

From: Brian Rau
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To: Docket Operations, M-30
US Department of Transportation

Re: Docket No.: FAA-2011-1279
Airborne Wind Energy Systems

Thank you for the opportunity to comment on Docket No.: FAA-2011-1279. I am the owner and operator of Medina Flying Service which is an Aerial Application (Part 137) service serving agricultural producers in central North Dakota. My company also assists local Fire Departments with fire suppression and search / rescue operations. I am the 2010 past president of the *National Agricultural Aviation Association*. I am the North Dakota liaison to the *Recreational Aviation Foundation* and I am a North Dakota *FAASTeam* representative. I have spent much of my career promoting aviation safety.

My area of North Dakota is being developed for wind energy. I believe the concept of Airborne Wind Energy Systems (AWES) to be a safety risk to Agricultural Aviation and General Aviation. I have read the information provided in the above docket and have done some research into Airborne Wind Energy Systems. The concept is probably not economically feasible, however with the push to so called "green or renewable" energy, if the idea gets government funding it may be implemented.

A single airfoil or other lifting device, tethered 1000 to 2000 feet above the ground will require the equal amount of horizontal distance from the tether point in all directions. This calculates out to a cylinder of airspace with a ground area of 314,000 sq ft (72 acres) to 12,560,000 sq ft (288 acres) extending upward to 1000 or 2000 feet. These numbers do not include a safety buffer if the wind decreases suddenly and the airfoil descends without retraction of the tether. Industry statements indicate they expect a single airfoil or other lifting device to produce approximately the same number of megawatts as a fixed surface wind turbine. It is not unusual for there to be over 100 wind turbines at a conventional wind turbine site. The amount of airspace that would be affected will severely disrupt aviation if the concept of AWES is developed.

If developed, AWES will probably be deployed in rural areas. It is not unusual or illegal for aircraft to operate at or below the altitudes being proposed for AWES. In agricultural aviation and other low level operations it is common to operate safely below other aircraft which are flying above 1000 ft AGL. The airfoil of an AWES may appear to be another aircraft and thought may not be given to the possibility of a tether between the airfoil and the ground. This would be a disaster waiting to happen.

The airfoil of an AWES would need to be painted and lit to make it visible. The tether would not have enough surface area for painting to have a visual affect. The tether would need to have high visibility strobes positioned at regular intervals of approximately 200 feet. This will probably not be workable for a cable that is being wound around a spool when being deployed or retracted.

Because of the above, I do not believe that AWES can be safely operated in the National Airspace System. Thank you for the opportunity to comment on this important issue.

Brian Rau