Comment Letter GG

Revised Comments

Wind Energy Ordinance & General Plan Amendment DEIR; POD 10-007, LOG NO. 09-00-003; SCH NO. 2010091030 & TULE WIND PROJECT; MUP 3300 09-019, GPA 3800 11-001, LOG NO. 09-021-002

Backcountry Against Dumps
P.O. Box 1275, Boulevard, CA 91905
AND
The Protect Our Communities Foundation
P.O. Box 305, Santa Ysabel, CA 92070

Revised and final version of comments dated December 30, 2011

We are putting San Diego County decision makers on actual and constructive notice

THE WAUBRA FOUNDATION'S Notice of Explicit Caution now warns turbine siting decision makers that they can be held liable. We hereby concur with, promote and serve such notice:

"The ... Foundation's continuing the current practice of siting turbines close to homes is to run the dangerous risk of breaching a fundamental duty of care, thus attracting grave liability," position, as the most technically informed entity in Australia upon the effects of wind turbines on human health, is this: Until the recommended studies are completed, developers and planning authorities will be negligent if human health is damaged as a result of their proceeding with, or allowing to proceed, further construction and approvals of turbines within 10km of homes.It is our advice that proceeding otherwise will result in serious harm to human health. We remind those in positions of responsibility for the engineering, investment and planning decisions about project and turbine siting that their primary responsibility is to ensure that developments cause no harm to adjacent residents; and, if there is possibility of any such harm, then the project should be re-engineered or cancelled.[1]

"The combination of fraudulent denial of serious health problems by wind developers and willing blindness on the part of bureaucrats and health officials is simply unacceptable, and it now leaves elected officials, bureaucrats, and wind developers open to serious legal consequences."[2,3]

"Science-based theory WELCOMES skeptical criticism, as it gives them an opportunity to consider other perspectives and to provide objective proof. Political-based theories REJECT skeptical criticism, as they do not want the fallacies of their agenda to be exposed."[4]

"...the issues of wind energy policy where it violates the basic living environment of families and the adverse health effects of wind turbine noise...there are many who dismiss anecdotal reports as inconsequential or meaningless, these reports are from real people, living with real problems, often with no recourse: they put 'the human face on science.' The authors also examine how this translates into a human rights issue, as government policy assigns more credibility to (wind industry) acousticians' reports than to medical evidence, and assigns more importance to renewable energy policy than to the individual lives injured by that policy..."[5]

"The reason the wind industry experts could claim that wind turbines produced insignificant levels of infra and low frequency sound is not because there isn't any, but instead, because the instruments/methods they used could not detect it. They went hunting for a needle in the haystack using a magnet when the needle was made out of plastic."[6]

[1] Explicit Cautionary Notice To Those Responsible for Wind Turbine Siting Decisions:
http://waubrafoundation.com.au/Y2NpZD0xImNhaWQ9MTMmYWlkPSZjcmM9MTQ0OTg1MiMyOA%3D%3D
[2] http://www.epaw.org/events.php?lang=en&article=uk3;
[3] http://www.epaw.org/documents/The_Sunday_Post_27Nov2011.pdf
[4] John Droz, Jr. physicist, http://www.slideshare.net/JohnDroz/energysb3presentationnclegislators
[5] Wind Turbines and proximity to homes: http://www.wind-watch.org/documents/wind-turbines-and-proximity-to-homes/
[6] http://docs.wind-watch.org/Bray-James-NC11-Abstract-76-final-5_20_2011-as-submitted-1.pdf

December 30, 2011

Matthew Schneider
Patrick Brown,
5201 Ruffin Road, Suite B
San Diego, CA 92123-1666

Wind Energy Ordinance & General Plan Amendment DEIR; POD 10-007, LOG NO. 09-00-003; SCH NO. 2010091030 & TULE WIND PROJECT; MUP 3300 09-019, GPA 3800 11-001, LOG NO. 09-021-002.

Dear Mr. Schneider & Mr. Brown:

These revised comments are submitted in place of the original comment document, dated December 30, 2011, and are made on behalf of the non-profit groups **Backcountry Against Dumps** and **The Protect Our Communities Foundation**, our members, and others. GG-1

Many will be adversely impacted by the proposed significant and cumulative changes and reduced protections as proposed in the Tule Wind GPA and Wind Energy Ordinance & Plan Amendment DEIR. Due to unforeseen circumstances far beyond the control of the assigned author, these comments are being submitted a few days late, however, they are being submitted prior to any public hearings or decisions by the County and therefore satisfy CEQA's exhaustion requirements. (See Pub. Res. Code § 21177; Galante Vineyards v. Monterey Peninsula Water) [submission of comments after close of comment period but before public hearings on project satisfies exhaustion requirements]. GG-2

These comments and previous comments filed by us and/or on our behalf for the joint PUC/BLM Tule Wind, ECO Substation, Energia Sierra Juarez Gen-Tie EIR/EIS,[7, 8, 9, 10] and MUP GPA, and the Wind Energy Ordinance POD 10-1007 and other related and cumulative impact energy and transmission projects, are incorporated in full by reference, along with all the additional documents referenced and cited within these comments, and should be applied to the projects listed above. We also incorporate by reference the current and previous comment letters on related projects submitted by the Boulevard Planning Group. Any errors or omissions are unintentional. GG-3

Please let us know if you require hard copies of the referenced documents to be produced in order to become part of the record. We intend to be prepared for litigation in the event it is deemed necessary to protect health, safety and welfare of people and other living things. GG-3

WE STRONGLY OPPOSE THE PROPOSED DRAFT EIR FOR THE WIND ENERGY ORDINANCE AND GENERAL PLAN AMENDMENT AND THE REDUCED SMALL AND LARGE TURBINE PROJECT ALTERNATIVES.[11] THEY REPRESENT AT LEAST 24 SIGNIFICANT ADVERSE IMPACTS THAT REPORTEDLY CANNOT BE MITIGATED BELOW A LEVEL OF SIGNIFICANCE--INCLUDING THE POTENTIAL UNNECESSARY TRANSFORMATION OF RURAL SAN DIEGO COMMUNITIES, HABITATS, AND ICONIC LANDSCAPES INTO INDUSTRIAL ENERGY SACRIFICE ZONES WITH INCREASED SOURCES OF WILD FIRE IGNITION AND RELATED RISK OF FUTURE CASTASTROPHIC FIRESTORMS, [12, 13] LOSS OF LIFE AND PROPERTY AND POTENTIAL TYPE CONVERSION. GG-4 GG-5 GG-6

[7] E-coustic solutions draft review of Tule Wind Noise studies and related material : http://www.cpuc.ca.gov/environment/info/dudek/ecosub/D%5C04ORG_03.04.11_E-Coustic%20(James,%20R).pdf
[8] Law Offices of S Volker: Tule Wind, ECO Sub, ESJ DEIR/EIS: http://www.cpuc.ca.gov/environment/info/dudek/ecosub/D%5C04ORG_03.04.11_Law%20Offices%20of%20Stephan%20Volker.pdf
[9] Law Offices of S Volker: Tule Wind MUP Proposed Plan Amend: http://www.windaction.org/documents/32554
[10] McCann Appraisal LLC: Property Value impacts Tule Wind ECO ESJ DEIR/EIS" http://www.sdcounty.ca.gov/dplu/docs/ZA/RealEstateImpactEval.pdf
[11] POD 10-007: http://www.sdcounty.ca.gov/dplu/ceqa/POD10007.html
[12] Flaming wind turbines: http://www.countryguardian.net/uelzenturbine%20with%20text.jpg
[13] http://www.10news.com/sdwildfires/index.html

Response to Comment Letter GG

Backcountry Against Dumps and The Protect Our Communities Foundation
Donna Tisdale
December 30, 2011

GG-1 This comment is introductory in nature. The County replaced the December 30th version of the commenter's letter with this one received on January 4, 2012 as requested. Since the commenter left the original date at the top, it is still noted as having been received on December 30, 2011.

GG-2 The County appreciates this comment and is responding to this comment letter although it was received after the close of public review.

GG-3 Since the County's Wind Energy Ordinance is one project pursuant to CEQA and is not combined with any other projects, the County is responding here only to the comments within this letter dated December 30, 2011 and revised January 4, 2012. The County also acknowledges the comments received during the NOP comment period, which were attached to the DEIR.

GG-4 The County acknowledges the commenter's opposition to the proposed project, the DEIR, and the reduced alternatives that were analyzed.

	GG-5 The County agrees that the DEIR identified 24 subject areas for which the project will have significant and unavoidable impacts even after all feasible mitigation is applied. **GG-6** The County does not agree that the project will result in any industrial zones since no changes are proposed to zoning maps. However, the County agrees that the DEIR identified potentially significant impacts to community character, biological resources, and hazards associated with wildland fires.

