

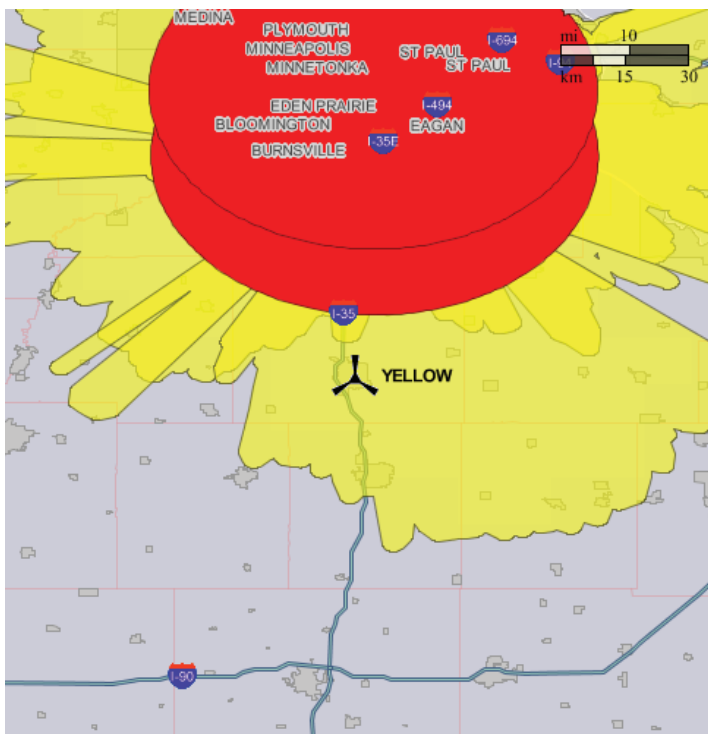


June 2010

National Security Concerns Collide With Wind Energy Development

We didn't need a sophisticated radar screen to see this storm cloud brewing. Recent testimony at the U.S. House of Representatives has brought the issue of wind turbine effects on long-range radar to center stage once again. The potential for threatening national security is no small addition to the list of project constraints with which wind energy developers must contend. But it can be managed like any other constraint, by addressing it early and staying abreast of the latest information.

Concerns surrounding the effects of wind turbines on long-range radar systems reached a fever pitch in 2006. Several wind projects in the upper Midwest were delayed as the Federal Aviation Administration (FAA) struggled to reconcile the proposed turbines with concerns about long-range radar lines of sight. Turbine signatures can mask the location and direction of aircraft, causing a major security concern.



This sample output from the [DoD Preliminary Screening Tool](#) shows the location of a hypothetical wind energy facility in Faribault, Minnesota (represented by the turbine symbol), relative to the Twin Cities metropolitan area to the north. Yellow and red areas indicate that impacts to Air Defense and Homeland Security radars are likely or highly likely, respectively.

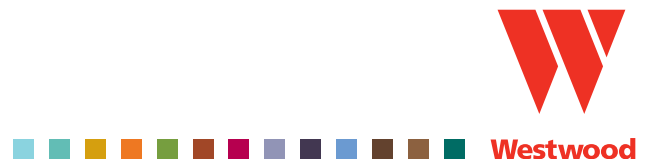
The 2006 delay was originally intended to halt development of a single project. Subsequently, however, multiple wind projects were put on hold. Panic ensued among much of the wind development community. The FAA eventually rescinded its "Presumed Hazard" notices for the delayed projects but noted that further study of best practices and mitigation was needed.

The issue was recently brought forth to the House Armed Services Committee. While the need for greater understanding of how wind turbines affect radar is clear, the process for evaluation and mitigation is not. Wind developers can use the Department of Defense (DoD) screening tool, but it lacks the depth of evaluation that provides real answers for how turbines may or may not threaten the operation of radar. For example, although the hypothetical wind energy facility shown at left is in a "yellow zone" where radar impacts are considered likely, the implications of that designation are unclear.

The FAA's role is to manage air traffic, not make determinations regarding national security. Most wind developers have experienced the long schedules associated with receiving determinations from the FAA. Further delays could be caused by the DoD's preference for halting wind projects until further impacts to security are understood. The DoD may ultimately enact its own wind turbine review process, the implications of which are unknown. The DoD may have legal authority to deny projects, or the process may be more opaque than the FAA's. Either scenario could pose challenges to the aggressive renewable energy development that existing federal policies have supported.

It's too early to tell how formal guidance will evolve to minimize the threat of wind energy development to national security. For now, the best strategy will be a familiar one to seasoned developers: factor the risk of radar interference into project planning from the outset, and keep the potential regulatory requirements and technological solutions on your radar screen – pun intended.

Solutions
for *your* **Success**



For more information, please contact

Aaron Tippie
Director, Wind Energy
aaron.tippie@westwoodps.com
952-906-7464