EnergyPLAN | PLAN
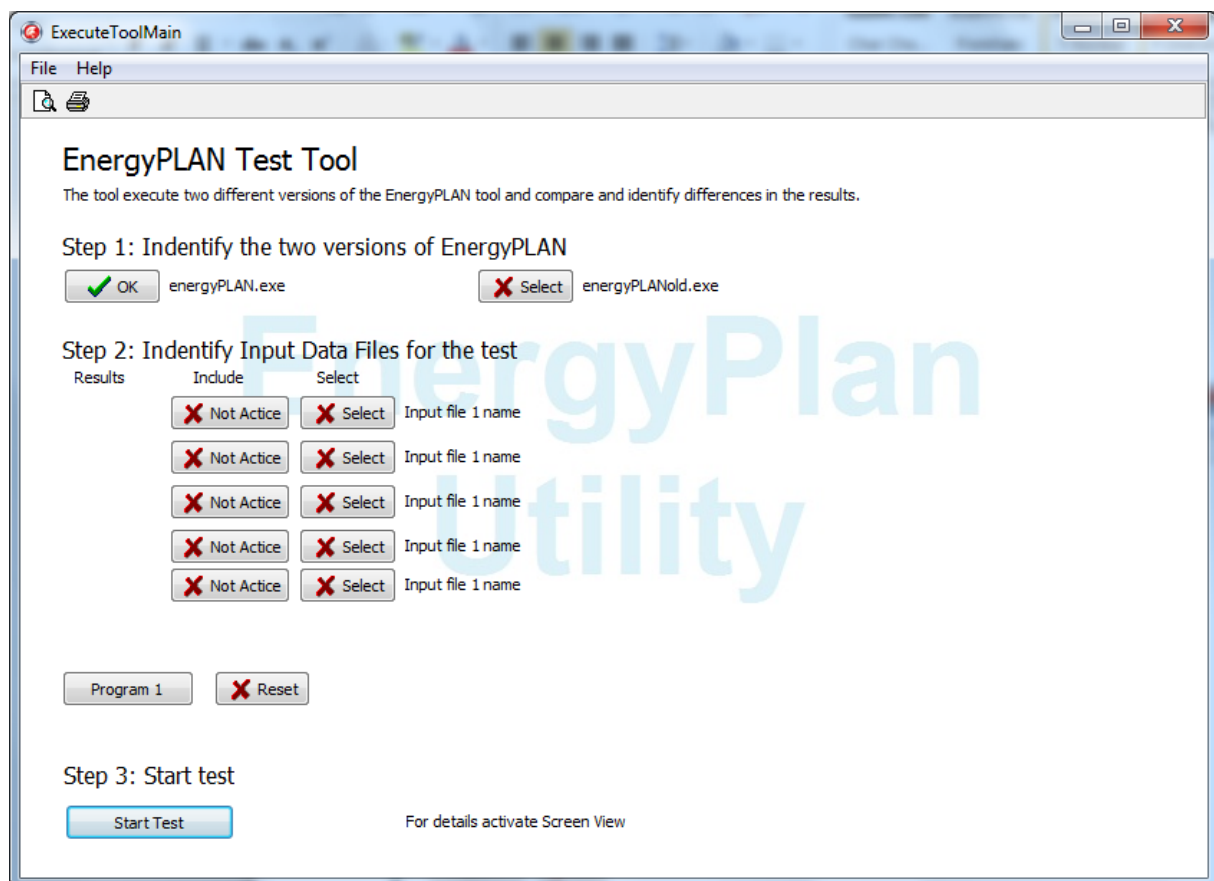## Advanced Energy System Analysis Computer Model

EnergyPLAN-Compare

An EnergyPLAN Help Tool

Documentation Version 1.0

August 2012

Henrik Lund
Aalborg University
Denmark

Preface

This is the documentation of the first version of an EnergyPLAN Help Tool called "EnergyPLAN – Compare".

Henrik Lund, Aalborg University, August 2012

Content

Purpose and application

The main purpose of the model is to assist in the testing of new versions of the EnergyPLAN model when the EnergyPLAN model is being further developed.

The tool may also be used by users of the EnergyPLAN model when a new version is released e.g. to test if the new version changes results of previous studies. However such use is possible only for version 10.0 and onwards, since previous EnergyPLAN models does not include the necessary link to the new tool.

What does the help tool do?