WE STRONGLY SUPPORT THE "NO PROJECT" ALTERNATIVE AS BEING THE MOST PROTECTIVE OF THE 807,904 ACRES[14] IMPACTED BY THE PROPOSED PROJECT AND THE 402,884[15] ACRES IMPACTED BY THE REDUCED PROJECT AND ALSO THE MOST PROTECTIVE OF THE RELATED RURAL COMMUNTIES, RESIDENTS, VISITORS, ECOREGIONS,[16] WIDE VARIETY OF RESOURCES,[17,18,19] SENSITIVE RESOURCES,[20,21,22,23] AND RELATED SOCIOECONOMIC CONDITIONS AND PROPERTY VALUES.[24,25,26]

GG-7

The most project-impacted areas are located in and around the communities of Alpine, Boulevard, Borrego Springs, Campo, Descanso, Jacumba, Julian, Pine Valley, Potrero, Ramona, Santa Ysabel, Warner Springs, Ocotillo Wells, and others. Many of these areas qualify as low-income and/or Environmental Justice communities that are located in High Fire Severity Zones.[27] Point-of-Use Residential scale wind turbines remain a viable alternative option without the proposed changes, but even small turbines can have adverse effects if the type of turbine is improperly designed, selected, operated and maintained or improperly or carelessly placed.[28]

GG-8

WE STRONGLY SUPPORT THE BOULEVARD PLANNING GROUP'S OPPOSITION TO THE PROPOSED PLAN AMENDMENTS AND REQUEST FOR A COUNTYWIDE MORATORIUM ON LARGE-SCALE INDUSTRIAL WIND TURBINE PROJECTS AND THE INITIATION OF LEGITIMATE INDEPENENT PEER-REVIEWED SCIENCE-BASED EPIDEMIOLOGICAL, FIELD, AND LABORATORY RESEARCH TO DETERMINE WHAT, IF ANY, SETBACKS[29] (FROM OPERATING WIND TURBINE PROJECTS) ARE ADEQUATE TO PROTECT PUBLIC HEALTH ,SAFETY AND WELFARE[30,31,32] IN ADDITION TO PROTECTING OTHER CRITICAL/SENSITIVE/VALUABLE RESOURCES FROM DIRECT, INDIRECT, AND CUMULATIVE PROJECT-RELATED EMISSIONS/IMPACTS/EFFECTS--INCLUDING ADVERSE SOCIOECONOMIC EFFECTS[33] RELATED TO UNJUSTIFIED AND UNSUPPORATABLE CONVERSION FROM RURAL OPEN AND SCENIC[34] TO HIGHLY INTRUSIVE INDUSTRIAL ENERGY GENERATION & TRANSMISSION ZONES.

GG-9

As the WAUBRA FOUNDATION'S EXPLICIT PRECAUTIONARY NOTICE TO THOSE MAKING WIND TURBINE SITING DECISIONS, SO CLEARLY STATES, the precautionary approach is fully warranted. San Diego County's rural residents and diverse at-risk resources, including those resources targeted for protection in the long-stalled Draft East County MSCP, and the Las Californias Binational Conservation Initiative, should not be used as unwilling lab rats in the ongoing experiment with the INTERMITTENT UNRELIABLE, VOLITILE, and

GG-10

[14] POD1007: Figure 1-4
[17] POD1007: 5.1-7 & Figure 4-1
[16] http://www.sdcounty.ca.gov/dplu/mscp/docs/east_mscp_ecoregions_8x11.pdf
[17] http://www.sdcounty.ca.gov/dplu/mscp/ec_species.html
[18] http://www.sdcounty.ca.gov/dplu/mscp/ec_biology.html
[19] http://www.sdcounty.ca.gov/dplu/mscp/docs/ECMSCP/East_County_Focal_Speceis_List.pdf
[20] Ostrander Tule ECO ESJ DEIR/EIS comments on wildlife impacts:
http://www.cpuc.ca.gov/environment/info/dudek/ecosub/Fr%5C06ND_02.28.11_Ostrander.%20Mark.pdf
[21] Bat deaths surprise researchers:
http://www.newwest.net/topic/article/at_montanas_biggest_wind_farm_bat_deaths_surprise_researchers/C41/L41/
[222] New Nesting Pair Golden Eagles found in McCain Valley: http://eastcountymagazine.org/taxonomy/term/505
[23] BLM East County RMP Critical Habitat Map
http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pdfs/elcentro_pdfs/esandiegoplan.Par.e7631351.File.dat/map%207%20-%20criticalhabitat8x11.pdf
[24] Wind Power/ Property Values: http://www.masterresource.org/category/windpower/property-values/
[25] McCann Appraisal LLC: Property Value impacts Tule Wind ECO ESJ DEIR/EIS" http://www.sdcounty.ca.gov/dplu/docs/ZA/RealEstateImpactEval.pdf
[26] http://acousticecology.org/wind/winddocs/property/McCann-Appraisal%20Info%20CVEC-2011-01-06.pdf.pdf
[27] http://www.nbcsandiego.com/news/local/Fire-Hazard-Zones-in-San-Diego-County--134781328.html;
http://frap.cdf.ca.gov/webdata/maps/san_diego/fhsz_map.37.pdf
[28] http://co2insanity.com/2011/06/12/broken-wind-turbine-blades-create-mountainous-waste-problem/#comments
[29] Explicit Cautionary Notice To Those Responsible for Wind Turbine Siting Decisions:
http://waubrafoundation.com.au/Y2NpZD0xJmNhaWQ9MTMyYWlkPSZpcmM9MTQ0OTk1MiMyOA%3D%3D
[30] A Summary of new Evidence: Adverse Health Effects and industrial wind turbines: http://www.epaw.org/documents.php?lang=en&article=ns25
[31] Comments from New York Farmer with 4 turbines:" I've been changed" http://www.windaction.org/stories/28942
[32] A plea from impacted turbine neighbor to Ontario Environment Minister: http://www.windaction.org/stories/19366
[33] Adverse health effects people, pets, livestock: http://docs.wind-watch.org/Bull-Sci-Technol-Soc-2011-Havas-027046761417852.pdf
[34] McCain Valley birding list and photos:
http://www.miriameasterlemon.com/Birding%20Pages/San%20Diego%20Birding%20Pages/By%20Site/McCain%20Valley.html

GG-7 The County acknowledges the commenter's support for the No Project Alternative. Please also see responses to comments K2, S3 and S4.

GG-8 The County acknowledges the information in this comment. Significant adverse effects from small wind turbines are analyzed in the DEIR.

GG-9 The comment requests a moratorium for large wind turbine projects and the initiation of new studies to evaluate revised setbacks for large wind turbines. This recommendation would conflict with the project objectives of the Wind Energy Ordinance. Nevertheless, the commenter can present this option to the County Board of Supervisors as an alternative during the hearing process. In addition, these comments will be included in the Final EIR and staff report to the decision makers. See also response to comment K3.

GG-10 Please see response to comment W3.

HIGH IMPACT LARGE-SCALE INDUSTRIAL WIND TURBINE PROJECTS.[35] Until legitimate and verifiable multidisciplinary science-based research has been conducted, large industrial wind turbines should not be sited in proximity to human habitation or other sensitive receptors or resources--especially in fire-prone areas. Impacted residents in the Boulevard area already know the down- and dark-side of wind turbine projects.

THE COUNTY OF SAN DIEGO AND EACH OF ITS POLICY AND DECISION MAKERS HAVE INDEPENDENT LEGAL, ETHICAL, MORAL, AND FIDUCIARY RESPONSIBILITIES TO VERIFY THE ALLEGED GREENHOUSE GAS REDUCTIONS[36] AND OTHER INDUSTRY-SUPPORTED MISREPRESENTATIONS OF THE SO-CALLED BENEFITS OF INDUSTRIAL WIND ENERGY, AS WELL AS THE NOW-DOCUMENTED AND FULLY-NOTICED SIGNICIFICANT ADVERSE EFFECTS TO PUBLIC HEALTH, SAFETY AND WELFARE,[37] WILDLIFE,[38] LIVESTOCK,[39,40] CULTURAL[41,42,43,44] AND BIOLOGICAL RESOURCES, FIRE,[45] AND THE SOCIOECONOMICS OF THE IMPACTED AREA--BEYOND THE BIASED AND SELF-SERVING INFORMATION BEING PROMOTED AND DENIED BY THE WIND INDUSTRY LOBBY, CO-OPTED MEDIA, AND/OR OTHER POLITICALLY BIASED GOVERNMENT AGENCIES OR INSTITUTIONS. THIS DEIR FALLS FAR SHORT IN ALL REGARDS AND MUST BE REVISED AND RECIRCULATED USING THE SCIENTIFIC METHOD, THE PRECAUTIONARY PRINCIPAL, AND GOOD OLD-FASHIONED RESEARCH, ETHICS, AND COMMON SENSE.

THE LINKED 19-PAGE U.S. FOREST SERVICE SUNRISE POWERLINK RECORD OF DECISION (ROD)[46] DOCUMENTS THE PROJECT-SPECIFIC LAND USE CHANGES AND CONFIRMS THAT THOSE CHANGES RESULT IN ADVERSE IMPACTS THAT CANNOT BE MITIGATED BELOW A LEVEL OF SIGNFICANCE TO VISUAL RESOURCES (SCENIC INTEGRITY), WILDFIRE AND BIOLOGICAL RESOURCES. THAT ROD ALSO CONFIRMS THAT RIDGELINE INSTALLATIONS CREATE GREATER INTERFERENCE WITH FIREFIGHTING ABILITIES. TOWERING WIND TURBINES ARE GENERALLY PURPOSED FOR INSTALLAION ON OR NEAR RIDGELINES. REGARDLESS, 400- TO 600-FOOT TALL TURBINES, AND ALL THEIR RELATED NEW POWERLINES, SUBSTATION, TRANSFORMERS AND INVERTERS, WILL INTRODUCE SIGNIFICANT ADDITIONAL FIRE IGNITION SOURCES AND INTERFERENCE WITH FIREFIGHTING CAPABILITIES.

