

Research by the U.S. Environmental Protection Agency has shown that proper maintenance and operation of existing commercial and residential heating units are the most economical means of reducing emissions from these sources. Such practices also provide fuel savings which can potentially offset maintenance cost. Education of owners and operators is the best means of achieving the desired maintenance and operating practices.

In a recent study of home heating units, it was found that by identifying and replacing untuneable units and by tuning the remaining units, smoke could be reduced by 50%, CO by 81%, HC by 90% and filterable particulate by 24%. A recent EPA study indicates that by proper design of residential heating systems, it is possible to achieve a 65% reduction in NO_x emissions, and at the same time, to reach a steady state thermal efficiency of 70 to 80%. The fuel reduction potential was found to approximate 20 percent. The prototype version of the system has been field-tested, and the above results are from this test.

Cost figures for this system are not available, but indications are that any increase in cost will be greatly offset by the fuel savings and increased thermal efficiency.