

Cyprus Among 10 Major Electricity Transmission Projects In 2019

Fircroft has included two subsea electricity cables running through Cyprus among the 10 biggest transmission and distribution projects in the world for 2019.

At \$4.1 bln, the **EuroAsia Interconnector**, linking the electricity grids of Israel, Cyprus Crete and Attica, has been valued as the fourth biggest project or network in the world, after **China's transmission lines development** worth \$33.7 bln,

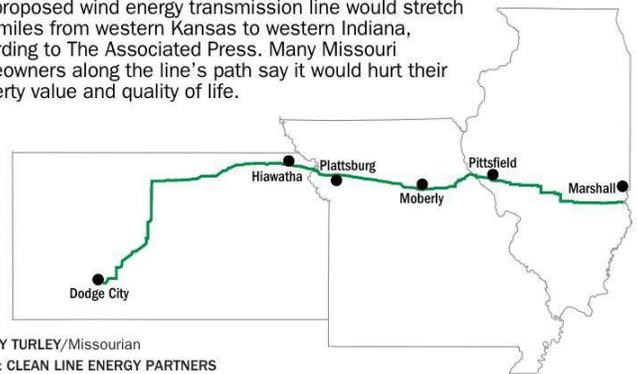


a **Russia-Japan cable** valued at \$6 bln and the **Atlantic Wind project**, valued at \$5 bln, linking the US offshore wind farms with the on land grid.

The fifth biggest project, according to Fircroft's blog EngineeringPro, is another subsea cable running through Cyprus, the **EuroAfrica Interconnector**, valued at \$4 bln, followed by the **Grain Belt Express Clean Line between Kansas and Missouri**, the **TransWest Express**

Grain Belt Express would cross Midwest

The proposed wind energy transmission line would stretch 780 miles from western Kansas to western Indiana, according to The Associated Press. Many Missouri homeowners along the line's path say it would hurt their property value and quality of life.



JEREMY TURLEY/Missourian
Source: CLEAN LINE ENERGY PARTNERS

from Wyoming to Arizona, the **National Grid Power Frameworks in England**, and the **Russia-North Korea Power Bridge**. The Fircroft report said "the majority of

TransWest Express transmission line

■ Potential future terminal at Intermountain Power Plant
— Transmission line



SOURCE: TransWest Express DESERET NEWS GRAPHIC

populations rarely live in the same locations as sources of

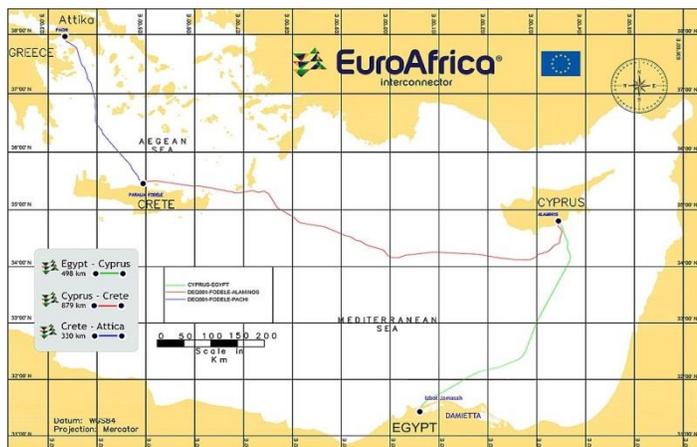
electricity generation. Whether it's coal-fired power plants or solar arrays, the sources of electricity generation and sources of electricity demand are generally separated by considerable distances. It's the job of transmission and distribution networks to bridge those distances and supply homes and business while losing as little electricity along the way."

"But with a growing global population, increasingly dense cities (the UN predicts that two-thirds of the world's people will live in cities by 2050) and a continued growth in electricity demand from both domestic and business sources, the challenge is on for power companies to generate and transmit the necessary electricity," the report added.

Fircroft described the **EuroAsia Interconnector** as part of a European network of intra-country and cross-border electricity grids which are interconnected via bi-directional cables to provide stable and sufficient electricity supply through national transmission operators.

