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## Plan Overview

*A Data Management Plan created using DMPonline*

**Title:** Quantum Computation in Transmission Expansion Planning

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**Principal Investigator:** Luca Hofstadler

**Data Manager:** Luca Hofstadler

**Project Administrator:** Luca Hofstadler

**Affiliation:** Delft University of Technology

**Template:** TU Delft Data Management Plan template (2021)

**Project abstract:**

The intention is to exploit the benefits of quantum computation and utilize them in transmission expansion planning.

**ID:** 155529

**Start date:** 01-02-2024

**Last modified:** 08-07-2024

**Copyright information:**

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# Quantum Computation in Transmission Expansion Planning

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## 0. Administrative questions

1. Name of data management support staff consulted during the preparation of this plan.

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2. Date of consultation with support staff.

2024-07-12

## I. Data description and collection or re-use of existing data

3. Provide a general description of the type of data you will be working with, including any re-used data:

Type of data	File format(s)	How will data be collected (for re-used data: source and terms of use)?	Purpose of processing	Storage location	Who will have access to the data
Code	.py, .jl, .ipynb	Internet	Calculation and simulation	GitLab	The project team
Industry data	.csv, .json	Data Transfer	Input for simulations	Local Storage	The project team
Graphics	.png, .jpg, .svg	Will be created	Results of simulations	GitLab	The project team
Literature	.docx, .pdf, .tex	Will be created or downloaded	Literature	Local Storage and Cloud	The project team

4. How much data storage will you require during the project lifetime?

- < 250 GB

## II. Documentation and data quality

5. What documentation will accompany data?

- Data will be deposited in a data repository at the end of the project (see section V) and data discoverability and re-usability will be ensured by adhering to the repository's metadata standards
- README file or other documentation explaining how data is organised
- Methodology of data collection

## III. Storage and backup during research process

6. Where will the data (and code, if applicable) be stored and backed-up during the project lifetime?

- Another storage system - please explain below, including provided security measures
- Git(lab)/subversion repository at TU Delft
- OneDrive
- Project Storage at TU Delft

Work place storage. Company intern security standards.

## IV. Legal and ethical requirements, codes of conduct

### 7. Does your research involve human subjects or 3rd party datasets collected from human participants?

- No

### 8A. Will you work with personal data? (information about an identified or identifiable natural person)

*If you are not sure which option to select, first ask your [Faculty Data Steward](#) for advice. You can also check with the [privacy website](#) . If you would like to contact the privacy team: [privacy-tud@tudelft.nl](mailto:privacy-tud@tudelft.nl), please bring your DMP.*

- No

### 8B. Will you work with any other types of confidential or classified data or code as listed below? (tick all that apply)

*If you are not sure which option to select, ask your [Faculty Data Steward](#) for advice.*

- Yes, data related to competitive advantage (e.g. patent, IP)
- Yes, confidential data received from commercial, or other external partners
- Yes, national security data (e.g. nuclear research)

Working with national transmission system operator.

### 9. How will ownership of the data and intellectual property rights to the data be managed?

*For projects involving commercially-sensitive research or research involving third parties, seek advice of your [Faculty Contract Manager](#) when answering this question. If this is not the case, you can use the example below.*

There will be open data which IP rights are managed by the corresponding data manager. The conf. data is not shared as it is IP of the respective companies.

## V. Data sharing and long-term preservation

### 26. What data will be publicly shared?

- Not all data can be publicly shared - please explain below which data and why cannot be publicly shared

Some validation data shared by the national TSO cannot be shared and the openly available one by the ENTSO-E Transparency Platform can be accessed through their site. The code and other files will be made available.

### 28. How will you share your research data (and code)?

- I will share my data and code via git(lab)/subversion and also create a snapshot in a repository
- I will upload the data to another data repository (please provide details below)

GitLab repo + Zenodo repo.. Creation of DOI and license is under development and the links will be made available.

**30. How much of your data will be shared in a research data repository?**

- < 100 GB

**31. When will the data (or code) be shared?**

- As soon as corresponding results (papers, theses, reports) are published
- At the end of the research project

**32. Under what licence will be the data/code released?**

- Other - Please explain

Matter of ongoing discussion.

## **VI. Data management responsibilities and resources**

**33. Is TU Delft the lead institution for this project?**

- No - please provide details of the lead institution below and TU Delft's role in the project

It is a combined undertaking by the AIT Austrian Institute of Technology and the TU Delft.

**34. If you leave TU Delft (or are unavailable), who is going to be responsible for the data resulting from this project?**

The repo will still be available and maintenance can be done by the people who I will assign.

**35. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?**

I will make sure that the FAIR principles are reflected in the project and determine the necessary time for it. The free repo resources won't be exceeded.