

Project: Aiosa Residence

Client: Jeff Aiosa

Location: Mystic, Connecticut



altherma



Challenge:

A failing 40% efficient boiler had fed the radiant system at Jeff Aiosa's

1,800 square-foot home for a half-century-plus.

The Solution:

The Daikin Altherma system enhances the existing radiant system installed.

No Mystery to Energy Savings in Mystic

In the fall of 2009 Aiosa decided to replace the old boiler and weighed his options: He didn't want another oil-fed boiler and natural gas was not available. So he turned to Daikin Altherma.

"After the local Daikin representative explained the system and how it works, and I watched a video about it on YouTube, I was convinced," he said.

"Since I already had a radiant system in the house, the Daikin Altherma system made perfect sense."

The Mystic electricity rates are relatively low (roughly 10 cents/kW) and the oil rates Aiosa was paying were fairly high (over \$3.00/gallon despite the fact that he used to "play the oil price market to avoid spikes"), so going to the electric-powered Daikin Altherma system made sense from that perspective too. Daikin Altherma, which was installed in November 2009, feeds the home's domestic hot water system and provides space heating.

Since the home is built on a concrete slab with no basement and the existing boiler took up 80% of the mechanical room, space was a big concern. "The existing furnace was a real estate hog. So I gained all that square footage because

Daikin Atherma just hangs on the wall," Aiosa said. He added that since he was able to permanently seal his chimney flue, he is also relieved to no longer have concerns about carbon monoxide in the home.

Additionally, the two 275-gallon oil storage tanks were removed, and just as importantly, there is no more noise or rumbling coming from the old furnace. "Daikin Altherma is completely silent. Frankly, I thought there would be some vibration or humming, or something that would let me know that the system was running. I literally had to take the user interface off the unit and relocate it in the living area to determine the unit was running," Aiosa said.

The homeowner is quite pleased with his new system and his consistent – and lower – heating bills. He expects the system to achieve payback in less than five years, and having used it for a full calendar year, has been thoroughly impressed with Daikin Altherma.

"Daikin Altherma has cut my heating expense by more than 50% in the winter. My estimation is average savings of \$1,200 per year. The old beast used to run just to make the temperature, even though it wasn't necessary. Now Daikin Altherma only runs when there's a heating or hot water demand," he said adding that he's considering adding chilled-water fan coils so he can use Daikin Altherma for cooling in the summer.

With his oil-fired burner, homeowner Jeff Aiosa used to pay to have the oil burner cleaned and serviced annually at a cost of roughly \$150. With Daikin Altherma, there is no maintenance, other than servicing a filter annually, which he did himself. "The filter looked like it was brand new. I just took it out, cleaned it, and put it back in, so it's virtually maintenance-free," he said.



Daikin AC Equipment

- 1 (Model # ERLQ036BAVJU) Outdoor Unit
- 1 (Model # EKHBX054BA6VJU) Hydrobox Unit
- 1 (Model # EKHWS050BA3VJU) Domestic Hot Water Tank