



# ROsmose - 2

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- ☐ 1. How can you evaluate utility integration for your process using ROSMOSE
- ☐ A Preview “frontend\_MER.qmd” file with only your process ET in the OSMOSE SOLVE chunk.
- ☒ B Preview “frontend\_TotalCost.qmd” file with your process ET and selected utilities in the OSMOSE SOLVE chunk.
- ☐ C Preview “frontend\_TotalCost.qmd” file with only your process ET in the OSMOSE SOLVE chunk.
- ☐ D Read the ROSMOSE tutorial section in the example guide book.
- ☐ E None of the options



- ☐ 2. How do you know which utilities you need to connect to your process
- ☐ A I plug and play with the utility examples given in the guidebook
- ☐ B I check the composite curves of my process, define minimum and maximum process temperature levels, and identify suitable utilities without changing any of their parameters.
- ☐ C I put one hot and one cold utility only.
- ☒ D I check the composite curves of my process, define minimum and maximum process temperature levels, and identify suitable utilities while modifying them to best fit my process.



**E** None of the options

- ☐ **3.** If you run the example “**frontend\_TotalCost.qmd**” using only the furnace, cooling tower, and market. What results do you get (considering an electrolyzer size of -50000 kW), with `elec_cost = 0.14 Eur/kWh`, `natgas_cost= 35 Eur/MWh` ?



- A** The energy utility OPEX reported is 65 648 483 €/yr.
- B** It doesn't compile, I get errors due to insufficient utilities.
- C** The energy utility OPEX reported is 39 385 286 €/yr.
- D** The energy utility OPEX reported is 38 123 524 €/yr.
- E** None of the options

- ☐ **4.** If your problem is compiling but OSMOSE is not giving you a solution and you are getting this error: “! Exception: Osmose was not able to solve the optimization.”. You should try to:



- A** Send all of your files to a TA to debug for you.
- B** First make sure the syntax is correct, you are calling the correct process and utility units in your frontend and then if the error persists use the “OSMOSE SEREALIZE\_ET” command to return OSMOSE error files and then check with your TA.
- C** Don't report utility integration for your process because it does not work.
- D** Change your main process stream requirements to make the utilities match.
- E** None of the options

- ☐ 5. Run the example using the furnace, cooling tower, market and steam network superstructure, considering an electrolyzer size of -50000 kW, with elec\_cost = 0.14 Eur/kWh, natgas\_cost= 35 Eur/MWh. What are the results that you get for the electricity consumption by the cooling tower (CT) and the natural gas (NG) consumption by the furnace?



- A CT: 20.89 kWh ; NG: 258.17 kWh
- B CT: 54.49 kWh ; NG: 258.17 kWh
- C CT: 54.49 kWh ; NG: 412.37 kWh
- D CT: 20.89 kWh ; NG: 412.37 kWh
- E None of the options

### Add Blank Question

Multiple Choice

True / False

Short Answer

### AI Assisted ✨

Generate Questions

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