34.

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Till: Anne.Dahlgren@krokom.se; benz@brannagarden.net
Datum: 8/6/2010 12:37
Ärende: Synpunkter Vindkraft i Krokoms komune

2010 -08- 06

Hej Anne,

här kommer mina synpunkter...
tyvärr talar jag inte so bra svenska... så mina synpunkter är på engelska.
Hoppas det går bra för dig.

hälsningar

Björn

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Arguments against the large scale windpower industry areas in Krokoms Komune

I am for a sustainable, nature preserving wildlife tourism in Krokoms komune and thus totally against all large scale windpower industry areas in Krokoms komune ...

1. ... because it endangers many jobs in the tourist-branch including my one and the one of my wife and thus the future of our 22 months-old son.
2. ... because many (incl. me) will loose a lot of money, cause their investments in cabins and properties will loose worth.
3. ... because it destroys the high quality of life of the area with visible and audible annoyance and even might cause health problems like studies about the "Wind Turbine Syndrom" shows.
4. ... because it destroys the basis for a sustainable tourist business and thus the blooming future of the area
5. ... because there is up to now **no striking argument** for the set up of those windpower industry areas in Krokoms komune. Here comes the most used arguments:
    1. **We need electricity!** => Then we should build a waterpower station next to the cities where it is used and not a windpower industry area in the middle of a naturdestination! On average, only 20% of the installed windpower capacitiy is fed-in into the grid. That means t.ex., only 7 of the 34 Windmills of Skärvången area deliver steadily electricity. The loss is approx 6% per 100km 130kv line[1] [2]. Until Stockholm approx. 30% of the power is lost! That means of the 34 Windmills installed t.ex. in Skärvången/Åkersjön only 5 deliver stable electricity to Stockholm. Approx. 1000ha is wasted for nothing while only 200ha[3] is used. Who can say by true heart, that this is reasonable and not an incredible wast of nature!
    2. **Windpower is a carbondioxid-saving, green energy!** => "There is no evidence that industrial wind power is likely to have a significant impact on carbon emissions. The European experience is instructive. Denmark, the world's most wind-intensive nation, with more than 6,000 turbines generating 19% of its electricity, has yet to close a single fossil-fuel plant. It requires 50% more coal-generated electricity to cover wind power's unpredictability, and pollution and carbon dioxide emissions have risen (by 36% in 2006 alone)."[4]
    3. **Windparks have no negative impact on tourism.** => There are too many factors for example "social desirability" of windpower and the distance between windpower industry area and touristic area, that most studies just don't fit the circumstances of Krokoms komune.

1 http://www.wer-weiss-was.de/theme59/article5080924.html (26.07.2010)
2 http://de.wikipedia.org/wiki/%C3%9Cbertragungsverlust (26.07.2010)
3 Vindkraft in Krokoms kommun. Tillägg till Översiktsplan. p.6.
4 Windpower is a complete disaster. Financial Post. 08. April 2009. Michael J. Trebilcock is Professor of Law and Economics, University of Toronto. These comments were excerpted from a submission to the Ontario government's legislative committee On Bill 150.
Read more: http://network.nationalpost.com/np/blogs/fpcomment/archive/2009/04/08/wind-power-is-a-complete-disaster.aspx#ixzz0tbVDAsEZ

4. **Ansättfjällen is a Scooter-"El Dorado" and thus not silent.** => a calculation shows that, if a year is a day, only one hour is occupied by scooters and 23h is pure silence!
5. **The windpark will create new jobs! =>** "A recent detailed analysis (focusing mainly on Spain) finds that for every job created by state-funded support of renewables, particularly wind energy, 2.2 jobs are lost. Each wind industry job created cost almost $2-million in subsidies."[5] In Ansättfjällen 33 entrepreneurs are endangered to win 10-15 new jobs.[6] Is this reasonable?
6. **We have to think of the landowners...** => if the windpower industry areas are not set up, no one looses money! Everynone still can profit of the area. But if the windmills are coming, than a lot of entrepreneurs and cabin owner loose money. **We should think of all investors (land owners, cabin owner and entrepreneurs)! =>** Without the windpower industry areas all stakeholders of the destination still have the best possibilities to profit of the high potential destination.