The EnergyPLAN compare help tool can run two different versions of the EnergyPLAN model using the same input data and compare approx. 150 main results and identify if there are any differences in the results. One can specify a list of different input data files which the help tool can run through.

How to operate the help tool

The EnergyPLAN compare help tool execute file has to be located in the same directory as the EnergyPLAN execute file. Moreover one has to place both the two EnergyPLAN models in the same directory as illustrated below:

Navn	Ændringsdato	Type
energyPlan Data	08-08-2012 11:28	Filmappe
energyPLAN.exe	08-08-2012 10:40	Program
energyPLANold.exe	10-07-2012 20:52	Program
ExecuteEPlanTool.exe	10-07-2012 22:50	Program

The help tool can be activated directly from the directory or from the EnergyPLAN model. When the help tool is located in the same directory as the EnergyPLAN model an icon will appear in the upper corner of the model as shown below:
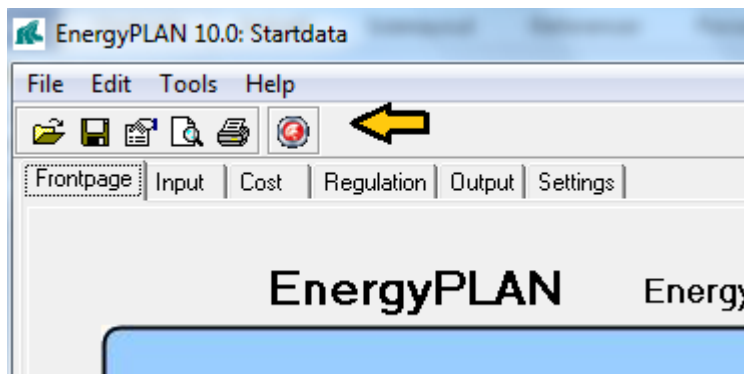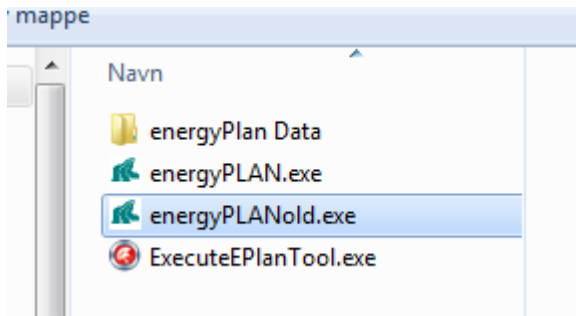

