



Web Consultation – Desired characteristics for open-source FlexPlan.jl library release

The FlexPlan project aims at creating an innovative grid-planning tool considering the opportunity to introduce new storage and flexibility resources in electricity transmission and distribution grids as an alternative to network reinforcement.

The mathematical formulation of the planning tool has been completed and the planning model is implemented as a proof-of-concept software library in called *FlexPlan.jl* in Julia / JuMP. *FlexPlan.jl* will be made available to the research community and industry as an open-source library in the next months, and it is based on a number of widely used open-source libraries developed in Julia language, such as *PowerModels.jl*.

This research grade library has the following features:

- Multi-period and stochastic transmission expansion model including storage and flexible demand investment models
- Representation of AC and DC networks
- Linearised ‘DC’ power flow formulation for transmission system modelling and linearised DistFlow formulation to represent radial networks
- Combined and decomposed modelling of transmission and distribution systems
- A number of different example test cases, sample test data and result processing functions
- Flexible and extendible design of the library and possibility to use different open source and commercial optimisation solvers

In order to improve the quality of the open-source implementation and facilitate the use *FlexPlan.jl* in the future we would like to ask for your feedback on the following identified topics:

- How is the willingness in your organization w.r.t. usage of open-source models?
 - If they are not used at the moment, what are the main reasons / barriers for that?
- Are you developing / contributing to open-source software?
- What are the most important selection criteria for you / your organization to use open-source models? – Please rank following options
 - Quality of documentation
 - Availability of tutorials
 - Frequency of model updates / releases
 - Number / variety of data interfacing options
 - Customizability of the model
 - Computational performance