

ENERGY CONSERVATION STANDARDS FOR RESIDENTIAL FURNACES AND BOILERS

TECHNICAL SUPPORT DOCUMENT ANALYTICAL TOOLS:

Filename	Description
LCC Spreadsheets	
LCC Spreadsheets using AEO 2005	
<i>LCC Main Spreadsheets¹</i>	
LCC_GB_AEO2005.xls	Gas Boilers (AEO 2005). Generates LCC results. (Ch. 7 & 8).
LCC_MHF_AEO2005.xls	Manufactured Home Furnaces (AEO 2005). Generates LCC results (Ch. 7 & 8).
LCC_NWGF_AEO2005.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC results (Ch. 7 & 8).
LCC_NWGF_LowIncome.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC low income subgroup results (Ch. 11).
LCC_NWGF_Senior.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC senior subgroup results (Ch. 11).
LCC_OB_AEO2005.xls	Oil Boilers (AEO 2005). Generates LCC results. (Ch. 7 & 8).
LCC_OF_AEO2005.xls	Oil Furnaces (AEO 2005). Generates LCC results. (Ch. 7 & 8).
LCC_WGF_AEO2005.xls	Weatherized Gas Furnaces (AEO 2005). Generates LCC results. (Ch. 7 & 8).
<i>LCC Additional Spreadsheets²</i>	
LCC_GB_AEO2005_rebound.xls	Gas Boilers (AEO 2005). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2005_rebound.xls).
LCC_MHF_AEO2005_rebound.xls	Manufactured Home Furnaces (AEO 2005). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2005_rebound.xls).
LCC_NWGF_AEO2005_rebound.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2005_rebound.xls).

¹LCC Main Spreadsheets for the six product classes are also used to generate input for the NIA analysis that calculate the Net Present Value (NPV) results.

²LCC Additional Spreadsheets for the six product classes are also used to generate input for the NIA analysis that calculate the National Energy Savings (NES) results.

LCC_OB_AEO2005_rebound.xls	Oil Boilers (AEO 2005). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2005_rebound.xls).
LCC_OF_AEO2005_rebound.xls	Oil Furnaces (AEO 2005). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2005_rebound.xls).
LCC_WGF_AEO2005_rebound.xls	Weatherized Gas Furnaces (AEO 2005). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2005_rebound.xls).
<i>LCC Regional Spreadsheets (5000 HDD & 6000 HDD)</i>	
LCC_NWGF_North_AEO2005.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC north regional subgroup results (Ch. 11).
LCC_NWGF_North_AEO2005_Rebound.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC north regional subgroup results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Regional)_AEO2005.xls).
LCC_NWGF_South_AEO2005.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC south regional subgroup results (Ch. 11).
LCC_NWGF_South_AEO2005_Rebound.xls	Non-Weatherized Gas Furnaces (AEO 2005). Generates LCC south regional subgroup results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Regional)_AEO2005.xls).
LCC_NWGF_above6000HDD_AEO2005.xls	Non-Weatherized Gas Furnaces (AEO 2005). This file is used to generate inputs for NPV spreadsheet only (NES(Regional)_AEO2005(HDD6000).xls).
LCC_NWGF_above6000HDD_AEO2005_Rebound.xls	Non-Weatherized Gas Furnaces (AEO 2005). This file is used to generate inputs for NES rebound spreadsheet only (NES(Regional)_AEO2005(HDD6000)_Rebound.xls).
LCC_NWGF_below6000HDD_AEO2005.xls	Non-Weatherized Gas Furnaces (AEO 2005). This file is used to generate inputs for NPV spreadsheet only (NES(Regional)_AEO2005(HDD6000).xls).
LCC_NWGF_below6000HDD_AEO2005_Rebound.xls	Non-Weatherized Gas Furnaces (AEO 2005). This file is used to generate inputs for NES rebound spreadsheet only (NES(Regional)_AEO2005(HDD6000)_Rebound.xls).
LCC Spreadsheets using AEO 2006	
<i>LCC Main Spreadsheets</i>	
LCC_GB_AEO2006.xls	Gas Boilers (AEO 2006). Generates LCC results (Ch. 7 & 8).
LCC_MHF_AEO2006.xls	Manufactured Home Furnaces (AEO 2006). Generates LCC results (Ch. 7 & 8).
LCC_NWGF_AEO2006.xls	Non-Weatherized Gas Furnaces (AEO 2006). Generates LCC results (Ch. 7 & 8).
LCC_OB_AEO2006.xls	Oil Boilers (AEO 2006). Generates LCC results (Ch. 7 & 8).
LCC_OF_AEO2006.xls	Oil Furnaces (AEO 2006). Generates LCC results (Ch. 7 & 8).