THE AMERICAN WIND ENERGY ASSOCIATION (AWEA) ENVIRONMENTAL HEALTH AND SAFTEY SEMINMAR 2012 WAS HELD IN SAN DIEGO ON JANUARY 9: (Excerpt) "*As the wind industry evolves, so have the responsibilities of the environmental health and safety (EHS) professional. From reducing incidents and preventing accidents, to ensuring environmental compliance, EHS managers are facing new demands and challenges in an uncertain regulatory and standards environment…Join us for the AWEA Wind Environmental Health & Safety Seminar to deepen your understanding of the issues facing occupational, environmental, health and safety professionals in the wind industry and how others are solving issues to some of the industry's most important challenges.*"

GG-10

GG-11

GG-12

GG-13

GG-14

[35] Understanding the Limitations of Electricity from Wind Energy: http://docs.wind-watch.org/schleede-terms.PDF
[36] Global Warming: the scientific way: http://www.northnet.org/brumug/WindPower/GlobalWarmingPosition2.pdf
[37] The Wind Power Controversy; Nature & Society: pages 10-13: http://docs.wind-watch.org/Nature-Society-Nov-2011.pdf
[38] http://www.wboy.com/story.cfm?func=viewstory&storyid=111042

[39] http://www.windaction.org/stories/17324
[40] Racing stable plans scrapped over wind turbine fears: http://www.telegraph.co.uk/earth/earthnews/8982541/Jockey-Tony-McCoy-scraps-plans-for-racing-stable-over-fears-windfarm-will-spook-horses.html
[41] http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/C/03TRI_03.02.11_Manzanita%20and%20of%20the%20Kumeyaay%20Nation%20(Elliott).pdf
[42] http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/C/03TRI_03.03.11_Viejas%20(Pico,%20A).pdf
[43] Tribal objections over impacts to cultural resources and landscapes: page 16: : http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/C/03TRI_03.03.11_Campo%20and%20LaChappa.%20M1.pdf
[44] http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/Final_EIR/I.%20%20Public_Participation.pdf
[45] Firemen left red-faced after hose too short to extinguish wind turbine fire: http://financegreenwatch.org/?p=2739

[46] USFS Sunrise Powerlink ROD: http://regarchive.sdge.com/sunrisepowerlink/docs/ROD_SDGE_%20SpecialUse.pdf

GG-11 This comment does not raise a significant environmental issue relative to the DEIR for which a response is required.

GG-12 The County does not agree that the DEIR is insufficient. In conformance with CEQA, the DEIR evaluated the whole of the action and analyzed each environmental subject area with regard to potential adverse effects. It is not the function of the DEIR to evaluate the merits of the project or develop a recommendation for decision makers. Rather, the DEIR adequately discloses impacts, describes feasible mitigation, and provides comparative analyses for reduced alternatives.

GG-13 The County acknowledges this comment and referenced ROD. This information does not raise specific issues relative to the DEIR, and therefore no further response is provided.

GG-14 The County acknowledges this comment and referenced AWEA excerpt. This information is does not raise specific issues relative to the DEIR and, therefore, no further response is provided.

Despite the "Environmental Health and Safety" title, there is no mention of the AWEA SEMINAR 2012 organizers or participants seeking or sharing more information on how and/or why their WIND TURBINE PRODUCTS and operations are generating consistent, well-founded, and now, well-documented complaints of significant adverse health effects and other damages--globally! All we see is across-the-board denial that there is a problem--and now that denial is repeated by our own County with no empirical data to back up claims of safety. This needs to change and science-based standards applied to project proposals and approvals.

GG-15

GG-16

DEFINITION OF CONSTRUCTIVE FRAUD[47]

Under contract law, a defendant can be liable to a plaintiff for constructive fraud if there was: (1) a false misrepresentation, (2) in reference to a material fact, (3) for the purpose of inducing the other party to rely on such representation, 4) on which the other party did justifiably rely, (5) which resulted in damages or injury and (6) a fiduciary relationship between the parties. Hagarty v. Ithaca City School District, 423 N.Y.S. 2d 843 (1979). Bad intent or dishonesty is not a requirement to satisfy constructive fraud. The elements for actual and constructive fraud are the same with two exceptions: constructive fraud drops the element of scientific knowledge on the part of the injurer of the representation's falsity--and adds the element of a fiduciary relationship.

Definition from Nolo's Plain-English Law Dictionary: "*When the circumstances show that someone's actions give that person an unfair advantage over someone else by unfair means (lying or not telling a buyer about defects in a product, for example), the court may decide to treat the situation as if there was actual fraud even if all the technical elements of fraud have not been proven.*"

Here, it is our strong opinion that the industrial wind energy lobby and related representatives, supporters and/or promoters have, either wittingly or unwittingly, committed various forms of fraud (through carelessness, negligence, lack of empathy, greed or other forms of blind willfulness/disregard) by failing to thoroughly investigate or otherwise educate themselves on the validity of the alleged safety, performance, and product emissions/benefits claims that they continue to perpetuate through verbal and written means at public meetings, in the media, through the mail and over the Internet, in the pursuit of securing/signing various contractual agreements with landowners, government entities, public officials, community benefit and mitigation funding beneficiaries.

GG-17

Large industrial-scale wind turbines are now, and will continue to inflict harm and/or damages, either directly or indirectly. The repeated reports from both the willing and unwilling victims of this fraud are strikingly and hauntingly similar and cannot be brushed aside and marginalized any longer without redress.

WE BESEECH OUR COUNTY DECSIONMAKERS TO TAKE THE HIGH ROAD AND COME TO THE AIDE AND DEFENSE OF ITS RESIDENTS AND ITS AMAZING WEALTH OF RESOURCES--ESPECIALLY THOSE COMMUNITIES AND RESOURCES THAT ARE SLATED TO BE SO DISPROPORTIONATELY IMPACTED BY THE PROPOSED/REDUCED PROJECTS--RATHER THAN RUSHING TO KOWTOW TO AN INDUSTRY THAT IS AWASH IN GROSS MISREPRESENTATIONS, DECEIPT, UNDESERVED GLORY, AND TAX- AND RATE-PAYER-BASED FUNDING.

GG-18

The California Low Carbon Fuel Rule[48] recently blocked by a Federal Judge for being discriminatory to out of state fuel producers[49] was one of the first in the nation to include the "life cycle" and "carbon intensity" to determine the amount of greenhouse gases emitted during the production and transportation of the fuel. The very same "life cycle" should be required for large wind turbines that require tons of steel, concrete and rare earth minerals[50] that are reportedly currently monopolized by in China,[51] and resulting in some shocking impacts[52] to

GG-19

[47] http://www.law.cornell.edu/wex/constructive_fraud
[48] http://www.arb.ca.gov/fuels/lcfs/lcfs.htm
[49] http://www.nytimes.com/2011/12/30/us/judge-blocks-californias-low-carbon-fuel-standard.html
[50] http://www.dailymail.co.uk/home/moslive/article-1350811/In-China-true-cost-Britains-clean-green-wind-power-experiment-Pollution-disastrous-scale.html
[51] http://www.theatlantic.com/magazine/archive/2009/05/clean-energy-apos-s-dirty-little-secret/7377/
[52] http://www.dailymail.co.uk/home/moslive/article-1350811/In-China-true-cost-Britains-clean-green-wind-power-experiment-Pollution-disastrous-scale.html

GG-15 This comment takes issue with the AWEA seminar but does not raise environmental issues relative to the DEIR.

GG-16 This comment implies that the County has made claims regarding the safety of wind turbine projects. It is not clear what information this comment is referring to.

GG-17 Issues raised in this comment are not related to an environmental issue pursuant to CEQA.

GG-18 Ultimately, the Board of Supervisors must determine which project or alternative will be implemented. The information in this comment will be in the Final EIR for review and consideration by the County Board of Supervisors.

GG-19 The type of analysis discussed in this comment depends on the project-specific proposals for large wind turbine applications. If appropriate, such analysis may be conducted during environmental review of specific proposed wind energy projects.

local peasant farmers, their land and their livelihoods in Batou where toxic lakes have resulted, in addition to hundreds or thousands of water truck trips[53] to long-haul water to remote construction sites -- as has so obviously and controversially occurred for the Sunrise Powerlink construction,[54, 55] despite numerous claims and promises to the contrary. We witnessed a similar hoard of massive water tanker trucks running east and west during the recent resurfacing of I-8 in rural East County.[56]

GG-19 Cont.

DESTRUCTION FROM RARE EARTH MINING FOR TURBINE CONSTRUCTION

In China, the true cost of the "clean," "green" wind power experiment is documented in "Pollution on a disastrous scale,"[57] by SIMON PARRY in China and ED DOUGLAS in Scotland, created 7:32 p.m. on 26 January 2011:
"This toxic lake poisons Chinese farmers, their children and their land. It is what's left behind after making the magnets for Britain's latest wind turbines... and, as a special live investigation reveals, is merely one of a multitude of environmental sins committed in the name of our new green Jerusalem."

The lake of toxic waste at Baotou, China, which has been dumped by the rare earth processing plants in the background.

