

A FEATURE TO DECREASE RUNTIME BY FIXING CAPACITY PARAMETERS

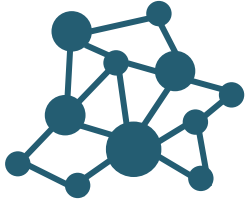
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On behalf of:

Institute for Energy Technology

Center of Global Energy Policy

The Danish Energy Agency



In highly detailed models...



...the run time tends to explode

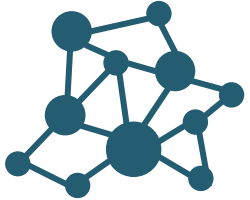
THE RUN TIME IS EXPLODING

We keep increasing the complexity.

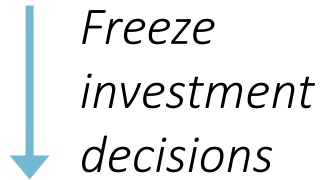
Modelers want

- more time slices and long-term model runs
- more technical details, like ancillary services or unit commitment
- more regions and countries
- etc.

For every new feature, the run time increases.



First run

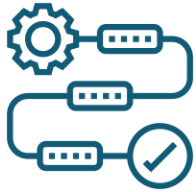


Second run

REDUCING THE RUNTIME

One way to reduce the run time is to *fix investment decisions* from one run to another.

Some work has already been done to develop such a feature (REG_BDNCAP), which might not cover all needs and currently does not have a well-described documentation.



Methodology development

- A simple way to add investment decisions between model runs
- Based on REG_BDNCAP
- A script to write scenario files in case the REG_BDNCAP-feature is not sufficient
- *This will be publicly available*



Testing, testing, testing

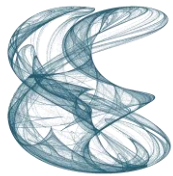
- Testing on at least four different models
- Testing on different reasons for adding restrictions on capacities



Increase accessibility

- Create and test a how-to-guide
- *This will be publicly accessible, so that the TIMES-community can benefit from the work*

A STRONG AND EXPERIENCED TEAM



Energy Modelling
Lab (DK)

- Project lead
- Methodology development
- Testing
- Documentation



Institute for Energy
Technology (NO)

- Methodology development
- Testing
- Documentation



Center of Global
Energy Policy (US)

- Methodology development
- Testing



Danish Energy
Agency (DK)

- Testing
- Review of documentation