6. ... because there is **NO REASON to take all that risks NOW. Jämtland overdelivers** its **goals for 2015** for windenergy **by more than 200% with the already existing areas with "riksinteresse för windkraft" and those parks who are further on in the process than those in Krokoms komune.**
   If Windpower in Krokoms komune should be the only solution to reach the national **goals for 2020**, **we still can decide about the windpower industry areas in 2015**. Then we will have more information about the benefits and risks of windpower industry areas, the necessity for places for recreation and about the potential of tourism of the destination.

As the decision about those large scale windpower industry areas is one of the most important decisions for this area for the next 25 years, the politicians in charge should think twice ...

1. if it is absolutely necessary and with no doubt the best for Krokoms komune to decide NOW about the set up of the windmills and not in 5 years.
2. if they have no doubt about advantages of large scale windpower industry areas compared to nature tourism and a high standard of quality of live to the people living there.
3. if they know everything about the risk of loosing jobs and money and that they have already solutions to compensate those negative side effects - if they occur - to protect their citizens, entrepreneurs and privat investors like cabin owners.

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5 Windpower is a complete disaster. Financial Post. 08. April 2009. Michael J. Trebilcock is Professor of Law and Economics, University of Toronto. These comments were excerpted from a submission to the Ontario government's legislative committee On Bill 150. http://network.nationalpost.com/np/blogs/fpcomment/archive/2009/04/08/wind-power-is-a-complete-disaster.aspx#ixzz0tbSP1NVt (14.07.2010)

6 Vindkraft in Krokoms kommun. Tillägg till Översiktsplan. p.6.

Scenarios for Krokoms Komune in the next 25 Years with and without the windindustry areas Skärvången/Åkersjön/Bakvattnet and Kaxås

Krokoms kommun decides 2010 NOT to build both big windindustry areas and wait for further national goals for energyproduction

2015: A positive tendency on numbers of tourist can be observed. The reasons are the declining attractivity of competiting natur destinations with huge windparks and the international marketing of the possibilities of the destination. As the destination provides 5 more jobs the Komune has a positive balance of migration.
2020: The moose-, beaver-, woodbirds -, Lynx- and Bear- Safaries have great success on international markets as Krokoms komune is one of only a few destinations, that has that rich wildlife and the know-how to commercialize it.
Now, evidence is strong enough that windmills are not able to substitute any Coal or Gas powerplant and the national goals in the energy production change ... there will be no subsidies to windmills anymore and no national interests for Windmills.

2025: Krokoms komune decides to limit the vacation cabins in the area to keep wilderness style and not to become an other "Åre" with its huge hotels. The prices for cabins rise again. Tourism has developed an provides lots of attractive jobs. There are more people move to Krokoms komune than move away.

2035: Krokoms komune has an international reputation for wilderness and nature like St. Moritz or Davos has one for downhill skiing, like the Toscana has for good food and wine, like Bordeaux has for his red wine.

Krokoms kommun decides 2010 to build both big windindustry areas.

2011: The families from Germany, Netherlands and Belgium move away and Ansättfjällen looses his hundspann possibilities, Brännagården and the Lift/Camping is for sale.

2012: The windindustry areas are set up. The construction boom in Krokoms komune is over. The windindustry areas have lots of visitors (locals and cabin owners) at the beginning. Brännagården and the Lift/Camping is still for sale, nobody dares to invest in the area as long as it is insecure about the impact of the windmills to the development of tourism.

2013: Locals and cabin owners figure out that the area has lost a lot of its attractivity due to visible but also due to audible annoyance. They don't visit Ansättfjällen so often anymore. The amount of visitors of the windindustry areas dropped rapidly to less than 20% of the first year.... windmills are interesting, but not interesting enough to visit more than one time.

2015: The windpower industry areas have almost no visitors. Schoolclasses/ Students prefer to got to windpower industry areas that are closer to their hometown. The first cabin owners found a better alternative to spend their spare time / vacation and start selling their cabins. The prices drop deep as there are more that want to sell than want to buy. The shop in Åkersjön has to close down. The attractivity drops even more. Cabin owners and entrepreneurs in the tourist-branch engage in legal actions and ask for compensation for their losses of money. The windindustry areas already turned the jobbalance into negativ.

