Who owns uk national grid

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The National Grid is the high-voltage electric power transmission network serving Great Britain, connecting power stations and major substations, and ensuring that electricity generated anywhere on the grid can be used to satisfy demand elsewhere. The network serves the majority of Great Britain and some of the surrounding islands. It does not cover Northern Ireland, which is part of the Irish single electricity market.

The National Grid is a wide area synchronous grid operating at a nominal 50 hertz. Most of the physical HV parts of the grid consists of 400 kV lines as well as some 275 kV lines that collectively form a supergrid. It has several undersea interconnectors: an AC connector to the Isle of Man, and DC connectors to Northern Ireland, the Shetland Islands, the Republic of Ireland, France, Belgium, the Netherlands, Norway, and Denmark.

Since the privatisation of the Central Electricity Generating Board in 1990, the National Grid in England and Wales is owned by National Grid plc. In Scotland the grid is owned by ScottishPower Transmission in the south, and by SSE in the north. Infrastructure connecting offshore wind farms to the grid is owned by offshore transmission owners. National Grid plc is the transmission system operator for the whole GB grid.[1]

In 1925, the British government asked Lord Weir, a Glaswegian industrialist, to solve the problem of Britain"s inefficient and fragmented electricity supply industry. Weir consulted Merz, and the result was the Electricity (Supply) Act 1926, which recommended that a "national gridiron" supply system be created.[6] The 1926 Act created the Central Electricity Board, which set up the UK"s first synchronised, nationwide AC grid, running at 132 kV, 50 Hz.[7]

At its inception in 1950, the 275 kV Transmission System was designed to form part of a national supply system with an anticipated total demand of 30,000 MW by 1970. The predicted demand was already exceeded by 1960. This rapid growth led the Central Electricity Generating Board (created in 1958) to carry out a study in 1960 of future transmission needs.[12]

In the 2010 issue of the code that governs the National Grid, the Grid Code,[13] the Supergrid is defined as those parts of the British electricity transmission system that are connected at voltages in excess of 200 kV.

The 2.2 GW undersea Western HVDC Link from Scotland to North Wales was built in 2013-2018.[14] This was the first major non-alternating current grid link within Great Britain, although interconnectors to foreign grids already used HVDC.

In 2021 a new non-lattice design of electricity pylon, the T-pylon, was built near East Huntspill, Somerset for the new 35 mile Hinkley Point C to Avonmouth connection.[15]

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In 2023, the National Grid began removing equipment from China"s NARI Technology over national security concerns.[16]

The contiguous synchronous grid covers England (including the Isle of Wight), Scotland (including some of the Scottish islands such as Orkney, Skye[23] and the Western Isles which have limited connectivity[24]), Wales, and the Isle of Man.

Total generating capacity is supplied roughly equally by renewable, gas fired, nuclear, coal fired power stations. Annual energy transmitted in the UK grid is around 300-360 TWh (1.1-1.3 EJ), with an average load factor of 72% (i.e. 3.6x1011/(8,760 x 57x106).[needs update]

Although overall losses in the National Grid are low, there are significant further losses in onward electricity distribution to the consumer, causing a total distribution loss of about 7.7%.[citation needed] Losses differ significantly for customers connected at different voltages; connected at high voltage the total losses are about 2.6%, at medium voltage 6.4% and at low voltage 12.2%.[35]

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