



## Perspectives

## Safeguarding rural landscapes in the new era of energy transition to a low carbon future



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## ABSTRACT

This paper focuses on threatened future intrusions of energy infrastructure on rural landscapes. In recent years there has been a large outpouring of publications apparently related to “the energy landscape” and “urban energy landscape”. In the author's view this is a misleading use of the word “landscape”. Here the words “rural landscape” refer to rural and countryside, as distinct from town, as they have done in the English language for over 400 years (according to the Oxford English Dictionary).

There are many reasons for concern about the future of our rural landscapes due to human initiatives, among which are scarcely constrained developments of onshore wind turbines, ground-mounted solar PV, and “modern” biomass and biofuels. Guidelines and regulations aimed at protection are frequently evaded. Those supposed to apply guidelines and regulations often fail in their duty. Areas supposed to be protected from intrusion by international, national, or local regulations are exploited. A sustainable future requires us to preserve scenic values and protect many rural landscapes. This will require much stricter limits on the location of renewable energy developments in the countryside.

## 1. Introduction

What is to be discussed here is a very different concept of energy landscapes – the mapping of conformations of molecular entities – focussed upon by some physical scientists. Here the focus is on our rural landscapes. This is how the word “landscape” is usually conceived – inland scenery; and rural as distinct from towns and cities. The threat is of an increasing number of energy structures which many people now consider, or will, or should, increasingly consider look out of place and undermine the beauty of our rural landscapes. The cause of this concern is the expectation, signs of which can already be noted in many countries and landscapes, that visually intrusive structures in – and exploitation of – the remaining countryside will escalate as efforts are made to move to a lower carbon world. As the term landscape refers to inland scenery, what follows will not cover offshore wind energy developments, estuarine barrages or tidal ‘lagoons’, wave or tidal stream technologies, although these may be observable from the land. As Patrick Devine-Wright has recognised, how seascapes may be valued as onshore locations is often overlooked in development strategies [1]. Few would term most landscapes around the world as “natural”, for human inroads from deforestation, agriculture, and even much afforestation have altered these landscapes. Most of us, hopefully, are aware of the sometimes gross intrusions on our landscapes of past fires, charcoal burning, shipbuilding, and fossil fuel developments. In some

countries – Brazil and Indonesia among them – the destruction of forests continues, with tragic consequences for the habitats of many rare species and some indigenous people [2,3]. Even in Europe and the USA, as noted later, forests are being cut down for reasons not always honestly admitted.

These are matters which have long been noticed and noted down. Martin Pasqualetti, in his chapter in the book: “Sustainable Energy Landscapes” [4], has given a succinct account of the history of the changing landscape. He shows a photograph of a coal mine in Mud, West Virginia, which seems to almost encircle a house – coal mines are legally permitted there to come within 300 feet of a house. He goes on to provide illustrations from oil and oil sands development, power plants – a nuclear plant among them, dams and pumped storage plants, wind turbines, geothermal plants, biogas and solar PV plants. In some ways there is, as so often, not much new in this. But nowadays, and for as long as concern lasts about enhanced near-surface global warming and the availability and affordability of useful energy, there is a high likelihood that intrusive structures will escalate in our landscapes.

The visible effects of landscape intrusion vary according to the viewer, their past experience and recollections, their age (apparently), their aspirations (such as living in a “rural idyll”), and the landscape affected. Patrick Devine-Wright has pointed out that the English appear to be more sensitive to their landscapes and intrusion thereon than the Dutch or Germans: the English have greater “place attachment”. He is a

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co-author of a paper which concluded several new transmission power lines “have been met with strong public opposition, notably in two of the countries researched in this study – Norway and the UK.” Indeed, the latter paper found: “there were consistently lower levels of acceptance, both generally and locally, in the UK in comparison to the Scandinavian countries” [5–7]. Patrick lives in rural mid-Devon, England. The author also lives in rural England. Those who oppose landscape intrusions (derisively referred to as a NIMBY – ‘not in my backyard’ member) are often likely to be rational and well-informed, as Patrick has pointed out. Maarten Wolsink has stated: “Actually, the combination of generally positive attitudes and oppositional behaviour based on motives related to the ‘backyard’ idea are rare” [8–12]. They are not necessarily selfish – adverse criticisms often made by developers and their agents who are seeking to make large amounts of money out of renewable energy developments and the subsidies frequently available thereon. They may well, however, go beyond the claim made by some authors – including Wolsink – that with earlier and improved consultation with local residents such opposition will fade away. For those who truly love their rural landscapes it is not simply a matter of being consulted or cajoled into agreeing on visual intrusions (wind turbines, solar PV systems) or the undermining of sustainable development (much biomass and biofuel development).

Inappropriate use, or deliberate misuse, of language is not confined to the NIMBY tag. Expressions such as “wind farms”, “solar farms”, and the recently become fashionable “energy landscape” and even “urban energy landscape” may be regarded as misleading. Onshore wind turbines are more appropriately termed “wind energy developments” (as are offshore ones); solar panels stretching across agricultural land better termed “solar mirrors” or “ground-mounted solar PV”. Seeking to hijack a rural environment by use of the word “farm” should be opposed. Visual or acoustic intrusions on the rural landscape should not be disguised by using a term which suggests merging with the landscape – the reality is that this rarely occurs. Instead we need strict enforcement of the requirement that large areas should be exempt from such intrusions – as indicated by the title of the important contribution in this field: “The Renewable Energy Landscape: Preserving scenic values in our sustainable future.” This book begins with a futuristic account of journeys across the USA in 2030. There is no respite from wind turbines, high-voltage transmission lines, shorn forests, and solar ‘farms’. Even when one reaches the Pacific Ocean a flock of wave buoys will greet you [13].