2020: Krokoms komune has lost its credibility for longterm investments like vacation cabins and it fails to develop Valsjönbyn to compensate the losses in Ansättfjällen. Now, evidence is strong enough that windmills are not able to substitute any Coal or Gas powerplant and the

national goals in the energy production change ... there will be no subsidies to windmills anymore.

2030: A lot of smaller windindustry area drivers are bankrupt and can't pay for the removal of the installed windmills ... then it is up to the Kommunes to take them down again.

2035: Krokoms komune has two big outdated windindusty areas. It has not enough money to take them down. It has lost most of its reputation and competence to be a fantastic natur vacation destination.

Argument 1: We need electricity!

Acknowledging the fact that Jämtland is already exporting electricity to the rest of Sweden, "We need electricity!" does not mean Åkersjön, Föllinge, Krokom or Östersund. With "We need electricity!" it is meant, Stockholm (airline 540km), Göteborg (670km) and Malmö (910km).
A 130kv[7] line looses approx. 6% electricity per 100 km[8] [9], thus until Stockholm the loss is approx. 30%, until Göteborg it is approx. 35% and Malmö it is approx. 43%!
Taking the Skärvången Windpark (34 Windmills) as example, the loss until Stockholm is the electicity production of 10 Windmills, until Göteborg it is 12 Windmills and until Malmö 15 Windmills!
That's why it is so much better to place the electricity production as close as possible to the electricity users[10].

Until 2015 Jämtlands aim is to develop 1TWh/year with windpower[11]. Only to take the biggest project (SCA-Statkraft:2TWh/år)[12], which is already further ahead in the process than the projects in Krokoms kommune, Jämtland will overdeliver by 100%. In any case, one thing becomes clear: We don't need any windpark in Krokoms komune now. Maybe in 5 or 10 years, but not NOW!

Argument 2: Windpower is a carbondioxid-saving, green energy!

"There is no evidence that industrial wind power is likely to have a significant impact on carbon emissions. The European experience is instructive. Denmark, the world's most wind-intensive nation, with more than 6,000 turbines generating 19% of its electricity, has yet to close a single fossil-fuel plant. It requires 50% more coal-generated electricity to cover wind power's unpredictability, and pollution and carbon dioxide emissions have risen (by 36% in 2006 alone).
...
Flemming Nissen, the head of development at West Danish generating company ELSAM (one of Denmark's largest energy utilities) tells us that "wind turbines do not reduce carbon dioxide emissions." The German experience is no different. Der Spiegel reports that "Germany's CO_2 emissions haven't been reduced by even a single gram," and additional coal- and gas-fired plants have been constructed to ensure reliable delivery."[13]

E.ON is one of the biggest energy-producing companies, and has the largest grid in Germany. In their Windreport 2005 they publish the following[14]:

