

The following is the time-line of events in the development of the Hotbox method. The following events occurred at NIST:

- 1978 - NIST Hotbox conceptualized.
- 1983 - NIST Hotbox built.
- 1985 - NIST calibration was completed.

At CTL:

- 1979 - CTL Hotbox installed.
- 1985 - CTL introduced the Guidebook of Performance on 21 wall systems.
- 1988 - Second draft of test procedures for dynamic performance of Hotboxes.

The next milestone for DOE is to test the dynamic stability of Hotboxes to examine moisture transfer through walls.

5.6.4 Conclusions

Unlike many of the other innovations examined in this report, Hotboxes are not a consumer good. Builders and construction companies, to whom they are targeted, do not have a recurring need for them because they can have a particular wall system tested on a Hotbox and then build numerous structures with the same wall specifications. Hence, an average user would not generally need to use a Hotbox very frequently. Also, Hotboxes do not have any direct energy savings, so the returns to DOE's investment cannot be adequately measured. Nevertheless, DOE played an important role in facilitating the use of Hotboxes, and was instrumental in the emergence of the NIST Hotbox as the industry calibration standard. By reducing uncertainties surrounding the thermal performance of different wall systems, DOE has helped builders and construction companies more accurately assess the advantages of energy-efficient buildings. In the future, DOE needs to sponsor a standardized dynamic Hotbox test for testing the performance of wall systems. Such standardization will lead to lower costs per run and consequently greater use of Hotboxes.