



Application Form

2007 System Showcase

Radiant Panel Association
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Response ID Z1706

Date Posted 5/8/07

Step 1 CATEGORY

1-5 Radiant Zones, new residential

Step 2 SUBMITTED BY

Step 3 PROJECT INFORMATION

PROJECT NAME: Bennett Project LOCATION: MA
YEAR COMPLETED: 2006 SQ FT LIVING AREA: 3542

STRUCTURE AGE: New SPACE HEATED/COOLED BY RADIANT: 1040 sq ft
LEVELS/STORIES: 2

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: # _____

ADDITIONAL FUNCTIONS:

- Fan Coil Domestic HW Hot Tub Pool
 Convectors Other Functions radiator panels

UTILITY:

- Electric Natural gas Propane Oil
 Solar Other Utility

HEAT SOURCE:

- Resistance Boiler Heat Pump Water Heater
 Furnace Other Heat Source

Step 4 PANEL DESCRIPTOR

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 acid stained concrete

OTHER PANEL DETAILS: _____

Tube Size: 1/2 inch **Cable Size:** _____ watts/ft

Spacing: 6 to 12 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:

___ **Air sensing thermostats** ___ **Panel sensors** Other 1 **Viessmann proportional room sensor**

OUTDOOR SENSING:

___ **Reset heat source high limits** ___ **Secondary loop temp controls**

1 **Viessmann outdoor sensor**

PANEL TEMPERATURE CONTROL:

1 **3-way mixing valves** ___ **4-way mixing valves** ___ **Injection valves**

___ **Injection Pumps** ___ **Heat exchangers** ___ **On-off valves**

___ **On-off pumps** ___ **On-off heat source** ___

ROOM CONTROL:

___ **Zone valves** ___ **Manifold telestats** ___ **Pumping zones**

5 **Thermostatic valves** ___ **Relays (electric system)** ___ **no zones-constant circulation**

Step 6 ADDITIONAL DESCRIPTION

Easton Home

This house was carefully planned to be as energy efficient and green as possible. The walls and roof are sprayed with Icynene insulation. While staying within a tight budget, the home incorporates passive and active solar. It is carefully situated on the site to allow sunlight to be captured by the ground level concrete slab, which is color stained and acts as the finished floors. The lower level slab is completely radiantly heated and controlled by a Viessmann Room Sensor to seamlessly begin adding heat at night as the solar energy is dissipated from the slab.

The slab is run on constant circulation so the warm solar south side can move heat to the cooler north side of the slab. The upper floor is heated with Buderus radiator panels, also with constant circulation and radiator valves giving control over each room. The boiler room is simplistic in design. A Viessmann Vitodens condensing boiler was chosen in keeping with the green theme because of its very low emissions. Careful attention was paid to piping size and layout to use the minimum amount of pumps to minimize the electrical draw. In order to enhance the low carbon affect, the roof holds a solar photovoltaic array.

Step 7 DESCRIPTIVE PROJECT PHOTO



Step 8 SUPPORTING PHOTOGRAPHS

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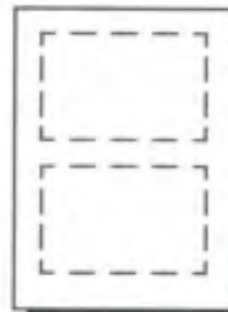
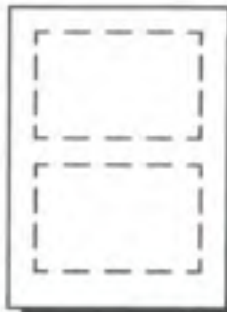
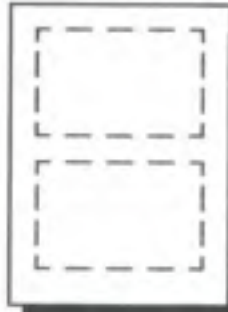
Attach photos to standard letter size paper (8 1/2 x 11") as shown below. You may include a maximum of three sheets of paper (six photos) for this section.

Required photos:

- tube or cable rough in
- finished installation of radiant heated area

Suggested photos:

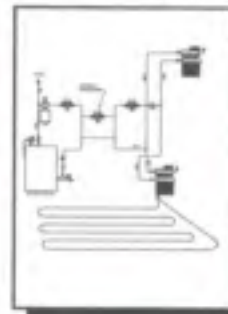
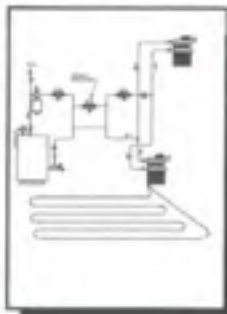
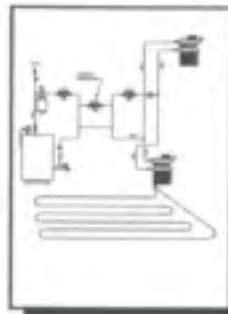
- building exterior
- panel installation
- mechanical room
- controls
- unique features



Step 9 SCHEMATICS or DRAWINGS

(maximum 3 - 8 1/2 X 11)

Attach up to three sheets of letter size paper (8 1/2 x 11") containing drawings or schematics depicting the mechanical/electrical details of the system. These may be hand sketches, professional drawings or computer generated.