LCC_WGF_AEO2006.xls	Weatherized Gas Furnaces (AEO 2006). Generates LCC results (Ch. 7 & 8).
<i>LCC Additional Spreadsheets</i>	
LCC_GB_AEO2006_rebound.xls	Gas Boilers (AEO 2006). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2006_rebound.xls).
LCC_MHF_AEO2006_rebound.xls	Manufactured Home Furnaces (AEO 2006). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2006_rebound.xls).
LCC_NWGF_AEO2006_rebound.xls	Non-Weatherized Gas Furnaces (AEO 2006). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2006_rebound.xls).
LCC_OB_AEO2006_rebound.xls	Oil Boilers (AEO 2006). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2006_rebound.xls).
LCC_OF_AEO2006_rebound.xls	Oil Furnaces (AEO 2006). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2006_rebound.xls).
LCC_WGF_AEO2006_rebound.xls	Weatherized Gas Furnaces (AEO 2006). Generates LCC results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Main)_AEO2006_rebound.xls).
<i>LCC Regional Spreadsheets (5000 HDD)</i>	
LCC_NWGF_North_AEO2006.xls	Non-Weatherized Gas Furnaces (AEO 2006). Generates LCC north regional subgroup results (Ch. 11).
LCC_NWGF_North_AEO2006_Rebound.xls	Non-Weatherized Gas Furnaces (AEO 2006). Generates LCC north regional subgroup results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Regional)_AEO2006.xls).
LCC_NWGF_South_AEO2006.xls	Non-Weatherized Gas Furnaces (AEO 2006). Generates LCC south regional subgroup results (Ch. 11).
LCC_NWGF_South_AEO2006_Rebound.xls	Non-Weatherized Gas Furnaces (AEO 2006). Generates LCC south regional subgroup results with rebound effect. This file is used to generate inputs for NES rebound spreadsheet only (NES(Regional)_AEO2006.xls).
NIA Spreadsheets	
NIA Spreadsheets using AEO 2005	
NES(Main)_AEO2005.xls	Main Generates NPV using AEO 2005 (Ch. 10)
NES(Main)_AEO2005_rebound.xls	Main Generates NES using AEO 2005 (Ch. 10)
NES(Regional)_AEO2005(HDD6000).xls	Generates regional (HDD6000) NPV using AEO 2005 (NOPR Document)
NES(Regional)_AEO2005.xls	Generates regional NPV (HDD5000) using AEO 2005 (Ch. 10)

NES(Regional)_AEO2005_rebound(HDD6000).xls	Generates regional (HDD6000) NES using AEO 2005 (NOPR Document)
NES(Regional)_AEO2005_rebound.xls	Generates regional (HDD5000) NES using AEO 2005 (Ch. 10)
NIA Spreadsheets using AEO 2005	
NES(Main)_AEO2006.xls	Main Generates NPV using AEO 2006 (Ch. 10)
NES(Main)_AEO2006_rebound.xls	Main Generates NES using AEO 2006 (Ch. 10)
NES(Regional)_AEO2006.xls	Generates regional NPV (HDD5000) using AEO 2006 (Ch. 10)
NES(Regional)_AEO2006_rebound.xls	Generates regional (HDD5000) NES using AEO 2006 (Ch. 10)
Other Analytical Tools	
EngineeringSpreadsheet.xls	Generates Simple Payback Results (Ch. 6)
FB_EmploymentSummary.xls	Summary of Employment Results (Ch. 14)
Util_&_Envr_Results.xls	Summary of Utility and Environmental Results (Ch. 13 and EIA Report)
GRIM Spreadsheet	Used to generate results for manufacturer impact analysis (Ch. 12)
Furnace Model Database	Used to model furnace energy use and produce most common furnace characteristics. (Ch. 7)