

Innovation type:  
New/improved work  
processes

Innovation:

TRL: # 6

Year: 2021

Contact:

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Potential users:

DSOs, energy retailers

## Pilot project: NODES flexibility platform

*CINELDI partner NODES is operating a flexibility marked platform, facilitating use of flexibility in the grid. Linja had a pilot project investigating the use of the NODES market platform for local flexibility market.*

*The flexibility market at Linja was tested at Bremangerlandet to solve local grid voltage issues.*

### Challenge

Reduce the voltage drop during high-load situation, in order to meet regulation requirements. A new sea cable can solve the issues, but this is an expensive solution in a sparsely populated area.

### Solution

It was possible to create a local flexibility market in a sparsely populated area, even though the desired amount of flexible power was not achieved, and the testing was performed manually. The participation electricity retailers has through this pilot established their flexibility initiatives and adjusted their organisations to enable such trading in the future. Linja has gained more understanding and knowledge regarding the use of flexibility markets. Unsolved issues have been identified: baseline calculations in large-scale testing, automatization of several aspects of flexibility trading; reporting of baseline, registration of flexibility needs and bids, activation (manual activating is labour intensive), verification of delivered flexibility and settlement. Linje did not have tools to predict the need for flexibility nor a good overview of sources of flexibility in a geographical area.

### Potential

Norwegian DSO has many sparsely populated areas where reinvestment in power lines and cable are expensive solutions. The potential for creating small local flexibility markets is therefore large. This pilot proved that it is possible through ten tests. The needed volume per trade was 0,6-1,2 MW to solve the voltage issues. But the largest trading in one test was 565kW. The average trade was 20kW. The prize was from 5 000 to 18 000 NOK per MW. The results are taken further into the Euroflex-project to be tested in larger scale.

### Reference in CINELDI

[Pilot "NODES flexibility platform" report](#) (in Norwegian)