

Your thesis design looks promising. When you make the transition from thesis design to draft thesis, I would recommend putting more focus on the research gap. When I go to the introduction, I would start broader. You can begin with stating that the Paris agreement of 12 December 2015 legally binds all participating countries and parties to certain commitments on climate change. Then, you can explain what the commitments are in terms of sustainable development. A beginning sentence like “Energy is (...)” can be skipped, since it is not necessary. After giving the global context, you can point out that you focus on one country in West-Europe as a case study. Make sure that you then note the kind of country that the Netherlands is: densely populated, space is scarce, gas reserve in Groningen. That makes it bit more specific than what you have now. It gives a legitimation on why this case is worth simulating. You now just pose that you are looking and the Netherlands. But why?

It would be helpful if you include an extra paragraph in the introduction on what has been done in other modelling studies. You write in the related work section that there are “many studies that focus on the investigation of the energy sector”. In the introduction, you want to highlight the key papers of what has been done on modelling of sectors and then specifically the energy sector. That is now missing. It would be helpful if you explain in more detail why “the formulation of a sustainable energy sector” is a “multi-level problem”. What is a multi-level problem? Can you give some glimpse on what has been done before on such multi-level problems and what kind of results have been found for them? Be careful in your writing with using words like “many” or “big”. You can better use significant than big. Many can be skipped in the context of “many socio-economic”. If it is really necessary in your opinion, you can use “several”. Before going to section 1.1, I would state what the research gap is: I guess the other studies do it from a “specific scope” and you use a more “generic scope”? This novelty of your research can be addressed more explicitly. You would also want that in your abstract, which is now mostly an introduction, but what kind of results do you expect? You do not have not mention that you do it for IAS and UvA. That can be mentioned shortly in the Methodology, but it is not important from the perspective of the master thesis. Also see some comments here on how to structure the abstract (and other sections):

https://canvas.uva.nl/courses/6056/files/5852546?module_item_id=1147364.

For the research questions, I like your sub-questions. For the first sub-question, you could already write the kind of data that is available. Since you will be using time-series data, I would frame it as “publicly available time-series data”. Could you make the “existing models” in the second sub-question more clear: what are these models? Can you name them by their name? The third sub-question could use a rephrasing but is interesting: “To what extent will the Netherlands be able to meet her commitments on climate change based on the Paris Agreement of 2015, given a data-based simulation of the energy transition?” The sub-questions give you good workflow, but can you really answer the main research question with them? The social, economic and ecological aspects are not named in any of the sub-questions. Neither are the boundary conditions? There seems to be missing one or two sub-questions. Suggestion: How can the Dutch energy transition towards sustainability be dynamically simulated by taking into account both the boundary conditions of the Dutch energy system and the social, economic and ecological aspects?

As to the evaluation of your model, I am not convinced yet how this will look like: you will compare the data produced by the model with the real-life data on which the model is based? You could add some more depth in how that works. It would also be good to name what kind of formal model it will be and how this relates to “the other models” you mention earlier. You mention [5] as the basis of your model. I would mention this already in the introduction and state that you replicate this study in the Dutch context. That frames the relevance in terms of replication. In the related work, you only say that it has only been used for Australia and not for other countries. That gives a research gap. The related work section is not a background section. You would like to hear more on what the several studies found in their investigation of the energy sector. You now connect that with 1 reference, but you want to hear several studies and also present how well they have done. This gives you a basis on what to expect. Was this model of Laimon successful in the context of Australia? Why do you use it? Are there also other models that you could replicate? Adding this will give your related work section more body.