

Transcription of Carl Phillips Testimony  
before the Wisconsin Public Services Commission  
July 1, 2010

PSC: Please raise your right hand. Do you swear to tell the truth, the whole truth, and nothing but the truth?

Carl V. Phillips: Yes, I do.

PSC: OK, spell your name.

PHILLIPS: Carl V. Phillips, C-A-R-L, initial V as in Vincent- Phillips- P-H-I-double L-I-P-S

PSC: All right, go ahead.

I'm an epidemiologist and policy researcher. I'm specifically expert in how to optimally derive knowledge for decision making from epidemiologic data.

I have a PhD in public policy from Harvard University, and I did a post doctoral fellowship in public health policy and the philosophy of science.

I've spent most of my career as a professor of public health and medicine, most recently at the University of Alberta and I currently direct an independent research institute.

I reviewed the literature on health effects of wind turbines on local residents, including the reports that have been prepared by industry consultants and the references therein, and I have reached the following conclusions which I present in detail in a written report that I believe will be submitted [to the commission].

First, there is ample evidence that some people suffer a collection of health problems, including insomnia, anxiety, loss of concentration, general psychological distress, as a result of being exposed to turbines near their home.

The type of studies that have been done are not adequate to estimate what portion of the population is susceptible to the effect, the magnitude of the effects, or exactly how much exposure is needed before the risks become substantial, but all of these could be determined with fairly simple additional research.

What is clear is there is a problem of some magnitude. The evidence may or may not be enough to meet the burden of a tort claim about a specific disease, but in my opinion it's clearly enough to suggest that our public policy should not just be to blindly move forward without more knowledge.

The best evidence we have—which has been somewhat downplayed in previous discussion—is what's known as “case cross-over data,” which is one of the most useful

forms of epidemiologic study when both the exposure and the disease are transitory. That is, it's possible to remove the exposure and see if the disease goes away, then reinstate it and see if the disease recurs, which is exactly the pattern that has been observed for some of the sufferers who physically moved away and sometimes back again.

With that study design in mind, we actually have very substantial amounts of data in a structured form, contrary to some of the claims that have been made. And more data of this nature could easily be gathered if an effort was made.

Moreover, people's avoidance behavior—their moving from their homes, and so forth—is a clear (what's called) “revealed preference measure” of their suffering. Such evidence transforms something that might be dismissed as a subjective experience or perhaps even fakery, to an objective observation that someone's health problems are worth more than the many thousands of dollars they've lost trying to escape the exposure.

My second observation . . . is that these health effects that people are suffering are very real. The psychologically mediated diseases that we've observed, and in fact overall mental well being, are included in all modern accepted definitions of either individual health or public health. It's true that they are more difficult to study than certain other diseases, but they probably account for more of the total morbidity burden in the United States than do purely physical diseases. Therefore [they] should not be in any way dismissed.

Third, the reports that I have read that claim there is no evidence that there is a problem seem to be based on a very simplistic understanding of epidemiology and self-serving definitions of what does and what does not count as evidence. I don't think I can cover too much of this in the available time right now, but I explain it in detail in my report—why these claims, which probably seem convincing to most readers *prima facie* [at first glance], don't represent proper scientific reading. Moreover, the conclusions of the reports don't even match their own analyses. The reports themselves actually concede that there are problems, and then somehow manage to reach the conclusion that there is no evidence that there are problems.

And my final point, as I've already alluded to, is it's quite possible to do the studies it would take to resolve the outstanding questions, and they could actually be done very quickly by studying people who are already exposed.

This isn't the type of circumstance where we cannot really know more until we move forward and wait for years of additional exposure. The only reason we don't have better information than we do is that no one with adequate resources has tried to get it.

That's the conclusion of my points.