Heating - Central Location for Heating Unit

Technology Snapshot & Benefits:
Combustion units for heating buildings may often be advantageously located centrally within the floor plan of the building. Such placement offers extra radiant heat recovery from a furnace or boiler proper and most importantly from the entire length of the chimney as it progresses upward throughout the house. A centrally located chimney typically provides better draw, since the chimney walls are not chilled by outside temperatures. This design is easy to accomplish in new construction, and a bit more challenging, but still possible, in existing structures.

Estimated Cost Savings:
Cold chimney walls inhibit the upward flow of exhaust gases. In practice, this retarding effect is often overcome by furnace adjustments that send more heat up the flue with an attendant loss in fuel, economic and environmental efficiency. Locating a furnace or boiler centrally in the building may yield savings on the order of 5-10%. For a monthly heating bill of $200 dollars, this equates to an estimated savings of $10-20 per month. For a new building, centrally locating the heating unit may incur no (or very low) additional costs, yet the savings will be permanent. For an existing structure, moving a heating unit to a central location is most cost-effective when the old unit reaches the end of its useful life and it is time for replacement. If these alterations cost $1,000, an improvement of this nature pays for itself over 9-10 years. At the same time, monthly cash-flow improves immediately.

Issues:
Existing building architecture may inhibit centrally located combustion unit. Wood-fired units may present a housekeeping challenge due to small bits of bark, leaves and other debris often associated with the movement of wood fuels. Costs to modify an existing structure may be prohibitive unless coupled with other planned renovations.

Regional Issues:
The value of this modification depends upon the annual heating requirement of your furnace or boiler. The National Weather Service provides an historical record (http://www.ncdc.noaa.gov/oa/documentlibrary/hcs/hcs.html) of departures of average daily temperatures from a reference temperature of 65 degrees F. This information is available as Heating Degree-Days per Year and provides a very useful estimate of how often your heating plant will run.

Installation (Getting It Done):
Masonry chimneys on outside walls are prohibitively costly to move unless coupled with a planned renovation. An additional triple-walled chimney may be used to advantage after checking with local fire codes.