Meeting 28/01:

Mention two points:

- Master Thesis Design

Thesis Design structure:

1. Title, student name, ID, email, supervisors with emails, abstract
   - Add a link to the private Github repository for DS-related projects
2. Short introduction defining the problem, context and stating the Research Question
3. Literature review indicating how your work is grounded in the literature and builds upon the state-of-the-art research
4. Methodology
   - Resources where applicable (datasets, software, etc.)
   - Approach: choice/justification of research method(s) to answer the research question
   - Describe how you evaluate your results
5. Risk assessment
   - Describe the risks, and describe your plan B
6. Project plan
   - Timeline (Gantt chart with results per week)
   - NB: describe achievements, not actions. (e.g., instead of data preparation you write all data in XXX format, well-described, ready for analysis using YYY)

Thesis Design acceptance criteria:

Below you see the weight of each section and the questions used by the supervisor to assess the sections.

1. A title, supervisor(s), abstract **(10)**
   1. Is all clear and neat?
2. A clearly defined research question and corresponding sub-questions **(20)**
   1. Can the research question be answered?
   2. Do answers to the sub-questions indeed help in an understanding of the research problem or even in solving the research problem?
   3. Are the sub-questions detailed enough?
3. Overview of the state of the art of the literature **(20)**
   1. One expects that the research problem is grounded in the literature and that each sub-question or field has a small section of relevant literature.
   2. All parts of the thesis should be grounded in or at least connected to the literature.
4. Methodology **(20)**
   1. Do I get a clear picture of the used resources?
      1. E.g., for data, do I get a clear picture of the data, its state, its availability, how much it is, how dirty, how much work to process, etc, etc.
   2. Are the methods which will be used described in enough detail, so that I can picture what will be done exactly?
   3. Is the evaluation appropriate? That is, do I understand how each sub-question is answered by the evaluation?
5. Risk assessment **(10)**
   1. Is it complete?
   2. Is it realistic?
   3. Is the backup plan executable?
6. Project plan **(20)**
   1. Is it complete? (I.e., every part of the work covered.)
   2. Is it realistic?
   3. Does it give a clear picture of what will be done when?
   4. Is it possible to evaluate whether the student is on schedule at any point in time?

Questions to answer to:

- What is your evolving research question?
- What is the core research problem to which your research question is related?
- What are your sub-questions that are instrumental to answering your research question?

- Does your research consist of different parts, possibly corresponding with the sub-questions? If so, explain how these parts are necessary to be able to answer the research question.
- How do you plan to answer your research question, i.e. what is your methodological set-up? Why do you choose this setup? How are you going to evaluate?
- How strong do you feel your research question is? Is it clear and specific enough? Are you confident with it? Does it include a comparison?

- Models (comments here + models)

General notes:

- Polarities need to be added in some models (need of exploration and understanding from my part)
- Variables with “Australia” will be replaced as soon as we find the way the Netherlands’ variables behave.

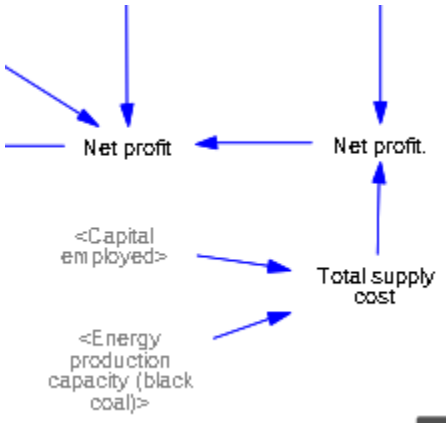
In figure 1-sfd model:

- New non-RE capacity, New RE capacity and Unprofitable capacity variables are not defined. I have defined them in order to produce a working model. However, I would like to check with you if my definitions are acceptable for the first phase of our modelling process.

