

Exercise ELE.1:

Open the file AQ_Ele_Exercises_1_4.xlsx

Open the first worksheet (Exercise ELE.1).

A table is given with information about 7 sites for electricity generation as provided by their managing companies. Blanks mean that the data is missing/not provided.

Please fill the table 2 with the data reported by the companies.

Here are some clues:

*** Net Vs Gross electricity: check exactly what data are required to be reported in table 2 and review the concepts in slide 14 of the presentation.**

*** Which plants are main activity producers and which are autoproducers? Review the concepts in slide 42 of the presentation.**

Exercise ELE.2:

Open the second worksheet (Exercise ELE.2).

A table is given with information about 4 sites for electricity and heat generation as provided by their managing companies. Blanks mean that the data is missing/not provided.

Please fill the table 6 with the data reported by the companies. Then you can spot inconsistencies in the data provided by calculating and checking calorific values and efficiencies (use the balance columns on the upper right) against the standard ranges given in the little right tables.

Note the inconsistencies in the lower "Issues" table.

Here are some clues:

*** Pay attention to the plant type: main activity or autoproducer? Electricity only, CHP, or heat only?**

*** Note the GCV/NCV ratio for natural gas, see slide 45 of the presentation.**

Exercise ELE.3:

Open the third worksheet (Exercise ELE.3).

Fill in the electricity trade table provided the information in the text and the map on the right.

Here are some clues:

*** The methodology for accounting electricity trade differs from all the other energy commodities. See slides 49-50 of the presentation.**

Exercise ELE.4:

Open the fourth worksheet (Exercise ELE.4).

A table is given with information about 11 sites for electricity generation as provided by their managing companies. Complete table 7a using these data.

You can check the quality of the data by verifying the capacity factor of each plant (use the empty columns on the upper right) against the reference ranges in the right reference table. Report eventual inconsistencies in the lower “Issues” table.

Here are some clues:

- * Pay attention to the plant description when filling the table.**
- * Recall the definition of capacity factor. See slide 48 of the presentation.**
- * Net Maximum Installed Capacity refers to capacity on the 31st of December of the year.**

Exercise ELE.5 (questionnaire):

Open the file AQ_Ele_Exercises_5.xls. This is an annual Electricity Questionnaire.

Open the worksheet “Start” and read the instructions in the upper right corner.

In the “Menu” worksheet run the consistency check using the upper button “check data” for the year “2011”.

Try to solve the inconsistencies by adjusting the figures and re-run the check after each change to see if it was effective.

Here are some clues:

- * The checks tell you in what tables and what cells the inconsistency exists.**
- * Start by adjusting the efficiency problem: assume that the inputs are correct and efficiency is 33%.**
- * Own use has to be less than 10% of gross production; in this case it is 213GWh.**