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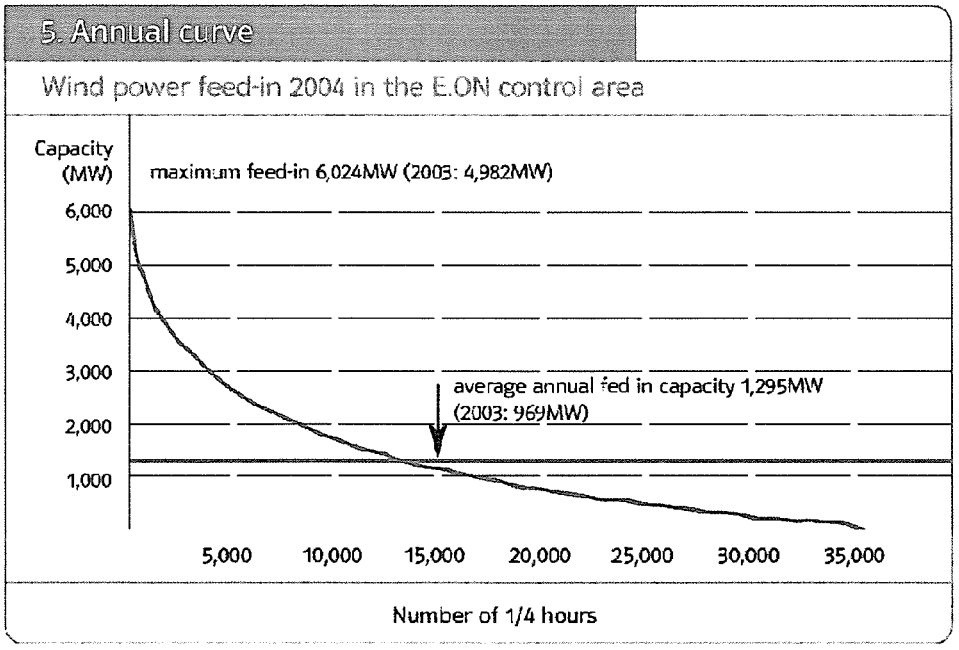
7 Windkraft i Krokoms kommune p. 21
8 http://www.wer-weiss-was.de/theme59/article5080924.html (26.07.2010)
9 http://de.wikipedia.org/wiki/%C3%9Cbertragungsverlust (26.07.2010)
10 http://de.wikipedia.org/wiki/%C3%9Cbertragungsverlust (26.07.2010)
11 Windkraft i Krokoms kommune p. 4
12 Windkraft i Krokoms kommune p. 4
13 Windpower is a complete disaster. Financial Post. 08. April 2009. Michael J. Trebilcock is Professor of Law and Economics, University of Toronto.
Read more: http://network.nationalpost.com/np/blogs/fpcomment/archive/2009/04/08/wind-power-is-a-complete-disaster.aspx#ixzz0tbVDAsEZ
14 Read more: http://apps.eon-energie.com/bestellsystem/bf_service_book.php?

"Wind energy is only able to replace traditional power stations to a limited extent. Their dependence on the prevailing wind conditions means that wind power has a limited load factor even when technically available. It is not possible to guarantee its use for the continual cover of electricity consumption. Consequently, traditional power stations with capacities equal to 90% of the installed wind power capacity must be permanently online in order to guarantee power supply at all times."

E.ON identifies amongst other the following difficulties with windpower[15]:

"FIGURE 5 shows the annual curve of wind power feed-in in the E.ON control area for 2004, from which it is possible to derive the wind power feed-in during the past year:
1. The highest wind power feed-in in the E.ON grid was just above 6,000MW for a brief period, or put another way the feed-in was around 85% of the installed wind power capacity at the time.
2. The average feed-in over the year was 1,295MW, around one fifth of the average installed wind power capacity over the year.
3. Over half of the year, the wind power feed-in was less than 14% of the average installed wind power capacity over the year.