"On the outskirts of one of China's most polluted cities, an old farmer stares despairingly out across an immense lake of bubbling toxic waste covered in black dust. He remembers it as fields of wheat and corn. Yan Man Jia Hong is a dedicated Communist. At 74, he still believes in his revolutionary heroes, but he despises the young local officials and entrepreneurs who have let this happen. 'Chairman Mao was a hero and saved us,' he says. 'But these people only care about money. They have destroyed our lives.'

"Vast fortunes are being amassed here in Inner Mongolia; the region has more than 90 per cent of the world's legal reserves of rare earth metals, and specifically neodymium, the element needed to make the magnets in the most striking of green energy producers, wind turbines. Live has uncovered the distinctly dirty truth about the

GG-20

[53] http://www.30news.com/news/2954485?/detail.html
[54] http://www.utsandiego.com/news/2011/dec/05/sunrise-powerlink-water-use-put-perspective/
[55] http://groksurf.com/tag/sunrisepowerlink/
[56] Historic Route 80: http://www.aaroads.com/california/us-080_ca.html
[57] http://www.dailymail.co.uk/home/moslive/article-1350811/In-China-true-cost-Britains-clean-green-wind-power-experiment-Pollution-disastrous-scale.html

GG-20 County staff has reviewed the article provided in this comment regarding the adverse effects from neodymium mining in China. The County appreciates this information. It should be noted that this information does not result in any new significant environmental impacts, an increase in the severity of previously identified project impacts, or new feasible project alternatives or mitigation measures.

process used to extract neodymium: it has an appalling environmental impact that raises serious questions over the credibility of so-called green technology.

"The reality is that, as Britain flaunts its environmental credentials by speckling its coastlines and unspoiled moors and mountains with thousands of wind turbines, it is contributing to a vast man-made lake of poison in northern China. This is the deadly and sinister side of the massively profitable rare-earths industry that the 'green' companies profiting from the demand for wind turbines would prefer you knew nothing about.

"Hidden out of sight behind smoke-shrouded factory complexes in the city of Baotou, and patrolled by platoons of security guards, lies a five-mile wide 'tailing' lake. It has killed farmland for miles around, made thousands of people ill and put one of China's key waterways in jeopardy. This vast, hissing cauldron of chemicals is the dumping ground for seven million tons a year of mined rare earth after it has been doused in acid and chemicals and processed through red-hot furnaces to extract its components."

Villagers Su Bairen, 69, and Yan Man Jia Hong, 74, stands on the edge of the six-mile-wide toxic lake in Baotou, China that has devastated their farmland and ruined the health of the people in their community.

GG-20 Cont.

WIND DOES NOT REDUCE CARBON EMISSIONS -- AND SOMETIMES INCREASES THEM

Excerpt from "Wind Fails the Carbon Reduction Test[58]: *"Wind power's performance in reducing electricity system carbon emissions also gets low marks. In many regions, wind turbine owners have bid into the electricity market at below cost or even negative prices, often up to the value of the PTC. That forces coal plants to cycle during off-peak hours. In simple terms, the less-than-full-load operation of these coal plants results in less efficient operation, therefore producing more carbon emissions per MWh produced...The practical effect is little reduction in system wide carbon emissions with the introduction of wind energy."*

GG-21

The National Academy of Science (NAS), in a report published in early 2007, agrees. The authors of the "Environmental Effects of Wind Energy Projects,"[59] concluded that "*Wind power will thus not reduce carbon emissions; it will only slow the increase by a small amount.*" **Several subsequent independent studies have confirmed the NAS assessment.**

[58] http://www.nowemag.com/renewables/solar/Chart-a-New-Course_3955.html
[59] http://dels.nas.edu/Report/Environmental-Impacts-Wind-Energy-Projects/11935

GG-21 The County appreciates this information from various sources evaluating the benefits, or lack thereof, of renewable energy projects. There is disagreement among experts in analyzing the costs and benefits of renewable energy projects. The project objectives of the County's Wind Energy Ordinance are primarily based on State and federal goals. However, the County seeks to include the most up-to-date information for public disclosure and consideration by the decision makers. As such, this information will be included in the Final EIR for consideration by the County Board of Supervisors.

"Evaluation of Wind Power Avoided Emissions Benefits,"[60] by Thomas A Hewson Jr., Principal, Energy Ventures Analysis Inc., and David Pressman, Analyst, Energy Ventures Analysis Inc.: *"It is a common belief that new wind power generation will displace coal and natural gas-fueled power plants and thereby avoid all their associated greenhouse gas (GHG) emissions such as carbon dioxide ($C0_2$), nitrous oxide (NO_x) and sulfur dioxide (SO_2). These avoided emissions benefits have become a major factor in gaining public support for siting wind projects and providing large governmental subsidies to offset wind's higher power production costs.*

"Unfortunately, these environmental claims are built upon incorrect assumptions about how U.S. environmental regulations actually work and the type of generation a given new wind project will displace. Avoided air emissions benefits attributable to any given power project can be calculated as the simple difference in industry emissions between a designated project that is built (and) one that is not built.

"This simple calculation has been incorrectly done by several renewable project developers and their consultants. Their mistakes have led them to incorrectly claim that large projects avoid air emission benefits from building new wind facilities ... Any air pollutant subject to a cap and trade program (SO_2, NO_x and regional CO_2) may be displaced but not avoided. Emission levels will remain at capped levels with or without wind project development. With the eventual implementation of a federal cap-and-trade regulating $C0_2$ emissions appearing likely, wind power will likely offer no future incremental greenhouse gas emission reduction.

"As renewables are not yet competitive in the open markets with fossil fuels, all wind projects currently being built are to meet this special set-aside market demand. In these states, the proper comparison is not to look at wind vs. coal or gas, but wind generation vs. other qualified renewable technologies competing for this special set-aside market, including solar, biomass, geothermal, landfill gas and so on. If wind were not used, utilities, in an effort to meet RPS goals, would replace it with another qualifying renewable resource. For these markets, displaced emissions for a given wind project will be the net difference between the project emissions (zero) and other competing renewable project emissions (also zero iv). Therefore, no avoided air emission benefit exists if wind generation displaces another renewable project generation to meet a state (or future national) renewable portfolio standard.

"Finally, proponents who suggest that wind is able to entirely displace $C0_2$ overlook a fact fundamental to energy generation: wind's unpredictability means it is truly has no generating capacity value, and its construction will not displace building any new coal or natural gas generation capacity. Grid reserve margins require wind backup, and the inefficiency of quickly firing up a natural gas unit to meet erratic wind generation output means any emissions displacement is minimal. Wind is simply an additional capital cost—and one that proves to be more than twice as expensive for the ratepayer.

"In summary, any analysis of wind power's potential to displace fossil fuel generation must first correctly reflect current environmental regulations. Any air pollutant subject to a cap and trade program (SO_2, NO_x and regional CO_2) may be displaced but not avoided. Emission levels will remain at capped levels, with or without wind project development. With the eventual implementation of a federal cap-and-trade regulating $C0_2$ emissions appearing likely, wind power will likely offer no future incremental greenhouse gas emission reduction benefit.

"One must also distinguish between states with renewable portfolio standards and those states without them. Those competing in these special set-aside protected markets are competing against other renewable projects and not in the open market against lower-cost conventional power sources. In these states/regions, one must compare emissions between competing projects. In such closed markets the wind projects again can offer no incremental emissions benefits. Unfortunately, almost all of a wind project's avoided air benefit claims are overstated."

"High Cost and Low Value of Wind Energy,"[61,62] by Glenn Schleede (semi-retired after working 30 years in the energy industry). His linked 22-page piece reprinted in "Science and Public Policy Institute" on Feb 10, 2010

GG-21
Cont.

[60] http://www.northnet.org/brvenug/WindPower/Hewson.pdf
[61] http://www.masterresource.org/2011/04/wind-spin-awea/#more-14633

includes the following statement: "*...Local Government officials, mislead by wind farm developers and lured by potential short term benefits, are fracturing their communities, destroying homeowners property values, and ignoring long-term costs when they encourage or condone wind energy projects.*"

GG-21 Cont.

INADEQUACY AND INCOMPLETENESS OF ENVIRONMENTAL DOCUMENTS

The Tule Wind FEIR/EIS is inadequate under NEPA and CEQA with numerous project issues left unresolved with undisclosed or unfinished Golden Eagle studies, take permits, projects at a later date, valid ambient noise studies conducted by non-biased experts, unresolved Wind Energy Ordinance & Plan Amendment issues, significant and controversial and unresolved cultural resource issues, groundwater and floodplain impact issues, road and right-of-way issues, community benefit/mitigation issues for the most impacted community of Boulevard and more. New nesting Golden Eagles have been witnessed and reported in McCain Valley[63] that were reportedly not identified by the Tule Wind consultants.

GG-22

With more and more evidence that setbacks which have been used in the past, and are still promoted by vested interests, are not adequate, it is disturbing to see the significantly reduced setbacks proposed in the DEIR. Determination of the correct setback has to be driven by what is necessary to ensure safety, health and welfare, and not by the fact that someone wants to invest in wind energy.

GG-23

"Wind Turbines and Public Health"[64]: 7:12-minute video produced December 8, 2011 by the Waubra Foundation: This video includes compelling testimony from impacted turbine neighbors and others close to these issues. The interviews reflect similar impacts being experienced by neighbors of the Kumeyaay Wind turbines located on leased tribal land in Boulevard.

