AUSE01Z10MA - V1

# COPENHAGEN'S WIND PLAN IS LITTLE MORE THAN A COSTLY VANITY PROJECT

*Lower world prices for fossil fuels have reduced the allure of clean energy*

BJORN LOMBORG

COPENHAGEN, Denmark's capital, wants to be the world's first $CO_2$-neutral city by 2025. But, as many other well-meaning cities and countries have discovered, cutting $CO_2$ significantly is more difficult than it seems, and may require quite a bit of creative accounting.

More surprisingly, Copenhagen's politicians have confidently declared that cutting $CO_2$ now will ultimately make the city and its citizens wealthier, with today's expensive green-energy investments more than paying off when fossil-fuel prices rise. But how can deliberately limiting one's options improve one's prospects? These sound more like the arguments of green campaigners — and they are most likely wrong.

The first challenge that Copenhagen faces in reaching its zero-emissions goal is the lack of cost-effective options for some sources of $CO_2$, particularly cars. Denmark already provides the world's largest subsidy to electric cars by exempting them from its marginal 180 per cent car-registration tax. For the most popular electric car, the Nissan Leaf, this exemption is worth €63,000 ($90,000). Yet, just 1536 of Denmark's 2.7 million cars are electric.

There is also the challenge inherent in wind-generated electricity: ensuring the city can run when the wind is not blowing. To address this, Copenhagen had to devise an electricity-generation strategy that enables it sometimes to run on coal-fired power, without creating net emissions.

The city's plan is to build more than 100 wind turbines within the greater Copenhagen area and in the shallow waters around it. With a combined output of 360 megawatts, these turbines will more than cover Copenhagen's electricity needs — and the surplus can be used to offset the city's remaining $CO_2$ emissions, including from the city's millions of non-electric cars.

Copenhagen's success thus depends on the surrounding areas not aiming for $CO_2$ neutrality. After all, the whole accounting exercise works only if others are still using fossil fuels that Copenhagen's unpredictable wind power can replace. In this sense, Copenhagen is hogging the chance to feel righteous.

The city's political leaders promise that this strategy for attaining carbon neutrality "provides an overall positive economic picture and will lead to economic benefits for Copenhageners" based on the expectation that prices for conventional energy sources like coal, oil, and gas will rise in the coming years. But the often-heard justification for this assumption — that humanity is rapidly depleting these scarce resources — is inconsistent with real-world events, as innovation has effectively expanded oil, gas, and coal reserves to unprecedented levels in recent years.

Consider Copenhagen's wind-turbine plan, the single largest expected source of savings. The total cost of construction and maintenance is projected to be $US919 million ($979m). Even assuming a very large carbon tax of €20 a tonne now (it is actually €5 a ton) rising to €50 a tonne in 2045, this would give a paltry $US142m that they would avoid in hypothetical $CO_2$ taxes. They also estimate saving $US1038m from not buying fossil-fuel-generated electricity. The cost for all the wind turbines is $US919m. In total, the saving is $US142m + $US1038m - $US919m = $US261m.

While that sounds impressive, it depends on a huge 68 per cent increase in the price of fossil-fuel-produced electricity by 2030. And Copenhagen is not alone in making such assumptions; the UK's Department of Energy and Climate Change estimates a 51 per cent price increase by 2030.

It is likely that these projections are unrealistic. Look at the long-term price trends of coal and gas, which power the vast majority of global electricity production. Despite a recent increase, real coal prices have been trending downward since the 1950s.

In the US, the shale-gas revolution, facilitated by the development of hydraulic fracturing ("fracking"), has brought prices to their lowest levels since natural gas gained prominence after the oil crises of the 1970s. With many more countries set to tap shale-gas reserves over the next decade, this downward trend will most likely continue, helping to lower the price of electricity generation further. That is why Aurora Energy Research recently projected a significant decline in electricity prices for the next three decades.

Fracking has also enabled the US to tap its large shale-oil reserves, making it the world's largest petroleum producer. Citigroup estimates that, by 2020, oil will cost just $US75 a barrel, and the former head of international forecasting at the OECD suggests the number could be closer to $US50.

This is inconvenient for climate mandarins in the UK and Copenhagen alike, because it reduces clean energy's allure. Even if fossil-fuel-powered electricity prices remain constant, Copenhagen's wind turbines become a net drain. If Aurora's forecast proves correct, the city's wind project would become a huge failure, costing 50 per cent more than the saved electricity is worth.

Instead of allowing politicians to spend public money on feel-good climate projects based on distant, and unreliable, predictions, citizens should encourage them to invest in clean-energy research and development, with the goal of making renewables inexpensive enough to overcome fossil fuels in the market. Initiatives like Copenhagen's, however wonderful they sound, are ultimately little more than costly vanity projects.

*Bjorn Lomborg founded and directs the Copenhagen Consensus Centre. He is the editor of How Much Have Global Problems Cost the World?*