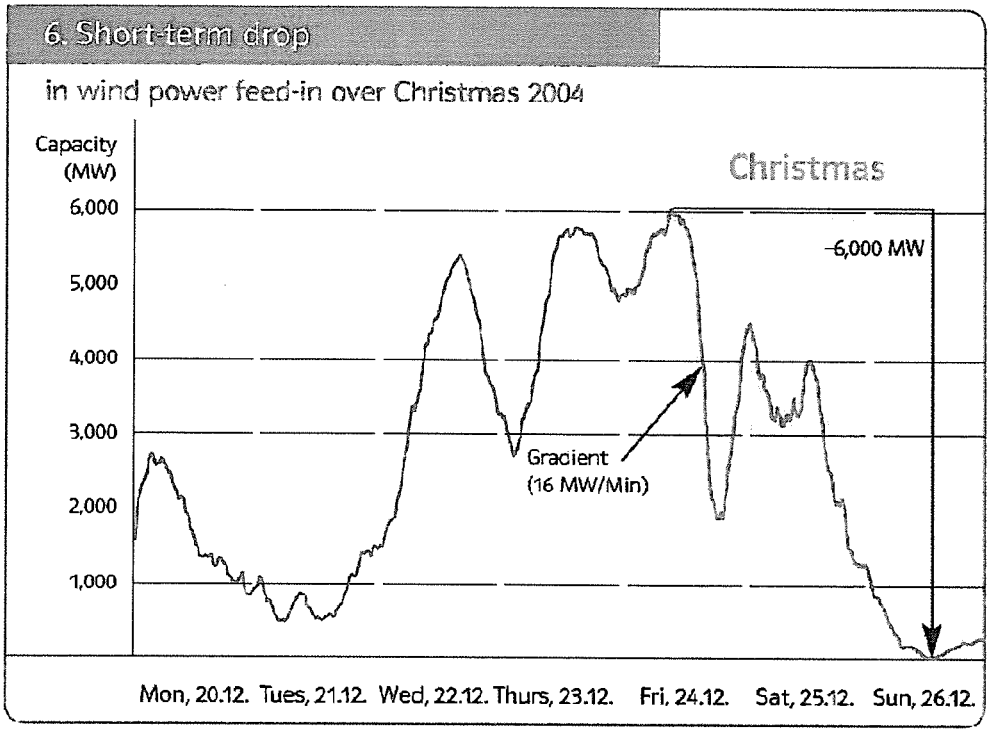


The feed-in capacity can change frequently within a few hours. This is shown in FIGURE 6, which reproduces the course of wind power feed-in during the Christmas week from 20 to 26 December 2004.
Whilst wind power feed-in at 9.15am on Christmas Eve reached its maximum for the year at 6,024MW, it fell to below 2,000MW within only 10 hours, a difference of over 4,000MW. This corresponds to the capacity of 8 x 500MW coal fired power station blocks. On Boxing Day,

lcode=englisch&id=1725&choosenProfile=&choosenBu=&filter=set&bestellen=

15 Read more: http://apps.eon-energie.com/bestellsystem/bf_service_book.php?lcode=englisch&id=1725&choosenProfile=&choosenBu=&filter=set&bestellen=

wind power feed-in in the E.ON grid fell to below 40MW. Handling such significant differences in feed-in levels poses a major challenge to grid operators.



"

Argument 3: Windparks have no negative impact on Tourism

There are so many factors that matters in the field the mere claim: "Windparks have no negative impact on Tourism" only show, that the one claiming so, did not think through the issue twice.

Here, I want to discuss some arguments against this claim:

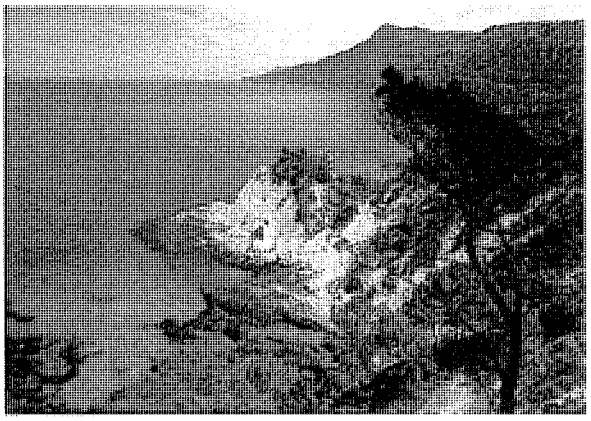
Studies about the impact of Windparks on Tourism and social desirability

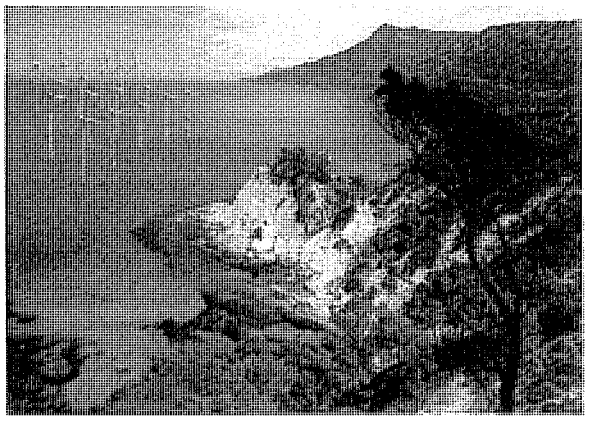
As Psychologist and Scientist I know about the difficulty to construct a survey without the so called "social desirability": the fact, that subject tend to answer a question the way they think it is social desirable. An example: The question: "Would you help an old lady to cross a busy street?" The majority would answer with "yes", because it is social desirable, even if they never would do so in real life.
The same holds for the question: "Would you visit this destination again, when there would be a windpark at the horizon?" People answer the question with "Yes", because windmills are supposed to be "green energy" producer and to be "green" is highly desirable nowadays. This question does not measure the acceptance of a windpark in this place but the assumed social desirability of windenergy itself.
As long as there are alternatives to the target destination (and there will always be alternatives without windmills (!)), people have the choice between destinations with windmills and without windmills.

