



## Application Form

### 2007 System Showcase

Radiant Panel Association  
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#### Step 1 CATEGORY

Simplicity - keeping it simple, cost-effective and efficient

#### Step 2 SUBMITTED BY

#### Step 3 PROJECT INFORMATION

PROJECT NAME: Wilson Residence LOCATION: Hillsdale, NY  
YEAR COMPLETED: 2006 SQ FT LIVING AREA: 1100

STRUCTURE AGE: 21-30 year SPACE HEATED/COOLED BY RADIANT: 950 sq ft  
LEVELS/STORIES: 1

STRUCTURE CONSTRUCTION: wood frame

STRUCTURE USE: residence

PROJECT TYPE: \_\_\_\_\_

Heating    Cooling    Snow Melting    Other Type

RADIANT PANEL LOCATION: \_\_\_\_\_  
 Floor    wall    Ceiling    Other Location \_\_\_\_\_

Radiant Zones: # 2

ADDITIONAL FUNCTIONS:

Fan Coil    Domestic HW    Hot Tub    Pool  
 Convector    Other Functions

UTILITY: \_\_\_\_\_

Electric    Natural gas    Propane    Oil  
 Solar    Other Utility

HEAT SOURCE: \_\_\_\_\_

Resistance    Boiler    Heat Pump    Water Heater  
 Furnace    Other Heat Source

**Step 4 PANEL DESCRIPTON**

**Floor Panels**

TUBE OR ELEMENT:

- Cable    Film    PEX tube    PB tube    Rubber    PE/Metal  
 PE    Copper   Other Tube/Element

PANEL CONSTRUCTION:

- Concrete slab on grade    Concrete slab below grade    Sand below concrete slab  
 Gypsum on concrete    Gypsum on wood subfloor    Concrete/wood subfloor  
 Wood sleepers    Under wood subfloor    Suspended in joist bay  
 Aluminum plates    Reflective barrier    Premanufactured panels

Other Panel Construction

PANEL COVERING:

- Carpet glued    Carpet & pad    Hardwood    Softwood  
 Ceramic Tile    Stone    Brick    Bare

Other Panel Covering

OTHER PANEL DETAILS:

Tube Size: 3/8 inch Cable Size: \_\_\_\_\_ watts/ft

Spacing: 8 to \_\_\_\_\_ in o/c (range) Other Panel Details: \_\_\_\_\_

**Wall Panels**

- Cast iron    Welded steel    Extruded aluminum  
 Embedded tube/cable    Premanufactured electric

Other Wall

**Ceiling Panels**

- Embedded tube/cable    Premanufactured electric    Premanufactured hydronic

**Snow Melt Panels**

SNOW MELT CONSTRUCTION:

- Embedded tube    Embedded cable  
 Asphalt    Concrete    Pavers

SNOW AND ICE MELTING:

- Always clear and dry    Melt and run off    Melt within an hour of snowfall

**Step 5 CONTROLS**

## INDOOR SENSING:

1 Air sensing thermostats Panel sensors Other Indoor Reset

## OUTDOOR SENSING:

Reset heat source high limits Secondary loop temp controls

## PANEL TEMPERATURE CONTROL:

3-way mixing valves 4-way mixing valves Injection valves  
 Injection Pumps Heat exchangers On-off valves  
 2 On-off pumps 1 On-off heat source boiler temperature controlled with indoor reset

## ROOM CONTROL:

Zone valves 4 Manifold telestats 1 Pumping zones  
 Thermostatic valves Relays (electric system)

**Step 6 ADDITIONAL DESCRIPTION**

The owner of this small country home is very conscience of energy use in the home. He recently purchased this home, and almost immediately began remodeling. Some of the projects the owner started in this home, included adding insulation to attic and floors, a blower door test was also completed. New windows will be installed. High on the priority to do list was replacing the existing electric baseboard heat, with comfortable, effcient hydronic radiant floor heat. We began work on this project by first completing estimated heat load calculations. We then sized the 95%+ efficient modulating/condensing boiler, and determined a method to attach the radiant floor panel system. Currently carpet and pad is the finished floor, hardwood floors will be installed at a later date during the remodel. Extruded aluminum plates were attached below subfloor. We also tried to keep the entire system as simple as possible using minimum hardware and controls. Owner, sets the thermostats at 66°F , and maintains a level comfort all heating season! Once the other exterior and interior remodeling projects are complete, the radiant system will compliment the house for many years to come.





SINGH MECHANICAL CO. LLC  
WILSON PROJECT

