NEXTGEN HIGHWAYS

FACT SHEET

November 2022

Underground Electric Transmission in the Highway ROW: The State of Play

An increasing number of transmission and communications infrastructure projects both in the U.S. and abroad are co-locating linear infrastructure using existing rights-of-way (ROW), including highway, rail, existing transmission corridors, and waterway ROW. Below are summaries of planned projects co-locating buried high-voltage direct current (HVDC) transmission in existing ROW.

SOO Green HVDC Link

The SOO Green HVDC Link is a proposed 350-mile, 2,100 MW, 525KV underground HVDC transmission line running along existing rail and highway corridors from Iowa to Illinois. The Project will connect the nation's two largest power markets – Midcontinent Independent System Operator (MISO) in the Midwest and PJM in the east.

SOO Green will supply residential, municipal, and commercial customers in PJM with reliable, affordable, and clean energy. The project is expected to drive $2.5 billion in direct investment and create thousands of construction, operations, and maintenance jobs, and spur additional economic activity throughout the Midwest.

Projected completion date and status: Construction expected to begin in 2023.

Champlain Hudson Power Express

The Champlain Hudson Power Express (CHPE) is a $3 billion, 339-mile underground HVDC transmission line designed to deliver 1,250 MW of renewable energy to the New York City area. The Project will use waterways (60%) and existing terrestrial ROW to remain out of sight and avoid environmentally sensitive areas. The project will run from the U.S.-Canadian border, south through Lake Champlain, along and under the Hudson River, and eventually ending at a converter station in Astoria Queens.

Projected competition date and status: Permitted and ready for construction; projected to come online in 2025.

Clean Path New York

The Clean Path New York is expected to enable the delivery of more than 7.5 million megawatt-hours of emissions-free energy into New York City every year by accessing resources in the upstate and western regions of the state. The project, combined with the CHPE, will help New York State meet a 2030 goal of producing 70% of the state's electricity using emissions-free resources. The 175-mile transmission line will connect 3,800 MW of new solar and wind power to the New York Power Authority's existing 1,160 MW Blenheim-Gilboa Pumped Storage Power Plant.

Projected competition date and status: Not yet permitted by the New York Public Utility Commission; projected to come online in 2027.

Piossasco-Grande Ile

The Piossasco-Grande Ile (the **Italy-France Interconnector)** runs between Italy and France, across the Alps, and consists of two 320 kV underground HVDC lines running 190 kilometers (~120 miles). The cables are sited in existing road and motorway infrastructure.

The Interconnector is a strategic project not just for Italy and France, but for Europe as a whole as it contributes to the creation of North-South infrastructure corridors benefiting the European Union. The additional 1200 MW between Italy and France — increasing transmission capacity on the northern Italian border by about 15% — will reduce grid congestion, helping to boost electricity imports and exports and improve integration of renewable sources.

Projected competition date and status: This line is projected to be complete in 2023.

SuedOstLink

The SuedOstLink underground HVDC transmission line will transport wind power from the North of Germany to the South. The SuedOstLink will transport large volumes of electricity from wind power state Saxony-Anhalt to the south of Germany, mostly following existing highway corridors. The project is 540 kilometers (~335 miles) in length and will operate at 525 kV.

Germany has pledged to reduce greenhouse gas emissions by 40% (below 1990 levels) by 2020 and by 80% by 2050. The Project will help transform the country's electricity supply system to a wholly renewables-based electricity – curbing emissions and environmental impacts, while delivering greater economic benefit and security of energy supply.

Projected competition date and status: Expected to come online in 2025.

SuedLink Underground HVDC

The SuedLink Underground HVDC transmission line in Germany is expected to be the longest underground HVDC power cable in the world. The Project is a 750 km (~466 miles), 525kV underground power line, capable of transmitting up to 4 GW of offshore wind power from north to south Germany while also facilitating the transmission of solar energy from south to north Germany.

Projected competition date and status: Production of the HVDC power cables to start early 2022 with expected project completion in 2026.

About NextGen Highways

The NextGen Highways is a collaborative initiative promoting the use of highways and other existing rights-of-way as infrastructure corridors where electric and communications infrastructure are strategically and safely co-located in existing highway right-of-way. Learn more at http://www.NextGenHighways.org