When the help toll is activated the following screen will appear:
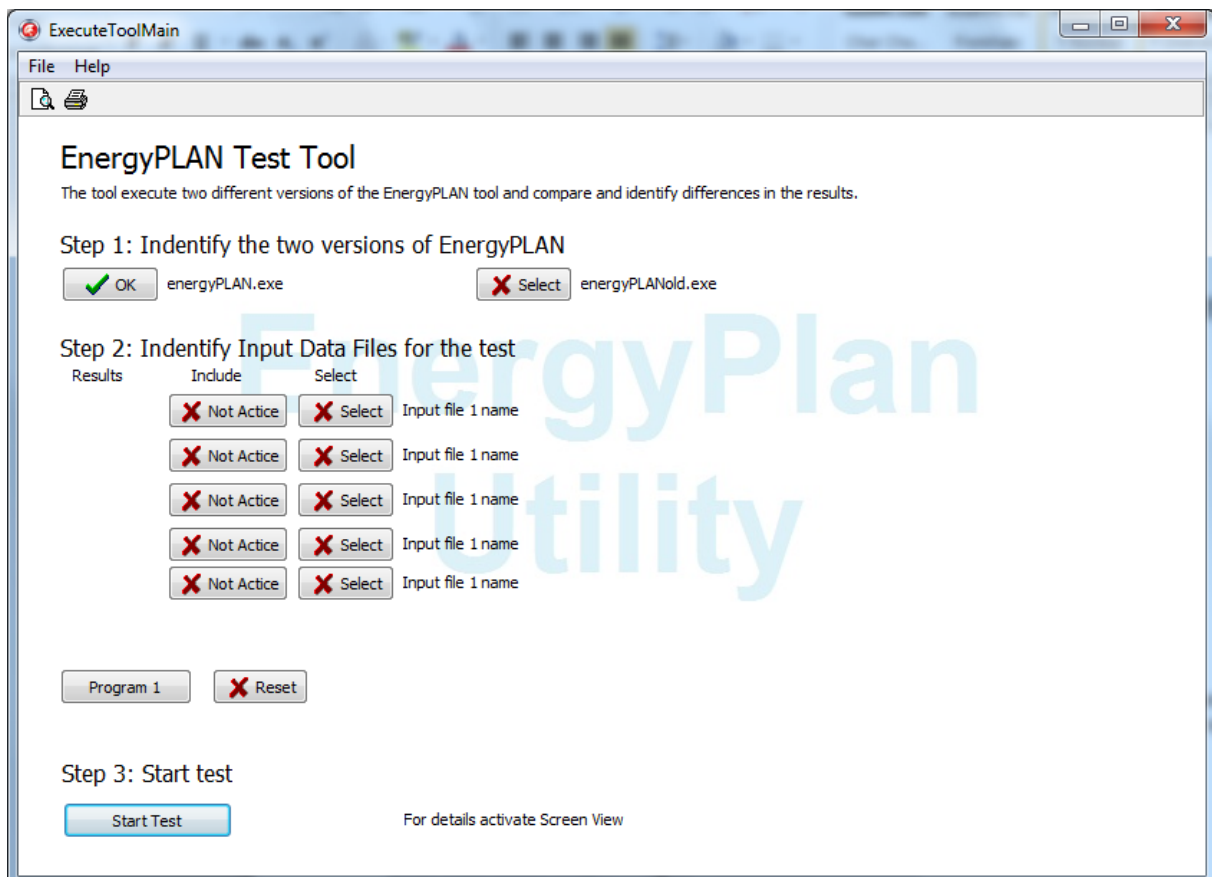
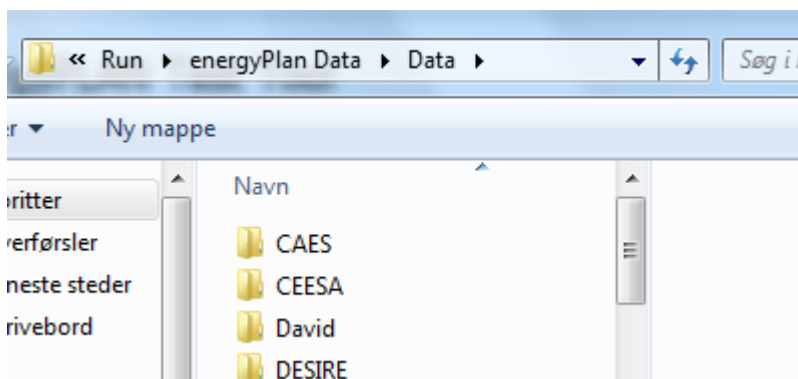One has to follow the three steps show on the screen.

Step 1:
Selecting the two versions of the EnergyPLAN model by pressing the "X Select" button and the following window will show:

Step 2:
Selecting input data files by pressing the "X Select" buttons and the following window will show:

Step 3:
Starting the test by activating the "Start test" button.

Now the help tool will open the one version of the EnergyPLAN model, which will load the indata file, make the calculations and store the results on the file "ExecuteToolDataTransport" which will be located in the "EnergyPlan Data" directory. The help tool will then close the EnergyPLAN model and read and store the results.

The above procedure will be repeated for the next version of the EnergyPLAN model and for all the specified input data files.

The results

After each input data file the help tool will show the main results on the screen in terms of either an "OK" (as shown below) or a count of the number of differences in the results.
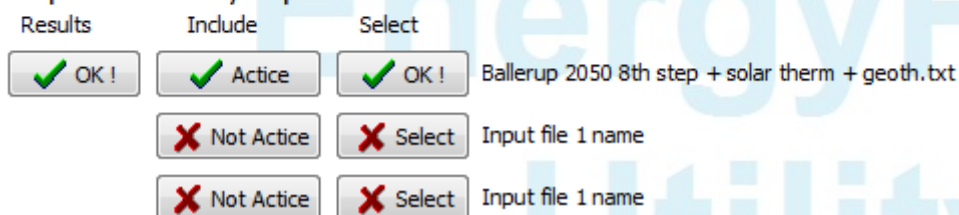
EnergyPLAN Test Tool