GG-24

The County's proposal to allow a 20-db increase over ambient rural noise levels, which average between 20 and 30 db, with an option to waive the newly proposed C weighted noise measurements are dangerously unconscionable and decision makers have now been placed on official notice that they can be held liable for harm caused by approving or implementing them. "*To ignore existing evidence by continuing the current practice of siting turbines close to homes is to run the dangerous risk of breaching a fundamental duty of care, thus attracting grave liability.*"[65]

GG-25

Independent INCE acoustician Rick James, Principal, E-Coustic Solutions, evaluated Iberdrola's Tule Wind[66] project noise studies and related materials AND RECOMMENDED REJECTION OF THE PROJECT DUE TO SIGNIFICANT IMPACT. From his 115-page professional evaluation with diagrams, graphs and charts:

GG-26

"*First, setbacks, from property lines to the nearest turbine of less than 2 kilometers (1.25 miles) are clearly inadequate for most quiet rural communities. The presence of nearby will not mask or otherwise offset the noise from wind turbines.[2] Wind turbine noise is distinctively annoying. The reports and documents submitted on behalf of the Project do not correctly or adequately describe the impact of the proposed project on the host community, or its residents whose homes and properties are close to the footprint of the project. This distance may seem extreme but is needed, based on the experiences of communities with other wind turbine projects. People living at distances up to 1 mile from wind turbines on flat land and, for turbines located on ridges above the homes at distances of up to 2 miles, are experiencing adverse health effects from sleep disturbance at night from audible turbine noise. Other aspects of wind turbine sound emissions, especially amplitude modulated infra and low frequency sounds*

GG-27

[62] http://www.masterresource.org/2011/04/wind-spin-awea/
[63] http://eastcountymagazine.org/taxonomy/term/3057
[64] Wind Turbines and Public Health: http://www.windaction.org/videos/33879
[65] Explicit Cautionary Notice To Those Responsible for Wind Turbine Siting Decisions: http://waubrafoundation.com.au/Y2NpZD0xJmNhaWQ9MTMzMjWlkPSZqcmM9MTQ0OTg1MiMyOA%3D%3D
[66] Rick James Tule Wind Review: http://www.cpuc.ca.gov/environment/info/dudek/ecosub/D%5CD40RG_03.04.11_E-Coustic%20James,%20RJ.pdf

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GG-22 This comment addresses the Tule Wind project and does not raise issues with the proposed Wind Energy Ordinance project.

GG-23 This comment opposes the minimum setback proposed in the draft ordinance for large turbines as insufficient for safety and health. Please note that future large wind turbine projects will have to provide additional setback distances in order to address low frequency noise provisions. While there is no universally accepted setback distance for large wind turbine projects, the proposed standards for requiring setbacks that correlate with low frequency noise output are meant to ensure that there will be a reasonable distance between large turbine development and sensitive receptors.

GG-24 County staff has reviewed the video referenced in the comment. The County appreciates this information.

GG-25 This comment opposes the low frequency noise standards proposed in the draft ordinance. Please refer to response to comment Q2. It should be noted that the County is immune from liability for injury resulting from the issuance or approval of a permit. Gov. Code, section 818.4.

GG-26 This comment takes issues with the Tule wind project's siting of large turbines near homes. For clarification, the County is not proposing to site large

that may not be reach the threshold of audibility are currently believed to be caused by vestibular disturbances from rapid modulations of the infra and low frequency sound.

"Second, background sound levels submitted on behalf of the Project's developers and/or operators often include sounds of short term events and 'wind noise' are reported. The measurements used to collect this information do not meet any recognized national or international standard. Instead a novel procedure is substituted for recognized standard measurement procedures. The end result is a biased assessment of background sound levels that overstates the background sound levels of the community by as much as 10 to 15 dBA. Use of this data to evaluate the potential for negative impacts of the people living near the project as defined in the CEQA Guidelines leads to a conclusion that the wind turbine noise will not be a source of noise pollution at the homes and properties near the project. Had the background noise been properly measured the conclusion would be that the Project will have a significant impact on the adjacent communities and wilderness areas.

"Third, computer model estimates of operational sound levels from the proposed projects understate the impact of the turbines on the community.

"Fourth, information provided by representatives and experts for the Project, on the topic of health risks, infra and low frequency noise, noise limits and setbacks, background sounds in rural communities and computer modeling studies are incorrect, incomplete or otherwise misleading.

"The assertions that there is no research supporting a concern that wind turbine sound emissions at receiving properties and homes and cannot result in adverse health effects do not reflect current understanding of independent medical and acoustical research.

"Had the background studies met the procedural and protocol requirements of the American National Standards Institute's (ANSI) S12.9 and S12.18 standards for measuring environmental sounds outdoors the study would have reported much lower background sound levels. The Project would have a "significant impact" under the rules of the CEQA Guidelines (Appendix G (VII)). Had the modeling properly addressed the increased sound power emitted by wind turbines from atmospheric conditions, rough downwind topography from the large boulders and outcroppings on the sides of the ridges, and small inter-turbine spacing, the dBA and dBC sound levels predicted for the sensitive receiving locations would have been much higher. These conditions include those of:

- *nighttime atmosphere with a stable boundary layer (temperature inversion) and high wind shear above that boundary layer (e. g. high wind shear),*
- *periods of atmospheric turbulence, as is likely for turbines mounted on high locations with rough terrain, and*
- *inter-turbine wake-induced turbulence created when turbines are located in rows with interturbine spacing of less than 5 to 7 rotor diameters (new information indicates this may need to be more like 10 to 15 rotor diameters) to prevent inter-turbine wake turbulence. Turbines in the current layout are as close as 3 rotor diameters or less.*

"The specific CEQA rules that define when an impact is significant that would not be met if the background noise study and computer modeling had been conducted according to the practices identified in this report are:

- *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies*
- *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.*

"The combination of the above negative factors in the reports prepared as submittals regarding the Project's wind turbine noise emissions/pollution will result in sleep disturbance for a significant fraction of those who live within a mile away. Chronic sleep disturbance results in serious health effects. For a smaller portion of the community, there will be a risk of the adverse health effects currently described as Wind Turbine Syndrome mediated through the body's organs of balance (vestibular) and proprioception. This is a different set of symptoms and causes than

GG-27 Cont.

turbine projects near homes, but is updating the regulations pertaining to future large turbine projects. Any application for a large turbine project will have to undergo its own separate site specific environmental review.

GG-27 This comment addresses the Tule Wind project and does not raise issues with the proposed Wind Energy Ordinance project.

what would be expected of higher levels of infra and low frequency sound and is not related to the audibility of the ILFN.

"The reports and other documents provided by the developers of the Project focus on the adverse health effects that occur when the sound pressure level of the noise source exceeds the Threshold of Perception. The adverse health effects of concern are not related to this set of health effects. They are a result of modulated infra and low frequency sounds at levels below the threshold of audibility. The result of these technical flaws, along with an outdated understanding of how the human body responds to acoustical energy below the threshold of perception leads to a conclusion that if the Project, as proposed, is approved, it will, with a high degree of certainty, have negative noise impacts that are "significant."

"I have reviewed the Applicant's Environmental Document, Section 3.12 Noise, and the Tule Wind Project Draft Noise Analysis Report prepared for Iberdrola by HDR Engineering of Minneapolis, Minnesota. I have also had the opportunity to review similar documents prepared for other wind turbine projects by HDR and other acoustical consulting groups that work for the wind turbine project developers. My experience with industrial wind projects leads me to conclude that wind turbine utilities that produce sound levels at the properties and homes of people adjacent or within the Project will exceed the 40 dBA (L(night-outside) limit provided by the World Health Organization (WHO) for safe and healthful sleep. It will result in a high level of community complaints of noise pollution, sleep disturbance, and nuisance.

"In addition, there is mounting evidence that, for the more sensitive members of the community--especially children under six--people with pre-existing medical conditions, particularly those with diseases of the vestibular system and other organs of balance and proprioception, and seniors with existing sleep problems will be likely to experience serious health risks. The review will address a number of topics. Those topics include:

- *Discussion of terms and standards,*
- *Discussion of weather and its effect on turbines*
- *Discussion of spacing and its effects on turbine noise*
- *San Diego County CNEL of 45 requires that one hour Leq to be 37.7. A limit of 40 dBA Leq outside a home (per WHO for nighttime noise) would just slightly exceed the CENL of 45 limit.*
- *An Overview summarizing deficiencies in the Draft Noise Analysis Report (October 2010) by HDR Engineering Inc, Minneapolis, MN. (referred to as "HDR")*
- *Description of wind turbine noise as a source of environmental noise exposure and noise pollution for humans*
- *Specific issues with the Noise Analysis Report produced regarding the Project*
- *Evidence that the Project noise will exceed the permitted levels,*
- *Comments on the potential risks to health and welfare of persons living near the footprint of the Project specifically regarding wind turbine noise.*

"During the summer of 2009, this reviewer conducted a study of homes in Ontario where people had reported adverse health effects that they associated with the operation of wind turbines in their communities. The study involved collecting sound level data at the homes and properties of these people, many of who had abandoned their homes due to their problems. This study found that sound levels in the 1/3-octave bands below 20 Hz were often above 60 dB and in many cases above 70 dB. Since the shape of the spectrum for wind turbine sound emissions is greatest at the blade passage frequency, which was below the threshold for the instruments used, it can be assumed that the sound pressure levels in the range of 0 to 10 Hz exceeded 70 dBA. Given the statement by Dr.Salt that vestibular responses would start at levels of 60 dBG or higher, this data supports the Salt, Alec, "Responses of the ear to low frequency sounds, infrasound and wind turbines." Hearing Research, 2010.

