

TESTIMONY OF DIANE MCCONNELL  
Champaign County  
IN OPPOSITION TO **SC3504**  
Amendment to Revise Setbacks from Industrial Wind Turbines

Chairman Oelslager, Vice Chairman Manning, Ranking Member Skindell and members of the Committee, I am here to speak against any revision of the setbacks for industrial wind turbines that would measure the distance from my home rather than my property line.

I have been personally engaged in the issue of siting wind turbines since around 2006. I attended almost every meeting of the Ohio Wind Working Group convened to establish turbine siting best practices. Back then the members of the public were not considered “stakeholders” and not until we demanded a seat at the table did we get one. Here we are - years later and amendments like the Hite Amendment still do not consider the public to be stakeholders. It was wrong then and it is wrong now.

Back in 2006, a project was being considered in Logan County and all siting decisions were up to local zoning. I recall being shocked at reading Minutes from one township where a trustee, whom I believe was a leaseholder, stated on the record that the only thing that should be considered is whether the turbine could fall on you.

Of course, in those days the wind developers tried to characterize these industrial power plants as an agricultural product – a crop. They said you could not hear them. They neglected to disclose low frequency noise emissions below the threshold of hearing. They said there were never accidents and blade throw was unheard of.

A great deal has been learned and experienced in the past decade as turbine towers increase in height and rotor diameters now stretch to double the wingspan of a 747. But it appears that Senator Hite would like you to ignore what is known. Or perhaps the wind industry continues to hide the truth, even from Senator Hite.

I would like to share some statistics from the wind industry’s leading insurer, GCube. Attached to my testimony is a report from GCube that discusses threats to the industry and increasing risk associated with increasing turbine size. GCube has identified that the industry currently experiences 3,800 incidents of blade failure on average each year, each costing up to \$1 million to resolve, 1,200 incidents of gearbox failure, each costing between \$200,000 – \$300,000, and approximately 50 turbine fires, with an average claims cost of \$4.5 million. It seems clear to me that living next door to a machine that experiences that level of failure on an annual basis is a risk to the property owner.

Another area of risk is noise. At great personal expense, homeowners in Champaign County hired an acoustical expert to measure background sound at our homes. Every turbine manufacturer acknowledges that noise from turbines will be audible in quiet countryside environments. The rule of thumb is that an increase of 5 decibels over background noise will be disturbing. Nordex micrositing advice published in 2005 warned “It is important to keep a distance to the next residences in order to not disturb the inhabitants by noise emission and shadow flickering of the turbine. Normally there have to be at least 500 meters between the WTG and the next residence.” Five hundred meters is 1,640 feet. I would argue the setback from property lines should be at least 1,640 feet based on what Nordex advised twelve years ago.

This makes the proposed 1.2 times turbine height property line setback advocated by Senator Hite absurd and unsafe. We seem to be back to the notion as long as it doesn't fall on you, it's okay.

I urge you to retain the minimum setbacks established in 2014. Turbines continue to get larger. Setbacks should not be getting shorter.

# GCube Ranks Threats to Global Onshore Wind

- *Resource risk surpasses mechanical breakdown as the major threat to future financial performance*
- *Political and regulatory concerns, challenges of remote development and NAT CAT risk remain prominent as the industry expands*



Anaheim, May 23 2017 – Resource risk is now the most pressing threat faced by onshore wind farm developers, owners and operators globally, surpassing mechanical and electrical breakdown as the number one potential source of financial losses.

This is one of the core findings released today by leading renewable energy underwriter GCube Underwriting Ltd. (GCube) in its latest report, entitled *Risky Business: Assessing Future Threats in Onshore Wind Development, Financing and Operations*.

Across a number of established and developing wind energy markets worldwide, low wind speeds are negatively affecting the ability of assets to deliver the output forecast by resource analysts prior to construction. The inability to effectively transfer weather risk has led to numerous, high-profile examples of sub-par project performance, directly cited in the financial results of major utilities and portfolio owners, and manifested in damaging ratings downgrades.

As the installed asset base grows, GCube predicts that resource risk will remain the most pressing concern for stakeholders in the wind energy sector for a number of years, driving uptake for revenue protection mechanisms such as Weather Risk Transfer (WRT) and Proxy Revenue Swaps (PRS). Indeed, these products will be an essential factor in accounting for an estimated \$56 billion shortfall in total asset values across the globe.

Mechanical and electrical breakdown, meanwhile, remains a substantial threat, with the increasing size and capacity of new technologies, and more assets than ever before moving into the post-warranty phases throughout the mature markets of Europe and the US. Developers and asset owners must therefore maintain a strong focus on project maintenance and technical risk management procedure.

Analysing the past five years of onshore wind mechanical breakdown claims, **GCube has identified that the industry currently experiences 3,800 incidents of blade failure on average each year, each costing up to \$1 million to resolve, 1,200 incidents of gearbox failure, each costing between \$200,000 – \$300,000, and approximately 50 turbine fires, with an average claims cost of \$4.5 million.**

In addition, further afield, in remote regions of Asia, Africa and Latin America, lack of familiarity with unique logistical, political and natural catastrophe (NAT CAT) risks, alongside shortfalls in infrastructure and the availability of high-quality labour, commonly result in significant unforeseen losses during construction and operation.

Risky Business includes an “Onshore Wind Threat Analysis” that draws on GCube’s experience of handling financial losses to assess and rank risks based on their current and projected future threat level – from low to critical.

After resource risk and mechanical breakdown, GCube ranks political and regulatory risk, project development in remote locations and extreme weather & NAT CAT as the third, fourth and fifth most prominent threats to the performance and profitability of onshore wind energy assets worldwide. Mention is also given to the emerging threat of cyber attack, and the potential for increasing personnel turnover to inhibit knowledge transfer.

“GCube’s data shows how the risk landscape is constantly changing, and the need for stakeholders to stay ahead of the curve if projects are to remain profitable,” commented Jatin Sharma, Head of Business Development at GCube.

“The insurance markets continue to develop new and improved means of protecting onshore wind developers and asset owners, both from the sudden and unforeseen impacts of mechanical breakdown, and the longer-term financial damage caused by resource-related project underperformance.”

“But, with high-profile incidents of both still prevalent across the industry, it remains clear that there is absolutely no room for complacency when it comes to investing in thorough financial and technical risk management.”

Risky Business is the latest in GCube’s series of reports produced for its community of insured clients and brokers. In seeking to enhance understanding of the risks facing the wind industry, the report draws on GCube’s expertise as the leading provider of specialist insurance to the renewable energy sector, as well as expert perspectives from MAKE Consulting and Duke Energy Renewables.