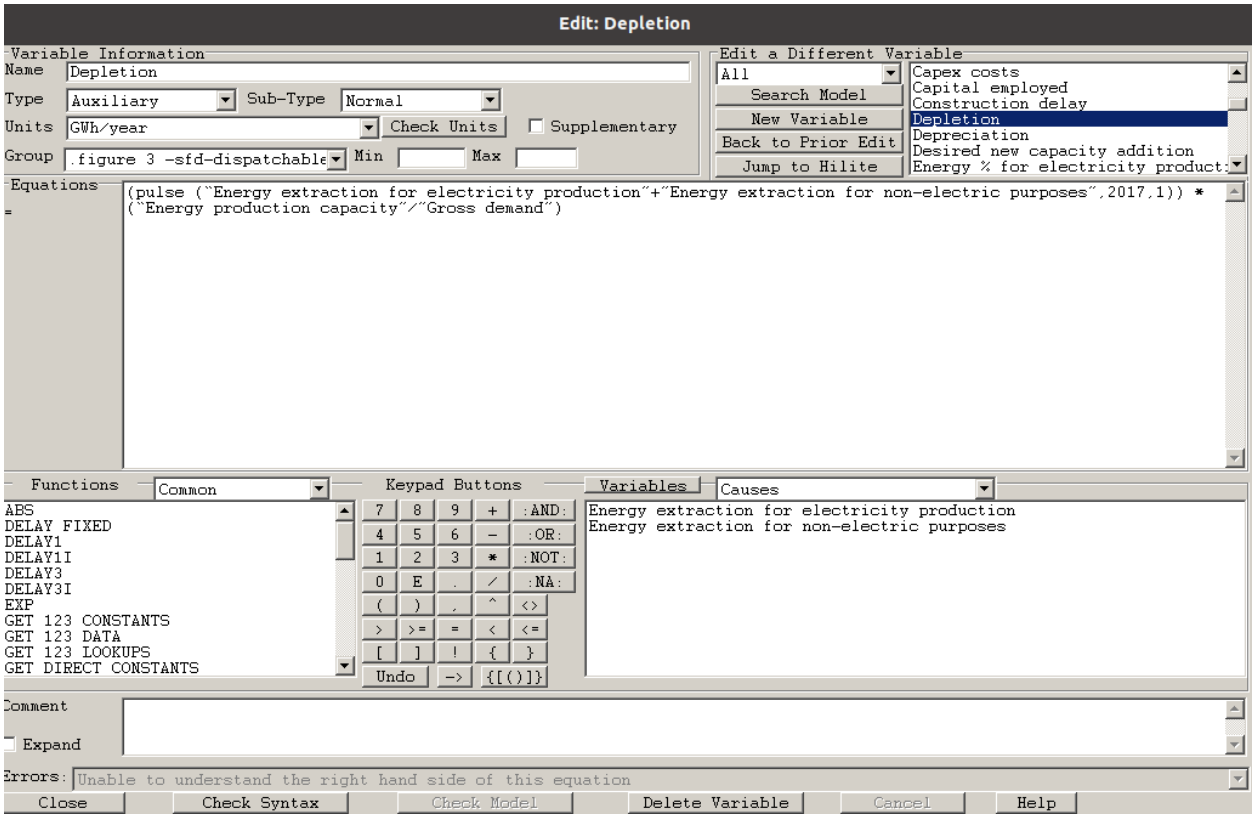
In figure 3-sdf-dispatchable resources model:

Note: started the simulation for black coal

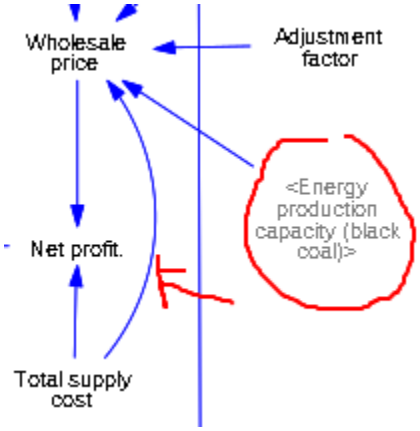
- I added the Capex costs variable (which was mentioned in the Capex equation but did not exist in the model). However, I am not sure how to define it.