So to test the acceptance of a windpark at the destination, the question should be:

You have one week of holiday. You want to experience pure nature. You travel 12 hours to get there. Where would you go?:

(1) or (2)





in the same study the parameter of "social desirability" should be measured, so the "real" acceptance of windmills at a destination can be calculated.

Any study that does not deal with "social desirability" is scientifically not up to date and has no worth to be taken into account.

Distance between the windpark and the touristic place

It is easy to understand that a windpark which is visible only in the distance has less impact on tourism than a nearby windpark which even can be heard or one that causes "blinking" effects.

If a study gives no information about the distance of the windpark and the touristic destination, it is useless to take into account.

The Windpark Skärvången / Åkersjön with 34 Windmills would be only 4km away from the village of Åkersjön. When the wind comes from the right side, the windpark will be heard. It is NOT hidden in the forest but visible from Övre Åkersjön, the lake Åkersjön, the skiing tracks, the lift, Önrun and many scooter tracks and many more places and thus of every place of importance! ... in full size and not just a silhouette at the horizon (t.ex. in Germany a Windpark is treated as disturbing within the distance of 25km).

Illustration 1: Önrun

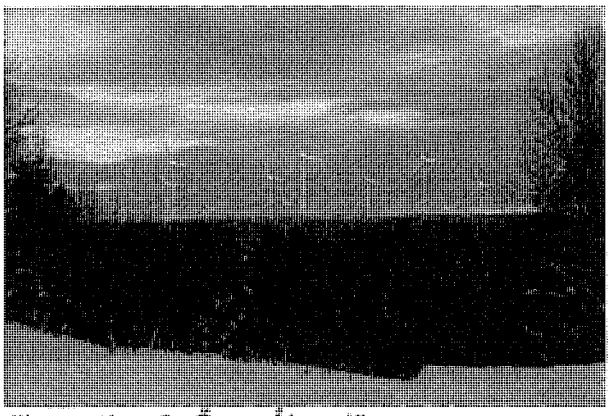


Illustration 2: Övre Åkersjön

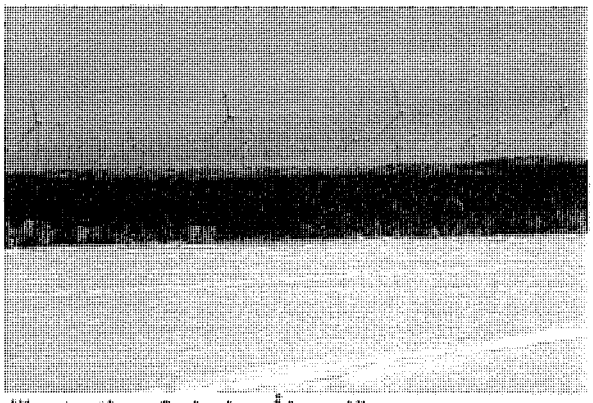


Illustration 3: Lake Åkersjön

Illustration 4: Skiingtracks

Åkersjön has no museum, no theater, no sports stadium, no funpark ... the only thing Åkersjön has is easy access to wilderness in its backyard and Silence ... With the windpark, Åkersjön would loose both ... wilderness and silence ... Why should anyone visit Åkersjön after the settlement of the windpark?

If you want an apple and you could choose between an apple and a banana. What would you take?