"This work was supported by research grant RO1 DC01368 from NIDCD/NIH James, R. R., "Comments Related to EBR-010-6708 and -010-6516" Comment ID 123842, 2009 hypothesis that there is a link between the dynamically modulated infra sound produced by wind turbines and reported adverse health effects. Adverse health affects related to inaudible low frequency and infra sound have been encountered before. Acoustical engineers in

GG-27 Cont.

the Heating, Cooling and Air Conditioning (ASHRAE) field have suspected since the 1980s, and confirmed in the late 1990s, that dynamically modulated, but inaudible, low frequency sound from poor HVAC designs or installations can cause a host of symptoms in workers in large open offices.[33]

"The ASHRAE handbook devotes considerable attention to the design of systems to avoid these problems and has developed methods to rate building interiors (RC Mark II) to assess them for these low frequency problems. The report on Ontario by this reviewer includes an Appendix that provides more detail on this aspect of how inaudible infra and low frequency sound can cause adverse health effects. When infra and low frequency sound is in the less audible or inaudible range, it is often felt, rather than heard. Unlike the A-weighted component, the low-frequency component of wind turbine noise "can penetrate the home's walls and roof with very little low frequency noise reduction.[33]" Further, as discussed in the 1990 NASA study the inside of homes receiving this energy can resonate and cause an increase of the low frequency energy over and above what was outside the home. Acoustic modeling for low frequency sound emissions of ten 2.5 MW turbines indicated "that the one mile low frequency results are only 6.3 dB below the 1,000-foot one turbine example."[26] This makes the infra- and low-frequency sound emissions from wind turbines a potential problem over an even larger area than the audible sounds, such as blade swish and other wind turbine noises in the mid to high frequency range.

"The acoustical consultant that does not practice in this field may not be as aware of the problems of amplitude modulated, in-audible low frequency sound identified by the ASHRAE engineers. Many have not integrated these new understandings of how infra and low frequency sound can affect the vestibular organs into their work on community noise. These levels were only a few years ago considered too low to cause any physical response. Today, there is a renewed interest in these effects.

"A paper titled "Infrasound, The Hidden Annoyance of Industrial Wind Turbines," by Prof. Claude Renard of the Naval College and Military School of the Fleet in France concludes: "The information given above is enough to understand that it is better not to be exposed to infrasound which propagates far from its point of origin and against which it is impossible to protect oneself, due to the long wavelengths. "Those most affected by exposure to infrasound are rural inhabitants living in proximity to wind turbines, and those working in air-conditioned offices. "The people in the former category are exposed to the infrasound 24 hours a day, whereas people in the latter category are only exposed to infrasound 6 hours a day. "The most important issue is therefore to know what intensity of infrasound can be tolerated without inconvenience over these periods of time. "We do not have the answer to this question."

"This project should be rejected based on the concerns raised in this report. There may be other arrangements of turbines that might be compatible with the community and current land use. However, this current arrangement, with inter turbine spacing of less than three rotor diameters, hard dense reflective ground surfaces, desert heating and cooling cycles being likely to create stable nighttime atmospheric conditions, and the rough terrain which will increase the in-flow turbulence all result in increased noise levels for residents and visitors. In the opinion of this reviewer the Project will result in the exposure of persons to or generation of noise levels in excess of standards established in the San Diego County noise ordinance, and also exceed the WHO 2009 nighttime guidelines setting 40 dBA (Leq) at night as the threshold for adverse health effects. It will also result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The Project, as currently proposed should be rejected."

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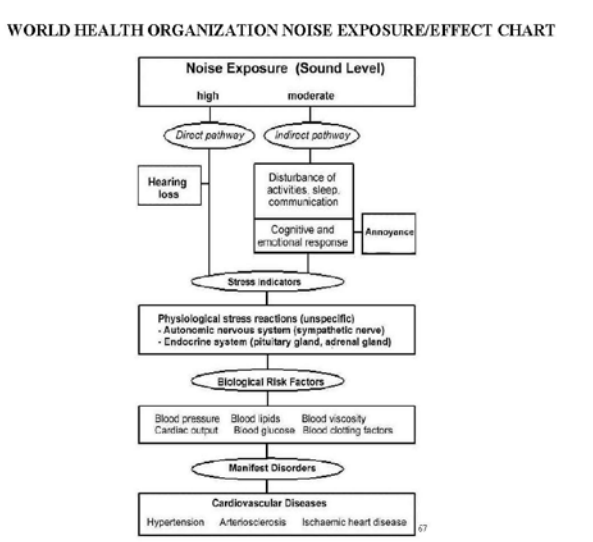

The New South Wales Government proposed new rules following controversial rural wind farms, which angered residents over noise and raised claims the vibrations cause stress and illness. Under the proposals, turbines will be subject to a noise limit of 35 decibels, five decibels less than in the state of Victoria, which has similar guidelines.

"**Overwhelming evidence that wind turbines cause serious health problems in nearby residents,**"[68] published by Carl V. Phillips Populi Health Institute states: "*Proponents of turbines have sought to deny these problems by making a collection of contradictory claims, including that the evidence does not "count," the outcomes are not "real" diseases, the outcomes are the victims' own fault, and that acoustical models cannot explain why there are health problems so the problems must not exist. ...Moreover, though the failure of models to explain the observed problems does not deny the problems, it does mean that we do not know what, other than kilometers of distance, could sufficiently mitigate the effects... There has been no policy analysis that justifies imposing these effects on local residents...The attempts to deny the evidence cannot be seen as honest scientific disagreement and represent either gross incompetence or intentional bias.*"

Wind turbine generated noise/infrasound/vibration-induced sleep fragmentation results in disruption of circadian rhythm/biological clock, which causes related adverse health effects[69]: Wind turbines have been well documented as a culprit in disrupting the sleep of impacted neighbors. Suffering from sleep disruption/fragmented

[67] World Health Organization 2009 Peer-Reviewed Noise/health impact chart
[68] http://bnt.sagepub.com/content/31/4/303
[69] http://www.signonsandiego.com/news/2011/sep/29/talk-finds-gone-helps-wake-people/

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GG-28 This comment appears to be a flowchart provided by the World Health Organization in association with its 2009 nighttime guidelines. However, County staff could not find this chart within any of the references. The information in this flowchart is not inconsistent with the existing content of the DEIR (see Section 2.8 regarding noise).

GG-29 The County appreciates this information and has reviewed the December 2011 documents from New South Wales. Though not a regulation, the New South Wales government prepared the following guideline for new wind farm projects:

"For a new wind farm development, the predicted equivalent noise level (Leq, 10 minute), adjusted for any excessive levels of tonality, amplitude modulation or low frequency, but including all other normal wind farm characteristics, should not exceed 35dB(A) or the background noise (L90) by more than 5dB(A), whichever is the greater, at all relevant receivers not associated with the wind farm, for wind speed from cut-in to rated power of the WTG and each integer wind speed in between."

The County has prepared a different method for regulating wind turbine noise as discussed in Section 2.8 of the DEIR.

	GG-30 Please see response to comment F1. **GG-31** These issues regarding the effects of wind turbine noise are not inconsistent with the existing content the DEIR and are addressed throughout DEIR Section 2.8.1.

sleep pattern is more than a mere annoyance--it poses a very real threat to the health, safety, and well being of humans and other living things. A recent article reported that scientists at the Salk Institute in La Jolla have discovered a gene that helps people wake up much in the way that a key turns on the engine of a car, unmasking an aspect of circadian rhythm that's important in human health.

Biologist Satchidananda Panda and his postdoctoral associate Luciano DiTacchio learned that the gene, a molecule called JARID1a, activates the period gene, a basic component of people's biological clocks. "*It's like an ignition in a car; it turns things on,*" said Panda, whose findings will be published today in the journal Science: "*A properly functioning circadian clock is essential to life and longevity. Panda says that figuring out how the circadian genes are activated could lead to better treatments, or a basic "tune up" of the biological clock, which could help improve human health...A lot of the genes involved in the biological clock are also involved in diabetes, regulation of the cardiovascular system and even cancer," Panda said. "We need to find out more about what's happening at the cellular level to better treat disorders in a number of biological areas.*""

"**Wind Turbine Noise,**"[70] **by John P. Harrison** states "*...the problem of adverse health effects of turbine noise is discussed. This is attributed to the characteristics of turbine noise and deficiencies in the regulation of this noise. Wind turbines, turbine noise, onshore and offshore noise propagation, noise regulation, turbulence ambient corresponds to a sound three times as loud as the ambient, well above the 3 dBA detectable.*

"*At a minimum, the noise limit needs to be reduced to 35 dBA at nighttime and, where applicable, reduced to 40 dBA for daytime. This is still intrusive in rural areas but will help bring setbacks to those recommended by health authorities. A penalty of 5 dBA needs to be added to the time-average predicted noise levels to compensate for the enhanced audibility of the amplitude-modulated and impulsive character of turbine noise. Uncertainty in design calculations is the norm in engineering practice.*