*“The **EuroAsia Interconnector** will see the construction of the world’s longest submarine power cable between Greece, Cyprus and Israel to create an ‘energy highway’ using HVDC technology. Construction of the project will be carried out in two phases. The first stage consists of the construction of a 500kV, 1,000MW submarine cable and eight HVDC onshore stations. The second stage will upgrade the electricity interconnector to 2,000MW.”*

“The interconnector is expected to stretch 1,518km and would be laid at a maximum depth of 3,000m undersea (equal to the height of 8 times the Empire State building). The individual sections will be: 310km Israel to Cyprus; 879km Cyprus to Crete; 329km Crete to Attica. Once the second stage upgrade has taken place it will be able to provide electricity to 3 million homes (or cities of Berlin and Madrid combined) - or 2 million people at peak load).”



In its description of the **EuroAfrica Interconnector**, the Fircroft report said *“should this project proceed as planned Egypt, Cyprus and Greece will be connected via a 2,000MW electricity interconnector by 2022. This is another ‘electricity highway’ which will connect national grids via a subsea cable with HVDC onshore convertor stations at each connection point.”* One of the key aims of the **EuroAfrica Interconnector** project is to end the energy isolation of Cyprus, which is currently the last member of the European Union which remains fully isolated without any electricity or gas interconnections.

The 1,707km route of the Euro Africa Interconnector will be divided into three segments: 498km from Damietta (Egypt) to Kofinou (Cyprus); 879km from Kofinou to Korakia (Greece); 330km from Korakia to Attika (Greece).

“Given the marine habitats the interconnector will pass through, the project is taking special precautionary methods to protect the environment. Sub-sea routes are being determined to avoid significant natural formations and geological obstacles. Once built, the interconnector cable will be buried at least two meters beneath ground and will be invisible for the entire route,” the report added.

Here are 10 major Transmission & Distribution projects that are starting up in 2019-2022 in response to that challenge:

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| 1. State Grid Corp. of China (SGCC) Transmission Lines
Value: \$33.7bn; Start Up: 2020 | 6. BRITIB Project (Bretagne-Britain-Iberia)
Region: UK/Europe; Value: \$3.7bn; Start Up: 2020 |
| 2. Russia-Japan Energy Bridge
Value: \$6bn; Start Up: 2020 | 7. Grain Belt Express Clean Line
Region: Americas; Value: \$3bn; Start Up: 2020 |
| 3. Atlantic Wind Connection – Transmission
Value: \$5bn; Start Up: 2020 (although the project may be on hold) | 8. TransWest Express Transmission Line
Region: Americas; Value: \$3bn; Start Up: 2022 |
| 4. EuroAsia Interconnector
Region: Europe/Asia; Value: \$4.1bn; Start Up: 2022 | 9. National Grid Power Infrastructure Frameworks
Primary location: England; Value: \$3bn - Start Up: 2021 |
| 5. EuroAfrica Interconnector
Region: Europe/North Africa; Value: \$4bn; Start Up: 2022 | 10. Russia-North Korea Power Bridge (Primorye-Rosan)
Value: \$3bn - Start Up: 2022 |

Trans west: <https://www.deseretnews.com/article/865669206/Interior-Department-approves-major-transmission-lines-through-Utah.html>

Russia No Korea: https://www.washingtonpost.com/news/worldviews/wp/2018/03/24/russia-wants-to-build-a-bridge-to-north-korea-literally/?noredirect=on&utm_term=.2b50680100db

State Grid China: <https://www.linkedin.com/pulse/ultra-high-voltage-power-grid-china-zhou-lin>

Atlantic: <http://atlanticwindconnection.com/projects/>

Euro Asia: <https://www.euroasia-interconnector.com/at-glance/the-big-picture/>

Euro Africa: https://en.wikipedia.org/wiki/EuroAfrica_Interconnector

Grain belt: https://www.columbiamissourian.com/visuals/graphics/grain-belt-express-would-cross-midwest/pdf_02d35ad0-60a9-11e9-b07a-cfa22cd8c66e.html