If you would like to go for a week on a vacation to experience "wilderness and silence" and you could choose between a place with "wilderness and silence" and a place with the sound and the view of a windpark (even if it offers a guided day tour through the windpark), what would you take?
Why do you think, tourists, visitors, stuga owners in Ansättfjällen wouldn't decide the same? No one has to have a stuga in Ansättfjällen, if it looses just a bit of its attractivity all visitors, tourists and stuga owners easily can find something else ... just 50 km away.

The annoyance of a windpark and the Wind Turbine Syndrom

One major annoyance of a Windpark is not just the visibility but the sound and noise it emits. "The main cause of annoyance [of a windpark] is an aerodynamic source created by interaction of the turning blades with the wind. With optimal wind conditions, this aerodynamic noise is steady and commonly described as an airplane overhead that never leaves.
When wind conditions are not optimal, such as during turbulence caused by a storm, the steady sounds are augmented by fluctuating aerodynamic sounds. Under steady wind conditions, this interaction generates a broadband whooshing sound that repeats itself about once a second and is clearly audible. Many people who live near the wind turbine find this condition to be very disturbing.
The whooshing sound comes from variations of air turbulence from hub to blade tip and the inability of the turbine to keep the blades adjusted at an optimal angle as wind direction varies. The audible portion of the whoosh is around 300 Hz, which can easily penetrate walls of homes and other buildings."[16]

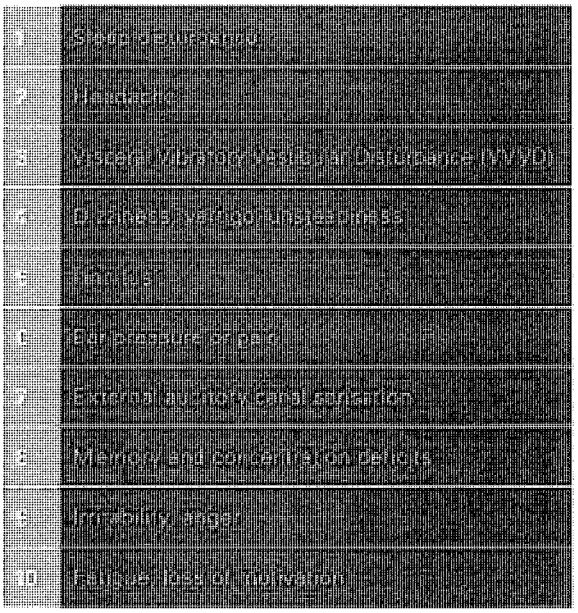
What causes the Turbine Syndrom?

16 http://www.windturbinesyndrome.com/img/WindTurbineNoise.pdf (28.07.2010)

"..., the rotating blades create energy at frequencies as low as 1–2 Hz (the blade-passage frequency), with overtones of up to about 20 Hz. Although some of this low-frequency energy is audible to some people with sensitive hearing, the energy is mostly vibratory to people who react negatively to it."[17]

"Annoyance from wind-turbine noise has been difficult to characterize by the use of such psychoacoustic parameters as sharpness, loudness, roughness, or modulation (Persson Waye and Öhrström, 2002). The extremely low-frequency nature of wind-turbine noise, in combination with the fluctuating blade sounds, also means that the noise is not easily masked by other environmental sounds. "[18]
"Jung and colleagues (2008), in a Korean study, concluded that low-frequency noise in the frequency range above 30 Hz can lead to psychological complaints and that infrasound in the frequency range of 5–8 Hz can cause complaints due to rattling doors and windows in homes.
The energy generated by large wind turbines can be especially disturbing to the vestibular systems of some people, as well as cause other troubling sensations of the head, chest, or other parts of the body. Dr. Nina Pierpont (2009), in her definitive natural experiment on the subject, refers to these effects as Wind-Turbine Syndrome (WTS).
Table 1 lists the symptoms that, in various combinations, characterize WTS." [19]

Table 1. Core Symptoms of Wind-Turbine Syndrome



Source: Pierpont, 2009

Audiology Today | JulAug2010

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17 http://www.windturbinesyndrome.com/img/WindTurbineNoise.pdf (28.07.2010)
18 http://www.windturbinesyndrome.com/img/WindTurbineNoise.pdf (28.07.2010)
19 http://www.windturbinesyndrome.com/img/WindTurbineNoise.pdf (28.07.2010)
20 http://www.windturbinesyndrome.com/img/WindTurbineNoise.pdf (28.07.2010)

