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Curative redispatch as a means for integrating large volumes of generation from renewables into the grid

Study Committee C1
Preferential Subject 2
Question 2.3.2

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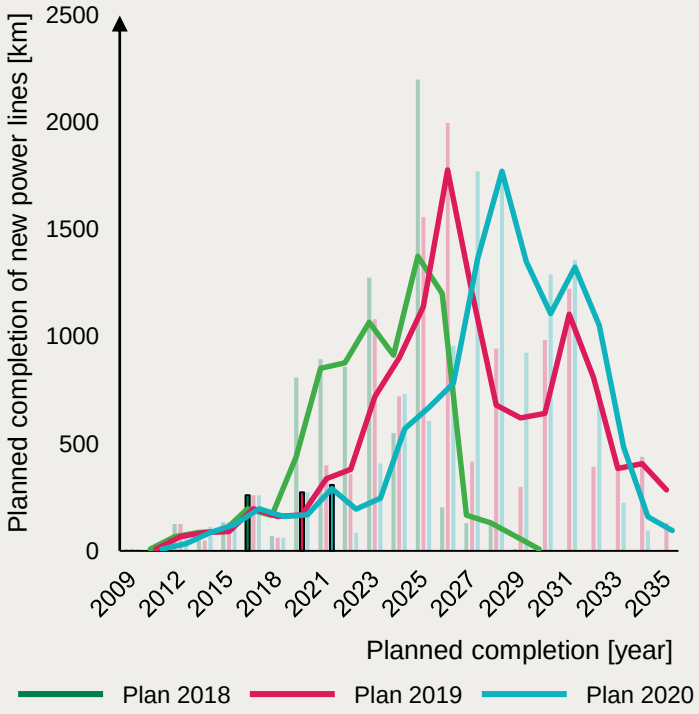
The need for new system sevices arising from the integration of renewable energy sources

- In Germany, the distribution of renewable energy generators is very uneven
- In the north, a lot of generation from wind energy is located
- At the same time, the centers of electrical load are more to the west and the south of the country
- This generates a great need for transmission capacity from north to south
- Currently, the expansion of the grid is held back by bureaucracy and opposition of locals
- Thus, new ways of utilizing the grid's capacity have to be explored to enable the grid to handle the new load flows



Curative redispatch can help in utilizing the grid more efficiently

- Curative redispatch is able to relieve a line immediately after it experiences an overload due to a fault in the grid
- Thus, the lines doesn’t need to be relieved beforehand when the fault has not occurred yet
- A grid booster can provide curative redispatch
- In a pilot project in Germany, a 250 MW / 250 MWh battery is to be combined with an offshore wind park to act as a grid booster
- It could be shown that monitoring a small number of lines is sufficient to save a large share of preventive redispatch
- Moreover, the lines’ utilization could be increased by up to 6 %.