"*For the wind developers, erring on the side of caution could protect their very large investments when testing for compliance does become the norm. A great deal is known about the excess noise due to turbulent inflow. Wind energy developers need to make test tower measurements of local natural turbulence and make calculations of wake turbulence to predict this excess noise. Compliance is not so difficult. It is common practice to check for compliance in all manner of industrial situations. This should be no different.*

"*Atkinson & Rapley Consulting (2011), in association with Astute Engineering in New Zealand has developed a fully automatic environmental noise measurement system, which is in service in New Zealand for compliance testing of wind turbine noise. Compliance testing is vital because it leads to reconsideration of noise prediction calculations. Where noise audits have been done, such as that at a home near Shelburne in Ontario, turbine noise well in excess of the noise limit has been demonstrated. In such cases, the wind energy company pays compensation or buys out the homeowner. No iterative use is made of the audit.*

"*With the above changes to the regulation of noise, a 35 dBA nighttime noise limit, penalties of 5 dBA for the periodic or impulsive character of turbine noise, 4 dBA for uncertainty in noise prediction, and a penalty for turbulent inflow noise, the setback from homes will approach the 1.5 to 2 kilometers recommended by health authorities.*"

***Reconciliation between regulation and adverse health effects**: There IS a problem. Noise regulation in the range 40 to 50 dBA allows turbines to be placed within 500 meters of homes and other sensitive receptors. Subsequently, in a significant fraction of such homes, residents are being annoyed, suffering sleep deprivation and disturbance, and in many cases, are suffering adverse health effects. Yet for other noise sources the limit appears reasonable. We now know that turbine noise has characteristics that contribute to this situation. We also know that there are factors not considered when applying the noise regulations. Finally, there is a reluctance to test for compliance. One can understand the reluctance; each turbine costs about $5 million to put in place, and unlike industrial machinery, there is no possibility of shielding the noise at source.*

[70] http://www.windcows.com/files/Wind_Turbine_Noise_Harrison.pdf

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GG-32 The County appreciates this information. Since the comment does not identify deficiencies in the DEIR, no further response is required.

GG-33 These issues regarding the effects of wind turbine noise are not inconsistent with the existing content the DEIR and are addressed throughout DEIR Section 2.8.1.

GG-34 The County appreciates this information. Based on similar research, the County has developed a noise level limit for low frequency noise as described in Section 2.8 of the DEIR and included in the proposed Wind Energy Ordinance. See also response to comment Q2.

GG-35 The issues raised in this comment are not inconsistent with the content of the DEIR. Please refer to DEIR Section 2.8.1.

GG-36 To ensure compliance with the County's noise limits for large wind turbines, the draft Wind Energy Ordinance includes compliance review provisions which will require Major Use Permits for large turbine(s) to be conditioned to require a compliance report to the County once every two years. The compliance report shall describe any complaints filed with the County during the previous two year period and all corrective actions taken if the use was found to be out of compliance with the requirements of Section

	6952 of the (County Zoning Ordinance) and/or the applicable noise related Major Use Permit conditions. As a result of this review, the Director will determine that the use is in compliance with the requirements of this section and the applicable noise related Major Use Permit conditions or that the Major Use Permit shall be subject to review by the Planning Commission. If the Planning Commission finds that the use no longer complies with the requirements of section 6952 and/or the applicable noise related conditions of the Major Use Permit, the Planning Commission may initiate modification or revocation of the permit in accordance with section 7382.c.

Nevertheless, regulation without compliance testing is unethical. The characteristics of turbine noise that contribute to annoyance and sleep disturbance are as follows: The sound from turbines is amplitude-modulated at the blade passage frequency. The modulation level is typically 3 to 5 dBA (van den Berg, 2005) but higher levels have been measured (Moorhouse, Hayes, von Hunerbein, Piper, & Adams, 2007). Two things arise: The peak sound is higher than the average used for noise regulation and the modulation enhances the audibility of the sound to such an extent that the turbine noise can be detected, even when the sound is below ambient (Hanning, 2010).

The noise emitted by a turbine is broadband, but at a distance of 500 meters and more, the atmosphere has absorbed the higher frequencies so that it is predominantly low-frequency noise that reaches a receptor. This low-frequency noise enhances annoyance and is more readily able to penetrate walls and resonate inside rooms. Many people report a thumping, rumbling, or impulsive character to the turbine noise (e.g., Frey & Hadden, 2007; Harry, 2007); the reason is not clear.

***Deficiencies with present noise regulation:** As noted above, the character of turbine noise makes it especially intrusive. This is exacerbated by the fact that wind turbines are sited in rural areas where the ambient noise level can be about 25 dBA. An intrusion of 15 dBA is too large. Germany has a nighttime noise limit of 35 Dba and this should be the international absolute maximum. Also as noted above, the standard algorithm for predicting noise at a receptor is ISO-9613-2. But, this was never designed for turbine noise. The ISO manual is specific in limiting its use to noise sources close to the ground such as "road or rail traffic, industrial noise sources, construction activities, and many other ground-based noise sources.*

Turbine noise derives from blades rotating, typically, between 35 to 125 meters above ground level. When used without compliance, testing the results of the predictions have little meaning. The authors of noise prediction algorithms appreciate that there is uncertainty in the calculations. For instance, the manual for ISO 9613-2 puts the uncertainty at □}3 dBA for a source to receptor distance in the range 100 to 1,000 meters. The turbine makers know that there is variability in manufacture; this is put at □}1 or □}2 dBA. Combining these, the predictions can be no better than □}4 dBA. This uncertainty is ignored by the wind energy developers and by the regulatory authorities. This is despite the fact that the final siting plans are signed off by professional engineers and approved by professional engineers."

TURBINES CAUSE SIGNIFICANT LOSS OF PROPERTY VALUES

Michael McCann / McCann Appraisal LLC issued his professional opinion that the turbines will cause significant property value loss[71] after visiting the Boulevard/Jacumba/La Posta area in January 2010, and reviewing the DEIR/EIS for the ECO Substation, Tule Wind and Energia Sierra Juarez Gen-tie line: *"Briefly stated, based upon my review of the proposed Project facilities, the Project does not comply with the County of San Diego Zoning Ordinance requirements for a MUP, as it is not compatible with adjacent and nearby residential uses and will have a harmful effect on the desirable character of the neighborhood. The Project will cause substantial diminution and injury to property values in the area, averaging approximately 25% as far as 2 to 3 miles, and with approximately 5% value loss from the nearest turbines out to as far as 5 miles. The basis for my professional opinions are described and summarized herein.*

"Further, the HVTL infrastructure and substation facilities will cause varying levels of value impairment, separate and apart from the impact of industrial scale (400-500 foot) turbines. Also, in my opinion, the EIR/EIS is deficient with regard to addressing property value impacts, and identifies no measures to mitigate against value losses in the surrounding area, particularly for residential property. In the event that the Project is approved, it should be conditioned upon implementation of a Property Value Guarantee (PVG). From a property value perspective, and to mirror the criteria of the EIR/EIS, implementation of a PVG that leaves property owners economically "whole" would Change a Class I impact to a Class II. A Class III level of mitigation is not possible, as marketing times will

[71] McCann Appraisal LLC 3-11: http://www.sdcounty.ca.gov/dplu/docs/7A/RealEstateImpactEval.pdf

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GG-36 Cont.

GG-37

GG-38

GG-39

GG-40

GG-41

GG-37 The issues raised in this comment are not inconsistent with the content of the DEIR. Please refer to DEIR Section 2.8.1.

GG-38 The issues raised in this comment are not inconsistent with the content of the DEIR. Please refer to DEIR Section 2.8.1.

GG-39 The County has conducted specific research on low frequency noise generated by wind turbines, as discussed in Section 2.8 of the DEIR. Based on the County's research, a measured difference of more than 20 dB between the wind turbine low frequency sound (dBC) and background sound (dBA) is the threshold for a significant impact related to noise. Therefore, the County has included provisions within the Wind Energy Ordinance based on this threshold. The comment provides a different method for regulating noise. Disagreement among experts does not result in an inadequate EIR (CEQA Guidelines §15151).

GG-40 See response to comment GG39 above.

GG-41 This comment raises the issue of large wind turbine impacts on property values. It should be noted that social and economic effects need not be considered in an EIR (see CEQA Guidelines sections 15064(e) and 15131). In addition, it should be noted that the County is not proposing placement of large wind turbines. The proposed Wind Energy Ordinance establishes

	provisions for permitting large wind turbines in the future under the Major Use Permit process. For any such application, stakeholders will have the opportunity to provide comments and testimony related to environmental or economic impacts.

still be impaired for properties with the most visible impairment of vistas and/or an increase in noise levels (audible and low frequency) beyond the level of "noticeable" to "nuisance," or equivalent terms.

"Finally, the reasonably foreseeable projects cited in the caption of this consulting report and described herein will cause a disproportionate and cumulative adverse impact on Boulevard, surrounding rural residential property, and the general Project area.