## 2. The landscape, national perceptions and/or traditions, and “culture”

Many English people have long been marked out as particularly sensitive to, and often well informed about, the beauty and sensitivity of the rural landscape around them. This is not to claim that their love of the English countryside has been uninfluenced by forces and cultures elsewhere – as far afield as China. Those who have read David Matless’s book: “Landscapes and Englishness” will recognise all this [14]. Those who have works by W. H. Hudson, Richard Jefferies, George Bourne (who also wrote under his real name, George Sturt), H.J. Massingham, Flora Thompson, Denys Watkins-Pritchard (‘BB’), and the early works of H.E. Bates on their bookshelves will feel it profoundly, and only a few can be referenced here [15–25]. Edward Abelson’s anthology of John Massingham’s writings makes a convenient starting point [15]. Those familiar with this material will empathise with E. M. Forster’s lament in “The Abinger Pageant” (1934) about “arterial roads, by-passes, petrol pumps, and pylons – are these going to be England?” Those who follow poets from William Wordsworth to Stephen Spender writing of the rural landscape will also recognise this, and mull over Spender’s “The Pylons”:

“Now over these small hills, they have built the concrete  
That trails black wire  
Pylons, those pillars  
Bare like nude giant girls that have no secret.”

Spender’s poem goes on:

“But far above and far as sight endures  
Like whips of anger  
With lightning’s danger  
There runs the quick perspective of the future.” [26]

Such literary and poetic outpourings may be described as part of the “cultural” landscape in some quarters, but it does not seem to be a particularly illuminating or accurate description. Instead, this poem, for most readers, will suggest hostility to pylons on the part of Spender. Yet it has been claimed that this poem attracted “unkind” comments and parody, and for one commentator at least it demonstrated that “the pylon-line resembled a heroic ideal, stalking off over the hills into a clean, rational future.” His official biographer, James Purdon, wrote: German Expressionism inspired his most anthologized poem of the period, ‘The Pylons’, an homage to the National Grid which has all the graphic starkness of a ‘Ufa’ film poster.” [27,28]

More recently there has been reference to the need “to promote culturally sustainable landscapes” [29]. This paper is primarily focussed upon afforestation in Tasmania, but it justifiably concludes that “the conceptual framework could be extended to other land use changes and infrastructural installations, particularly land uses that visually or functionally disrupt existing meanings attributed to the rural landscape”. To “installations” visible in the rural landscape in England may be included the beauties of Stone Age forts and barrows, Emperor Hadrian’s Wall, Norman castle mounds, medieval churches, fine historic country houses, and thatched cottages huddled together in England, and such equivalents as may exist elsewhere. But over the past 90 years there have been battles over visual intrusion of energy infrastructure, not least electricity pylons and overhead transmission lines. The early arguments were over either bringing electricity supplies speedily and cost-effectively to homes and farms, or bearing the heavy additional costs of burying the lines to avoid visual intrusion. This battle took off seriously in 1928 in England with the Sub-Committee on Electricity of the then called Council for the Preservation of Rural England (still the CPRE but the word Preservation dropped in favour of Protect). It was a battle that was largely lost over the years, although it increased the awareness and sensitivity of the supplying Central Electricity Board [30–33].

Yet even some who claimed not to admire pylons striding across “our intimate countryside”, have also claimed that they do not disfigure the countryside “but can quickly disappear if new research makes them obsolete, and this we should insist on” [34]. Nan Fairbrother, who wrote those words in her book: “New Lives, New Landscapes”, published in 1970, was also the first person to introduce me to the term “urban landscape”, which has caused irritation ever since. This is, of course, a personal perspective and the works of Vanesa Castan Broto on “urban energy landscapes” and of Jessica de Boer and Christian Zuidema on “Towards an integrated energy landscape” published in *Urban Design and Planning* are among those that have aroused recent interest [35,36].

Rather astonishingly, a recently published “Routledge Research Companion to Energy Geographies” has claimed that there is “an important lacuna in the academic, educational and publicist literature” relating to “an integrated perspective on the relationship between energy and geography” (page 2). Yet on page 5 it is stated: “However, the dominant public issue is their visual presence in the landscape, as identified by several geographers (Pasqualetti et al.). It has continued to grow and evolve in many countries, most recently taking on the mantle of what has come to be called “energy landscapes” (Nadai and van der Horst)” [37–39]. Then on page 135 Martin Pasqualetti rightly states that: “Often energy landscapes are visual affronts to personal aesthetics – such as might occur from the installation of wind farms and transmission pylons.” This statement is somewhat undermined when it is claimed later on the same page that: “in Western countries landscape transformations attracted little attention up to the 1960s when concerns raised by environmental movements started to be recognised by larger publics” [37]. As discussed above, the concerns were of long standing.

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