UK ELECTRICITY TRANSMISSION LINES:

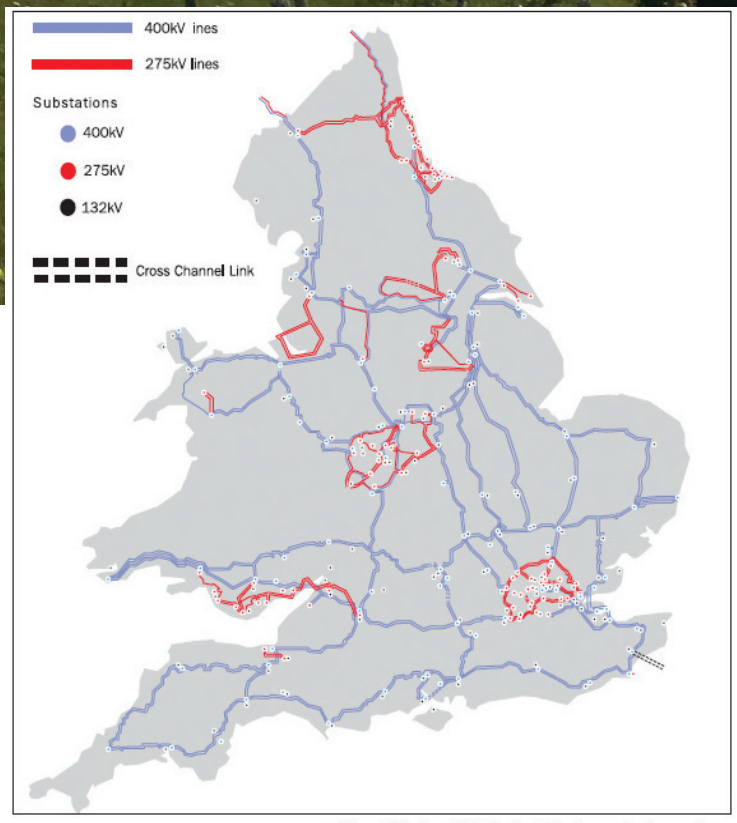
CONFLICT WITH NEW HOUSING AND COMMERCIAL DEVELOPMENT

Design Solutions and Compensation

BY COLIN SMITH

The U.K. has a densely populated land mass. The population in England is around 50 million with an area of around 50,000 square miles — approximately 1,000 people per square mile. By comparison, New York state is similar in size but with a population density circa 400 per square mile.

There is ever increasing pressure for the sustainable development of land, particularly for new housing. The current target is 300,000 new homes every year.



Much of the National Grid electricity transmission system was developed in the 1950s and '60s, when the main concern was to bring electricity to the centers of demand. Many of the towns and cities have now expanded in area with ensuing conflicts between power lines and houses. Numerous potential development sites are crossed by overhead lines.

The national supergrid high voltage electricity transmission consists of over 4,350 route miles of (400kV and 275kV) overhead lines.

Historically, little attention was paid to the design and layout of development and its relationship to the electricity equipment where development took place close to high voltage overhead lines. The result was the creation of what are now considered poor environments — better outcomes are now achievable and required.

High standards of design and sustainable development forms require a more creative approach to new development around high voltage overhead lines: the need for guidance is clear and is provided in a Design Guide created by National Grid with input from the development industry which is titled "Sense of Place."

The Town and Country Planning Association's (TCPA) endorsement of "Sense of Place" says,

> "A consequence of current policy is that significant [urbanization] is on the edges of towns where a common constraint is overhead power lines which typically converge to serve concentrations of urban consumers.
>
> In situations where overhead lines cannot be diverted away from development and/ or placed underground, they should be accepted as an unavoidable feature of the landscape the impact of which is to be mitigated by skilled urban design.
>
> The TCPA is pleased to endorse the urban design guidance prepared by National Grid for situations where overhead power lines may have to remain."

While National Grid owns the majority of the land occupied by its substations, the land crossed by its electricity lines, is "occupied" by either "wayleaves" or "easements."