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Bennett Project / Biohvac Energy Systems



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Bennett Project
Prochree Energy Systems



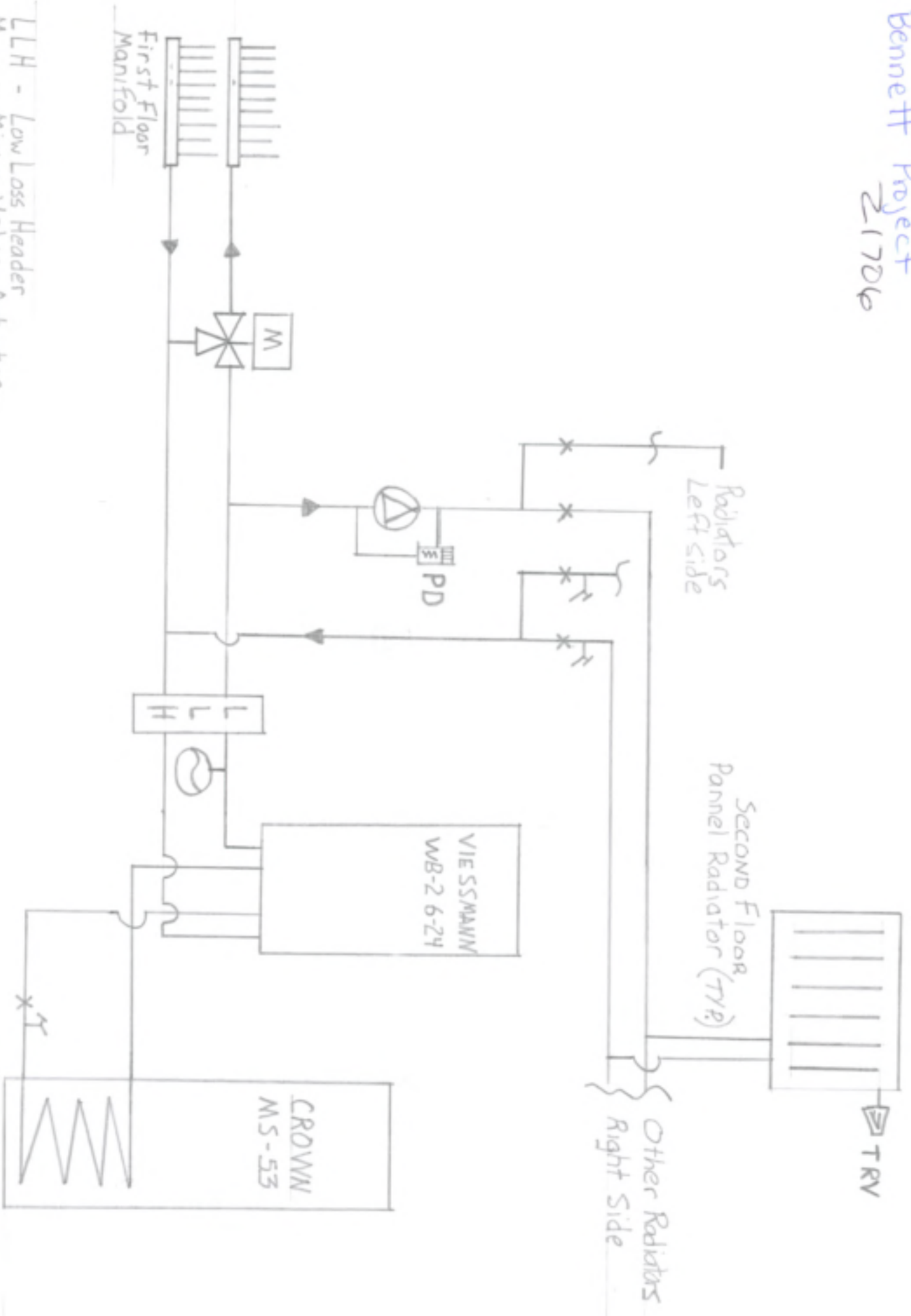
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Bennett Project

Bouchee Energy Systems

Bennett Project 21726



- LLH - Low Loss Header
- M - Mixing Valve Actuator
- PD - Pressure Differential Valve