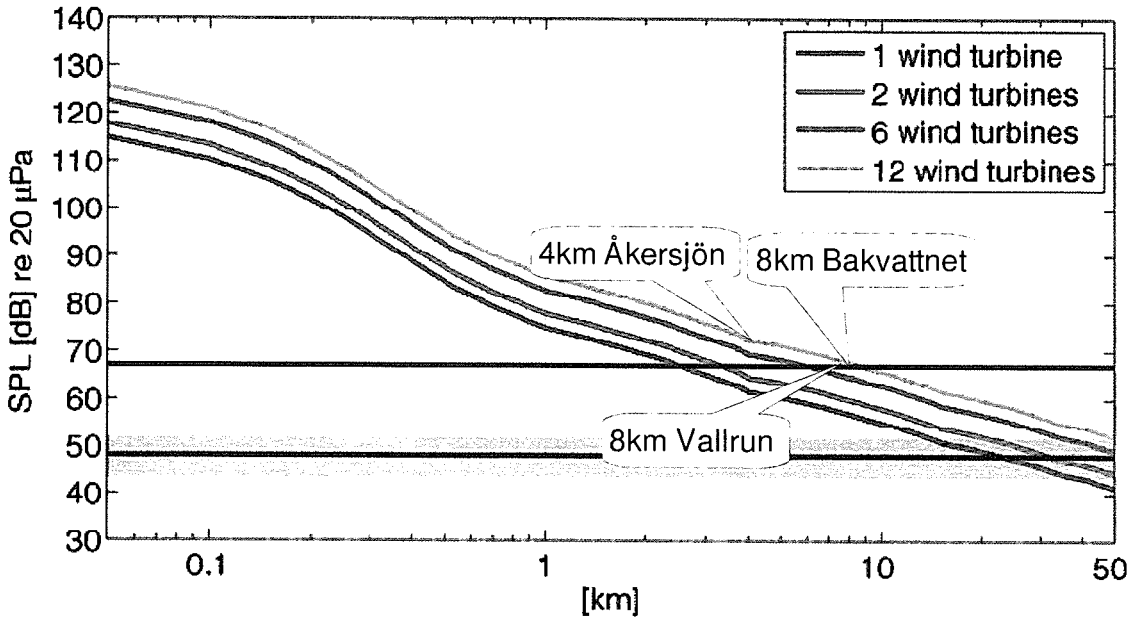

Illustration 5: Soundpressure of a windpark with 1, 2, 6, 12 wind turbines with 600kW.

Illustration 5[21] shows that the low-frequency sound of a windpark with 12 600kW turbines would be around 73dB in Åkersjön.

Here some examples to compare[22]:
A chainsaw in 1m distance has 110dB
A sound of a road with traffic in 5m distance has 80dB
A vakuumcleaner in 1m distance has 70dB
A normal conversation in 1m distance has 60dB
The wind rustling in the leaves in a long distance has 10dB

But it is planed to build 3 times as much and 3 times as big turbines in this windpark at Skärvången/Åkerjön. Thus the sound will be even "louder" than shown in Illustration 5. As it is low-frequency sound, most people would not clearly hear it, but feel it with the body. Most would feel a difference. The destination would be not as recreative as it was before.
And some would show the wind turbine syndrom. Visitors would not come again and cabin owners would start selling their houses ...

No doubt, that the windpark will have a negative effect on Tourism in Ansättfjällen.

Argument 4: Ansättfjällen is a Scooter-"El Dorado" and thus not silent. The noise of the windpark will not have an additional impact!

First of all, this arguments acknowledge that there is noise of the windpower industry area Åkersjön/Skärvången, that can be heard in the nearby villages!

21 http://www.bgr.bund.de/nn_1386324/DE/Themen/Seismologie/Downloads/infraschall__WKA,templateId=raw,property=publicationFile.pdf/infraschall_WKA.pdf (29.07.2010)
22 http://www.sengpielaudio.com/TabelleDerSchallpegel.htm (4.8.2010)