The tool execute two different versions of the EnergyPLAN tool and compare and identify differences in
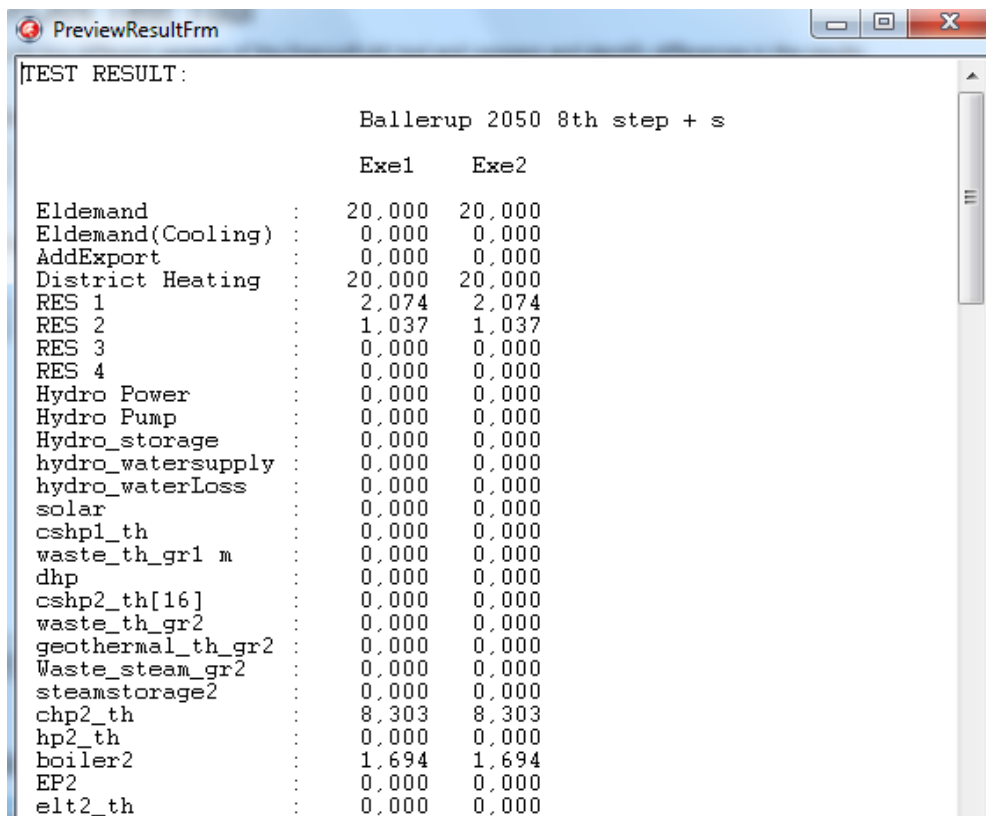
Step 1: Indentify the two versions of EnergyPLAN

✔ OK   energyPLAN.exe   ✔ OK !   energyPLANold.exe

Step 2: Indentify Input Data Files for the test

Results   Include   Select

✔ OK !   ✔ Actice   ✔ OK !   Ballerup 2050 8th step + solar therm + geoth.txt

✘ Not Actice   ✘ Select   Input file 1 name

✘ Not Actice   ✘ Select   Input file 1 name

To see the details of the result one has to activate the 📄 button in the upper left corner and the following window will appear:

```
PreviewResultFrm

TEST RESULT:

                    Ballerup 2050 8th step + s

                Exe1     Exe2

Eldemand            :    20,000   20,000
Eldemand(Cooling)   :     0,000    0,000
AddExport           :     0,000    0,000
District Heating    :    20,000   20,000
RES 1               :     2,074    2,074
RES 2               :     1,037    1,037
RES 3               :     0,000    0,000
RES 4               :     0,000    0,000
Hydro Power         :     0,000    0,000
Hydro Pump          :     0,000    0,000
Hydro_storage       :     0,000    0,000
hydro_watersupply   :     0,000    0,000
hydro_waterLoss     :     0,000    0,000
solar               :     0,000    0,000
cshp1_th            :     0,000    0,000
waste_th_gr1 m      :     0,000    0,000
dhp                 :     0,000    0,000
cshp2_th[16]        :     0,000    0,000
waste_th_gr2        :     0,000    0,000
geothermal_th_gr2   :     0,000    0,000
Waste_steam_gr2     :     0,000    0,000
steamstorage2       :     0,000    0,000
chp2_th             :     8,303    8,303
hp2_th              :     0,000    0,000
boiler2             :     1,694    1,694
EP2                 :     0,000    0,000
elt2_th             :     0,000    0,000
```

Any difference in the results will be clearly marked.