

The pre-existing oil burner technology is easy to use and service, but has a "seasonal efficiency" of only 65%. The FHROB provides an 11-22% improvement over the pre-existing technology. It reduces oil consumption by an average of 18% for boilers and 11% for furnaces (Hoppe and Graves, 1982). It is also inexpensive - the incremental cost to retrofit an oil burner is small (\$200-\$400), yet the savings are substantial (\$150-200 annually), and the payback is short (0.5 to 3.7 years). The FRHOB is a low-tech, standard item, easily installed and serviced.

4.4.2 Initial Barriers to Adoption

Although the technology was commercially available as an energy-saving device in the mid-1970's, it had not achieved significant market penetration. By the late 1970's there were a few manufacturers producing the product, but their volumes were small. There was little awareness of the technology among the public or the industry, and the product was not "taking off."

The fuel oil industry is highly fragmented and very competitive. Local dealers have no control over margins. Prices are set by producers, and dealers take a standard markup for the service provided. Oil producers are only distantly associated with users and have little incentive to pursue fuel oil conservation.

Equipment manufacturers producing oil furnaces and boilers also represent a highly competitive and fragmented industry that lacks vertical integration. Furnaces are assembled by "box manufacturers" using components produced by numerous other manufacturers. Minor incompatibilities between components are dealt with by the use of relatively standard adaptors. Flanges allow interchangeability between most burners