |
| Locati         | on:          |                | Attic                          |            | Close      | ed crawl space     |                         |                               |
|                |              |                | Conditioned space              | •          | Gara       | ge                 |                         |                               |
|                |              |                | Unconditioned<br>basement      |            | Other      | r                  |                         |                               |
|                |              |                | bacomon                        |            | Carlo      | ·                  |                         | Program Standards             |
| Fuel & Efficie | ncv          |                | Electric                       |            | Ener       | ov Factor (FF).    |                         | 93 FF                         |
| 0              | ,            |                | Natural das                    |            | Ener       | av Factor:         |                         | 61 FF                         |
|                |              |                | Propane                        |            | Ener       | ny Factor:         |                         | 61 FF                         |
|                |              |                | Other                          |            |            | ,, <u> </u>        |                         |                               |



# Load Calculation Input Form (to be completed by HVAC contractor)

#### PLEASE SEND TO:

Advanced Energy Corporation, Attention: Krista Egger 909 Capability Drive Suite 2100, Raleigh, NC 27606 PH: 919-857-9000 FX: 919-832-2696 E-Mail: <u>kegger@advancedenergy.org</u>

#### LOAD CALCULATION REVIEW

Right-sized HVAC equipment is an integral part of the SystemVision program. For each plan submitted, Advanced Energy reviews an ACCA Manual J room-by-room load calculation for compliance with the program standards. Complete and submit this form along with the load calculation. Loads may be sent via e-mail as .pdf files or via fax or mail.

| HVAC CONTRACTOR:      | <br>CONTACT:   |  |
|-----------------------|----------------|--|
| PHONE:                | <br>FAX:       |  |
| E-MAIL ADDRESS:       |                |  |
| NON-PROFIT DEVELOPER: | <br>PLAN NAME: |  |

**ATTACHED REPORTS MUST INCLUDE:** (for other software, please submit equivalent reports)

| Wright-Soft             | Elite RHVAC                               |
|-------------------------|---|
| Load Short Form         | Project Report                            |
| Building Analysis       | Miscellaneous Report w/ Duct Load Factors |
| Component Constructions | Load Preview Report                       |
| Project Summary         | Total Building Summary Loads              |
| Worksheet               | Detailed Room Loads                       |
| Drawings                |   |

#### **DESIGN SELF-REVIEW:**

| Input                     | Modeled Value | Standards/ACCA Recommendation                                      |
|---------------------------|---------------|--|
| Indoor Design Temperature |               | 70 Heating/75 Cooling/50% RH                                       |
| Outdoor Design            |               | 99% Heating/1% Cooling per MJ8, Table                              |
| Temperature               |               | 1A   |
| Window U-Value            |               | ≤ .35  |
| Window SHGC               |               | ≤.38   |
| Wall R-Value              |               | Consult builder  |
| Ceiling R-Value           |               | Consult builder, ≥ R-38  |
| Floor R-Value             |               | Consult builder  |
| Infiltration              |               | Tight or equivalent  |
| Appliances                |               | 1 appliance recommended; maximum of 2                              |
| Occupants                 |               | Total = # of bedrooms + 1  |
| Duct Tightness/Sealing    |               | Extreme or equivalent  |
| Duct Location             |               | Consult builder  |
| Ventilation               |               | Total = $(.01 \text{ x ft}^2) + 7.5 (\# \text{ of bedrooms } + 1)$ |

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