"Wayleaves" are personal arrangements which can be terminated; they do not create an interest in land, whereas an easement is an interest in land either for a term of years or in perpetuity. A typical easement width is around 30 meters (100 feet — 50 feet each side of the center line), which is the minimum to allow unimpeded access for repair and maintenance of the overhead line.

Providing statutory height safety clearances are maintained. In the absence of any restriction in the easement, there is nothing to prevent development close to or under overhead lines but the presence of high voltage overhead lines across a site often creates constraint on development with potential loss of land value.

Effective master planning, along with site layout and design solutions sympathetic to and compatible with the electricity infrastructure allows mitigation, is an essential requirement if a loss of value claim is contemplated.

Housing layouts, which avoid directly facing onto the line by breaking down the linearity of the transmission route, enable a variety of design responses, allowing the transmission route to be experienced differently from various locations within the development which helps diminish its prominence.

The adverse impact is further minimized by land uses other than habitable dwellings being located directly beneath — and in close proximity — to the overhead lines. Examples of such use are highways, car parks, open space landscape and environmental mitigation, play areas and stormwater alleviation balancing ponds.

Compensation

However effective the mitigation of adverse effect, there will be occasions when development value is lost, whether by a reduction in the overall number of dwellings which could be built, and/or a reduction in the value of the land due to presence and impact of the pylon and/or overhead line.

Where a wayleave exists the landowner, often in conjunction with a developer, may trigger a claim and obtain compensation by either terminating the wayleave and activating a so-called statutory "necessary wayleave" process, or as is more often the case entering into an agreed easement to replace the wayleave. A necessary wayleave procedure follows a statutory process, which requires contemplation of the overhead line being removed. In practice, that is almost never the outcome.

Sometimes, where there is an already existing easement, the terms contain a so-called "development uplift" clause such that if and when planning permission is granted, a "second bite of the cherry" claim can be made for loss of development value at the date of the permission, subject to deduction of whatever was paid for the original easement grant, based on its agricultural value. The current difference between agricultural and development values per acre can typically be up to a multiplier of 100.

The photograph on the left depicts the development near Lancaster which features a part of a 60-dwelling development where effective mitigation was secured by siting landscape and environmental mitigation along the overhead line corridor. There was no loss of development plots. A compensation claim based on land value sales evidence has recently been agreed upon.

If agreement on compensation cannot be reached, the usual dispute resolution forum is the Lands Tribunal (Upper Tribunal — Lands Chamber), effectively a branch of the U.K. High Court.

The overwhelming majority of claims are settled by agreement.

However, an exception was "AWE v. National Grid." In 2007, the landowner (AWE) terminated a wayleave and entered a sale contract to a residential developer predicated on the payment of either £Xm assuming the overhead line was removed or of £Ym assuming the line remained. A Necessary Wayleave was granted in 2010 so the line remained, and in 2013, the difference in values £5,800,000 ($6.9m) was awarded by the Lands Tribunal.

An example of a commercial property with a neat solution to an overhead line is above, at Bridgewater (SW England). When a power line stood in the way of a large food store operator's regional distribution warehouse that was close to 900,000 square feet in area, the height clearance requirements for the roof beneath the overhead line were observed and simply lowered, with a cut out for the overhead lines.

As someone who has dealt with energy and infrastructure land acquisition and compensation for several decades, my view is that these days, the market is much less alarmed and troubled by power lines than it used to be. The EMF (electromagnetic fields) health scares of ten to twenty years ago never get mentioned and the willingness and commitment to mitigate loss and find solutions is improving all the time. ✪

Colin Smith FRICS; CPA Hon Member Past Chairman and Hon Secretary began his career in 1972 with Government Valuation Office, undertaking highway land acquisitions. He became an equity partner in regional property consultancy from 1989 to 2006 and worked with high speed railway land acquisitions and property tax appraisals. In 2006, he joined CBRE and dealt with land acquisitions for 2012 London Olympic Games and Heathrow Airport Expansion. Smith has an extensive experience with energy sector infrastructure — oil, gas and electricity. Currently, he is an expert witness and strategic advisor on wide variety of land acquisitions and compensation. He has been involved with IRWA since 2009.