

Silent air product comparison

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This field has a lot of big companies putting research and development money down to create the newest technology. There are many other companies in this country that are trying to break into the market. This company can be found using the sight Windustry (<http://www.windustry.org/companies>). This search engine can find hundreds of companies in this country. The top three world companies in this market are GE power, Vestes, and Enercon. This chart shows the areas in which Silent Air will be able to lead the market based on our current designs.

Silent Air leads in the categories of sound out put because of the new design that we are using. Silent Air product is cheaper because of this smaller design it will cost less to manufacture and construct on sight. The rest of the categories, especially efficiency, are a part of our development plans. The market is all very close with efficiency values; there is not a distinct leader. Because Vestes has the largest market share currently they are able to give their customers more efficiency because they have the most field-testing.

The maximum wind speed is also something we will keep in mind, and is also a very close field of competition. We are not interested in competing for the largest Swept area, as Enercon built an E-126 with a turbine diameter of 126 meters. This massive size has implications in maintenance cost as well as sound output. Trying to compete on this field would be taking Silent Air away from our core competency, and it would be difficult to succeed in this growing market. As an upcoming wind turbine manufacture we see a great opportunity to fit into a growing market.

Of the top 10 wind turbine manufactures, only 1 of them is based out of the United States; GE energy ranking in at #4. GE energy is an energy company that focuses on many different sources of energy, and therefore cannot dedicate the time and resources to wind turbines that our company will be able to. As a strict wind turbine designer and supplier, we will be able to provide a quieter more efficient turbine to our customers and all at a better price. Our plans are well beyond the market in the United States, and as a worldwide distributor there is still a very large void in the market.

The current #1 supplier, Vestas, installed 35, 000 Mega Watts worth of power in 2009, while #2, Enercon, only installed 19, 000 Mega Watts. This shows that there is huge opportunity for a wind turbine dedicated company to make a huge impact on the market. Vestas is one of the major companies we will be competing with along with GE energy. Not only is it the current leader, but also in 2008 they expanded their United States headquarters. Where this company and all of the others seem to lack is that they focus strictly on the quantity of wind turbines they sell, and don't pay enough attention to the noise pollution that their products create.

Our company will put a large emphasis on reducing the noise pollution, thus making our product an easy sell, helping us to drive towards the top of the market rapidly. Though there are many companies that contribute to the wind turbine market, most of them are very small divisions of general energy companies. So as a company focused strictly on wind turbines, and the research and development of them there is a great amount of business to market us towards. Another, competitor is Windustry which promotes

progressive renewable energy solutions and empowers communities to develop and own wind energy as an environmentally sustainable asset.

Through member supported outreach, education and advocacy we work to remove the barriers to broad community ownership of wind energy. All regulations from the Federal Government must be followed prior to following the State of Maine Regulations. Hence, we need to adhere to the (1) Federal Energy Regulatory Commission (FERC) which requires our company to provide a (2) quantitative estimate of the impact of the project on sound levels at identified noise sensitive areas. Along with that the (3) Maine Department of Environmental Protection (MEDEP) needs us to establish a quantitative sound limit for our Silent Windmill projects in Maine.

We would need to provide an (4) hourly sound level limit that applies to our new facility property boundaries and nearby locations. (6) The operational Sound hourly must be equivalent to the sound levels resulting from facility operations, this we would need to limited to 75 dBA. (7) Under FERC the project managers must identify all noise sensitive areas such as schools, hospitals, or residences. Hence, before putting up any windmills we'd need to do a land survey. (8) FERC stipulates the use of the day-night sound level and limits attributable to a facility.

So the day-night sound level can have 10 decibels added to sound levels occurring during nighttime hours between 10pm and 7am. We need to adhere to City of Calais, Maine Regulations Our companies' windmills noise level generated will not be (1) objectionable due to volume, intermittence, beat, frequency, or shrillness. Existing (2) Noise Levels establish existing

acoustic conditions near the terminal site; hence we need to perform a (3) sound monitoring station to satisfy MEDEP regulation.

The station would (4) measure sound levels with meters the must meet type 1 performance requirement of the American National Standard Specification for Sound Level Meters. (5) Noise Monitoring Locations will be set up so our windmill location is six miles southeast of downtown Calais. Hence a long term sound monitoring base must be established. (6) This is to prevent noise from Noise Sensitive Areas which we must control noise to between 50dBA and 60dBA (7) Noise Mitigation calculation must be predicated by Silent Air Co. to meet the maximum sound levels from facilities must comply with all FERD and MEDEP sound limits.