Hamburg | Behörde für Umwelt, Klima, Energie und Agrarwirtschaft

SH Schleswig-Holstein
Ministerium für Energiewende, Landwirtschaft, Umwelt, Natur und Digitalisierung

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LETTER OF SUPPORT: "SuprAl Hamburg" project proposal for the "Innovation Fund" of the European Commission

Schleswig-Holstein is the northernmost federal state in Germany. In 2018, renewable energy facilities generated 23 TWh of electricity. This is equal to more than 150% of the consumption of the state. The rated capacity of offshore wind power installed is around 2 GW and will be tremendously increased in the coming years. The Free and Hanseatic City of Hamburg is the most important center of power consumption nearby with a huge potential of flexible demand.

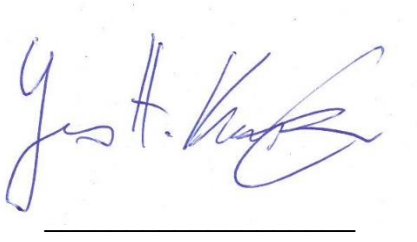
To realize the potential of renewable power and flexible demand, upgrades to the current grid are unavoidable. These are often resisted by the public and therefore the implementation takes a lot of time. More capable transmission technology could solve many of these conflicts and therefore accelerate the progress of change.

The Ministry of Energy Transition, Agriculture, Environment, Nature and Digitalization (MELUND) and the Ministry of Environment, Climate, Energy and Agriculture (BUKEA) support further growth of offshore wind power. One of the many challenges of this still young technology is getting the electrical power from the wind farms connected to the mainland grid. The conventional high voltage AC submarine cables currently widely used may not be the best solution for the future. High voltage DC cables have significant lower transmission losses but have reached their maximum capacity of transferable power. The appropriate cable routes are limited and it will be most difficult in the future to land the forecasted wind power.

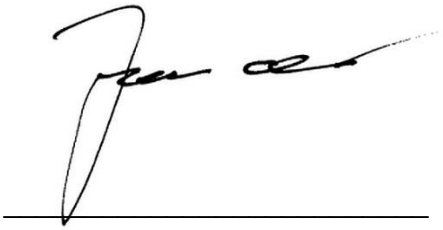
High current DC super conductor cables may well turn out to be the best solution to connect offshore wind farms to the grid and could even become one of the key technologies for the transformation of the energy system. In addition, especially for transport and distribution of electricity in urban regions maybe the technology is a forward-locking solution to connect the energy sectors.

On behalf of MELUND and BUKEA, we hereby express our support for the project "SuprAl". If VESC and TRIMET can successfully demonstrate the operation of a 200 kA / 70 MW super conductor in an industrial environment, this would be valuable evidence for the capability of the super conductor technology and enable us to better evaluate its application in wind farm connections and transport systems into industrial und urban areas.

Best regards



Senator Kerstan
Behörde für Umwelt,
Klima, Energie und
Agrarwirtschaft



Minister Albrecht
Ministerium für Energiewende,
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