

PROJECTS

CEDREN HydroBalance

assessing the value of using Norwegian hydropower for balancing in continental Europe in 2050. Study impacts on hydropower operation, profitability, environmental effects and social-acceptance issues.

SOVN

build a new tool to solve a multi-stage large-scale stochastic optimisation problem based on a detailed description of the hydropower system.

MAD

aggregation/disaggregation has been a pivotal technique in hydropower scheduling tools, this project aims to update and improve this concept.

NORSTRAT

investigating a Nordic energy system in 2050 without emission of green-house-gases. Main focus is on the electric system with phase-out of fossil fuels, electrification of personal transport and increase in consumption. Increases in transmission grids are analysed.

Short-term production scheduling

extend marginal cost calculations to new topologies, allow mixing of cuts and independent water values, as well as access to new solvers for SHOP.

Extended pump functionality in SHOP

implement variable speed pumps, hydraulic short circuit and reserve delivery from pumps in SHOP.

Pressure point restrictions

include pressure-dependent restrictions in the unit commitment and dispatching phases in SHOP.

Simulation functionality in SHOP and new interface

allow simulation of a full watercourse in SHOP and use SHOP as a WCF service.

Validation of the SHARM model

estimate the value and investigate the consequences of using a stochastic short-term model.

EMPS-API

pre-project assessing specification and implementation alternatives for an API for Samkjøringsmodellen.



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