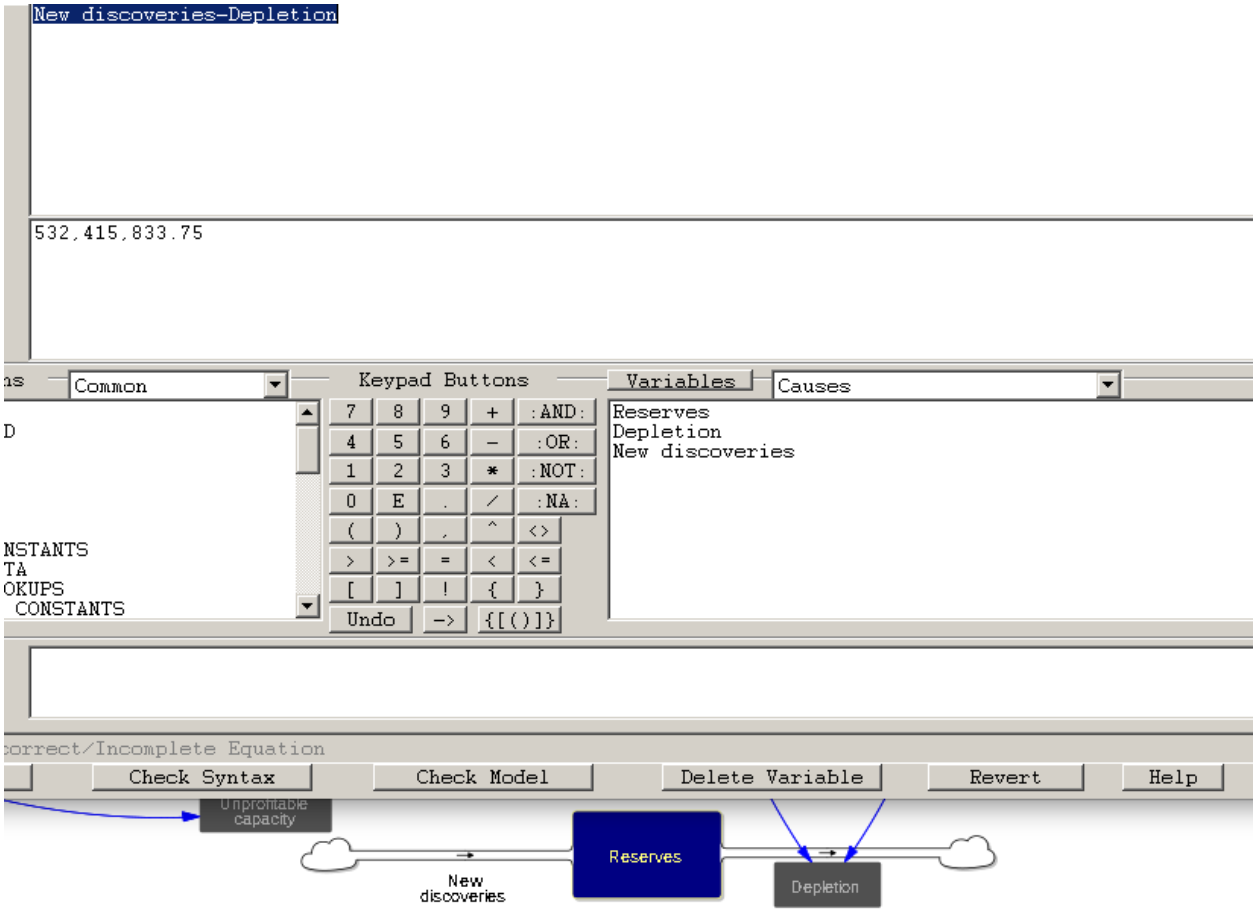
- [redacted] added the shadow variables and the total supply cost one since it was required from the equation.



- I think something is wrong with the depletion variable (and its equation)…



- additions (for the equation)



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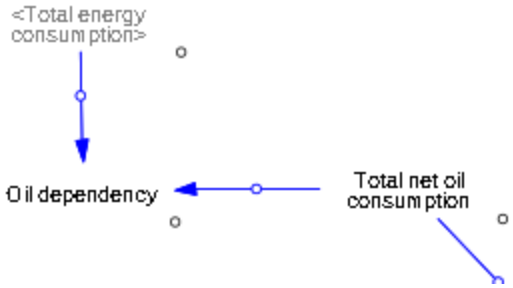
the equation is not correct (for Vensim) unless reserves-stock is included in it.

- Some variables are not defined in the paper (capex costs, energy extraction for electricity production, total supply, unprofitable capacity) How should we handle them?

- In general, I was a bit confused since for some cases there were missing information and I wasn't sure if i should focus more on the model (graphicaly) or the equations in order to finalize it.

In figure 3-sfd-CO2 emissions model:

- No connection between the top elements - I added it



- added in order to fulfil the equation
- Actually, many of the information needed is missing in order to complete this diagram.

In figure 3-sdf-non-dispatchable resources model:

- Will be improved after having discussed the dispatchable model.