"The combined effect will be to surround and "blight" these residential uses and residents, and significantly expand the area of value impairment from the ECO / Boulevard Substation, Tule Wind and Energia Sierra Juarez (ESJ) Gen-tie line Project. My specialized and unique experience with utility scale wind energy developments, as well as 30 years of real estate, land use evaluation and appraisal background has enabled and qualified me to evaluate whether the proposed Project meets the criteria described in the San Diego County Zoning Ordinance, the overall issue of economic impact, from a real estate and land use perspective, and the methodology that is appropriate for measuring property value damages from disamenities or environmental impairment. My research continues, and I reserve the right to supplement my opinions at a later date, as may be warranted if the Project proceeds, testimony at hearing and/or in litigation becomes necessary. Other records considered in developing my opinions are retained in my work file for future reference."

GG-41 Cont.

Mr. McCann is not alone is his findings of wind turbine-related adverse impacts to property values and our groups and others have previously provided them at various opportunities. We fully incorporate those references again here.

"**Wind farms, residential property values, and rubber rulers,**"[72] **February 16, 2010 by Albert R. Wilson**. Albert R. Wilson is principal of A. R. Wilson LLC, based in Woodland Park, Colorado. Wilson has evaluated the financial impacts of environmental and other risks on business and real property values for more than 25 years, and has taught and written extensively about these impacts on the appraisal, legal, banking and governmental communities. In summary, real estate appraisal experts are challenging the scientific credibility and accuracy of a recent U.S. Department of Energy ('DOE') report on the effect of wind power projects on property values. Albert R. Wilson's new paper asserts that well-known flaws in the methodology used in the study raise serious questions concerning the credibility of the results, and the DOE report's authors failed to follow well-developed and tested standards for performing regression analyses on property sales. His paper can be accessed by clicking on the footnote link. He states:

1. I recently examined a document published by the Department of Energy's Lawrence Berkeley National Laboratory titled "The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis" (hereafter "Report"). I express no opinion concerning the impact of wind power projects on residential property values and instead focus on the underlying methods used in the development of the Report, and the resulting serious questions concerning the credibility of the results.

GG-42

2. As stated in the title the primary bases for the conclusions drawn in the Report are hedonic analyses of residential real estate sales data. A hedonic analysis in turn is based on the assumption that the coefficients of certain explanatory variables in a regression represent accurately the marginal contribution of those variables to the sale price of a property.

3. While I have other issues with the Report and again reiterate that I have no opinion on the influence of wind farms on residential sales prices, the concerns I have addressed here lead to the conclusion that the Report should not be given serious consideration for any policy purpose. The underlying analytical methods cannot be shown to be reliable or accurate.

4. The reasons for the conclusion discussed here may be summarized as:

[72] http://www.windaction.org/documents/25681

GG-42 The County appreciates this information. Please refer to response to comment GG41 above.

1) Lack of access to the underlying data prevents the independent validation of the data, replication of the analysis, testing of alternative analyses, or testing of the conclusions against the real market.

2) The peer review process used for both the literature and the Report can only determine the acceptability of the papers for publication. It cannot reveal the validity, accuracy or reliability of the work behind the papers.

3) Given the peer review conducted, the fact that no published and recognized standards for the development of an accurate and reliable regression on sales price were used render the Report of highly uncertain value for any purpose.

4) The exclusive use of a test of statistical significance only indicates that the coefficients for Distance and View variables are not conclusive. What we do not know is what those coefficients actually represent. Only tests of economic significance would provide an answer, and none has been conducted.

5) Low explanatory power, 13% less than an acceptable minimum for an accurate regression on sales price.

5. Since human stress causes health problems, the stress of "taking of property values and use options" without due process from the neighbors of wind turbine projects and infrastructure must be considered.

6. With evidence that wind turbine neighbors do lose options for future use of their property when setbacks are inadequate, they also lose real value.

7. Lost options potentially include not being able to build a residence, sell the land for residential or other sensitive development, or even build their own turbine if so desired.

8. Inadequate setbacks can, in fact, represent the "taking of property without due process."

9. Setbacks should be established to protect safety and health of both the participating and non-participating residents without ambiguity, and the property values of the non-participating neighbors.

10. Setbacks should be determined for each wind structure to meet standards for maximum allowable sound levels and shadow flickering and to provide safe distances from ice shedding and structural failure or turbine blade breakage and throw-off."

GG-42
Cont.

The aforementioned blade breakage is amply illustrated in the stunning photos below. These were taken of recent wind turbine failure and resulting spectacular fire with flying flaming debris during a high wind event in Scotland. Such events raise alarms for rural residents facing a proliferation of large-scale wind turbine projects and more power lines, such as those that sparked numerous recent fire storms, billions in damages, increased fire insurance and utility rates and huge lawsuits.[73] It also highlights the results of limited access to fire protection services.

GG-43

[73] Court petition: Utility responsible for fire insurance http://www.signonsandiego.com/news/2011/dec/30/court-petition-utility-not-customers-responsible-w/
[74] Turbine Fire http://www.dailymail.co.uk/news/article-2071633/UK-weather-Wind-turbine-EXPLODES-hurricane-force-gusts-batter-Northern-Britain.html

GG-43 The County agrees with the concerns expressed in this comment. Fire protection plans and specific safety measures will be required for all future large wind turbine projects. See additional discussion in DEIR Section 2.6.

The two photos below show Infigen's 25 2MW Kumeyaay Wind turbines located, on leased Campo tribal lands, in close proximity to private residences along Ribbonwood Road in the McCain Valley area of Boulevard. Numerous tribal homes are in even closer and more dangerous proximity.
(2 photos below taken by D. Tisdale in 2011)

GG-44

GG-44 This comment illustrates existing conditions in the Boulevard Community where turbines were placed on Campo tribal lands. While the County addressed potential cumulative impacts in the DEIR, including those projects on Campo tribal lands, future individual large turbine permits will also have to conduct cumulative impact analyses and avoid or mitigate so as not to exacerbate existing adverse effects.

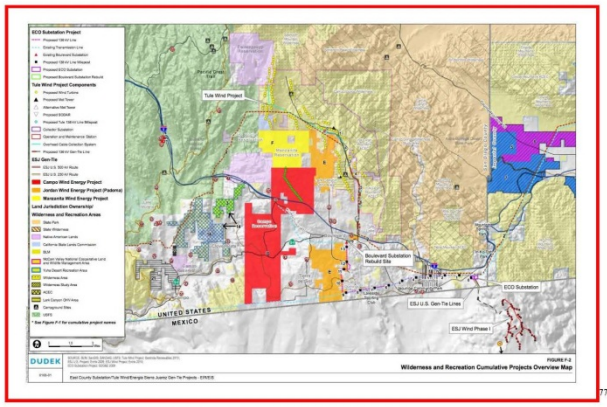
EXISTING LOCAL IMPACTS ARE DOCUMENTED AND LOCAL COMMULNITIES WILL BE INESCAPABLY SURROUNDED

Several hundred more turbines are in various stages of planning on tribal, BLM, State, Forest and private lands in the immediate and surrounding areas that will virtually encircle these rural homes and those of adjacent tribal members. Many of these impacted residents are already suffering from living near Infigen's 25 Gamesa 2MW turbines at Kumeyaay Wind.

Infigen is the subject of noise violations documented at its Capital Wind[75] project in Australia--where neighbors have registered similar complaints of adverse health effects since the turbines were installed near their homes and started operations.

Relief from the turbine-related stress and illness is rare unless the wind is still, the turbines are down for repair, as the Kumeyaay turbines were for several months after the yet-to-be-explained 2009 catastrophic failure[76] or the residents leave their impacted home and neighborhood long enough to get some rest and respite. Some actually abandon their homes due to adverse effects and lack of resolution to the problems

The Cumulative Impact Projects Map below, from the joint PUC/BLM ECO Substation, Tule Wind and Energia Sierra Juarez DEIR/EIS, dated late 2010, shows just some of the now-proposed industrial wind and transmission projects concentrated in southeastern San Diego, Western Imperial County and Northern Baja. It is now outdated, and does not show any of the industrial scale solar projects proposed throughout the Backcountry.



[77]

The proliferation of wind turbine substations also raises concerns with increased risk of transformer fires that can quickly spread and take days to extinguish. Transformer fires can also leak transformer oil into the soil,

[75] Peer Reviewed Acoustic Assessment of wind turbine noise: http://www.wind-watch.org/documents/
[76] What happened at the (Kumeyaay) Wind Farm?: http://eastcountymagazine.org/node/2734
[77] Wilderness and Recreation Cumulative impact projects Overview Map Figure F-2: ECO Substation, Tule Wind, ESJ/DEIR/EIS

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GG-45
GG-46
GG-47
GG-48
GG-49

GG-45 This comment is not relevant to the project except as it relates to the cumulative impact analysis in the DEIR. The County has included all past, present and reasonably foreseeable future projects in its cumulative analysis. Table 1-4d has also been updated since receipt of this comment.

GG-46 See response to comment F1, W3 and GG36.

GG-47 This comment provides information about existing conditions in the Boulevard Community. While this comment does not identify deficiencies in the DEIR, the County appreciates this information and will include it in the documents presented to the decision makers for the project.

GG-48 The County concurs with this comment and is in receipt of the map shown.

GG-49 These are considerations that will be taken into account when specific large turbine projects are proposed in the County's jurisdiction. A proposed large wind turbine project would undergo site specific environmental review that would analyze these potential impacts and, if they are potentially significant, provide mitigation measures. In addition the Major Use Permit for a specific large wind turbine project would include conditions to address fire safety and hazardous materials.