In The Matter Of: McLEAN COUNTY ZONING BOARD OF APPEALS

February 27, 2018

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1	McLEAN COUNTY ZONING BOARD OF APPEALS	(0 :	
2	MEETING	1 (Commencing as 6:00 p.m.)	
	MEELING	2 CHAIRMAN FINNIGAN: We're going to be	ring
3	Wednesday, February 27, 2018	3 the McLean County Zoning Board to order. Will	the
4	6:00 p.m.	4 secretary call the roll?	
5	at	5 (Roll call taken with Board Members Brian	
6	McLean County Government Center	· ·	
7	115 East Washington Street Bloomington, Illinois	6 Bangert, Michael Kuritz, Rick Dean, Julia Turner	
		7 Jim Finnigan, Chris Carlton and Mary Beth Taylo	r
8	Case Number SU-18-02	8 present.)	
9		9 CHAIRMAN FINNIGAN: We have seven members	bers,
10	BOARD MEMBERS PRESENT:	10 we have a quorum, so the staff has been affirmed.	
11	Brian Bangert	11 This is reconvening of Case SU-18-02, and I'm goi	
12	Chris Carlton - 1st Alternate Rick Dean	12 to let Phil talk here for just a minute.	5
13	James Finnigan - Chairman Michael Kuritz	· · · · · · · · · · · · · · · · · · ·	
	Mary Beth Taylor - 2nd Alternate	MR. DICK: We had earlier communication	
14	Julia Turner	14 from Mr. Keith Shank of the Illinois Department	ot
15		15 Natural Resources and we had realized that the	
16	AIGO DECEME.	16 zoning board members had some questions, that th	ney
17	ALSO PRESENT:	17 would like to have clarification on some of his	•
18	Philip Dick, Director of Building and Zoning Samantha Walley, Assistant State's Attorney	18 communications, so Mr. Shank was good enough to sh	ow
19	Luke Hohulin, Assistant County Engineer	19 up here tonight and he will present, but before he	**
20			
		20 does that, I think the attorney for the applicant	
21		21 wanted to present some information and then we'll	go
22	June Haeme: CSR #084-003038 Area Wide Reporting and Video Conferencing	22 right to him. And he'll be mainly discussing his	
23	301 West White Street	23 report, and if you need copies of that, I have	
24	Champaign, IL 61820 800.747.6789	24 additional copies.	
		1	
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- 1 foundation for this EDPR Exhibit 15?
- MS. ANTONIOLLI: So EDP/Applicant's
- 3 Exhibit 15, this was a request by one of the board
- 4 members during earlier testimony of Allison Poe I
- 5 believe while she was testifying and we promised to
- 6 provide a copy.
- 7 MR. LUETKEHANS: Again, I would just like
- 8 a foundation for this from somebody who can actually
- **9** testify as an engineer or something to this effect.
- 10 Just putting a document in like this that we've,
- 11 first of all, never seen before and, second of all,
- 12 that has -- you know, it's not a public document,
- 13 there's no foundation, there's no one to testify
- 14 that this is true and accurate or how it relates to
- 15 the wind turbines.
- 16 CHAIRMAN FINNIGAN: Is Ms. Poe here
- 17 tonight?
- **MS. ANTONIOLLI:** She is, yes.
- **19 CHAIRMAN FINNIGAN:** Why don't we wait
- 20 until she can come up and lay the foundation for
- **21** that.
- MS. ANTONIOLLI: We will.
- 23 **CHAIRMAN FINNIGAN:** Just a few minutes
- 24 here and we'll get that taken care of one way or

- 1 that role, it's my responsibility and that of my
- 2 staff to implement provisions of the Illinois
- 3 Endangered Species Protection Act and the Illinois
- 4 Natural Areas Preservation Act pertaining to the
- 5 consultation process. I'd like to explain that
- 6 process a little bit. There always seems to be a
- 7 lot of questions about it.
- 8 Both of these statutes require that
- 9 whenever a unit of local government or a state
- 10 agency is considering an action that they must
- 11 authorize, fund or perform that may alter
- 12 environmental conditions, they're required to
- 13 consult the Department of Natural Resources as to
- 14 whether that action is likely to adversely affect
- 15 the essential habitat of state listed endangered
- 16 species or to adversely modify a site listed on the
- 17 Illinois Natural Areas Inventory. The animals and
- 18 plants that are on the state list under the Illinois
- 19 Endangered Species Protection Act are -- some of
- 20 them are the same, but most of them are different
- 21 than those that are listed by the federal
- 22 government. Most people I meet are not aware that
- 23 the federal government's endangered species act and
- 24 the state's act are not really related although they

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- 1 another.
- 2 MS. ANTONIOLLI: Okay, very good, thank
- 3 you.
- 4 **CHAIRMAN FINNIGAN:** Would you like to be 5 sworn in.
- 6 **MR. SHANK:** Sure.
- 7 (Mr. Keith Shank was duly sworn.)
- 8 CHAIRMAN FINNIGAN: Would you state your
- name and address for the record?
- MR. SHANK: My name is Keith Shank,
- 11 S-H-A-N-K, and I live at 2324 Westview Drive in
- 12 Springfield, Illinois.
- 13 CHAIRMAN FINNIGAN: Okay. And just for
- 14 the record, we're only talking about the application
- 15 we're dealing with tonight not what we've already
- approved, so any questions tonight for Mr. Shank, or
- 17 he's explaining, are going to be on this
- 18 application. That's board members also.
- MR. SHANK: Ladies and gentlemen of the
- 20 zoning board, I'm pleased to appear before you
- 21 tonight. As I've stated, my name is Keith Shank.
- 22 I'm employed as the chief of the Impact Assessment
- 23 Section of the Office of Realty and Environmental
- 24 Planning in the Department of Natural Resources. In

- 1 have somewhat the same title. Just for an example,
- 2 there's only 31 species on the federal list that
- 3 occur in the state of Illinois, but the Illinois
- 4 list contains 156 animals and 324 plants. So
- 5 there's quite a bit more things to talk about under
- 6 the state act than there are under the federal act.
- The Illinois Natural Areas Inventory
- 8 requires a little explanation. The Natural Areas
- 9 Preservation Act established the Illinois Nature
- 10 Preserves Commission, and they run the state nature
- 11 preserves system and they also define what a natural
- 12 area is or is not. Most people when they hear that
- 13 term assume that if it's land that hasn't been
- 14 managed by people for a long time, that must be a
- 15 natural area, but it has a more specific definition.
- The department maintains what it calls an inventory of natural areas, the Illinois Natural
- 18 Areas Inventory, and these are sites that are
- 19 designated by the department based on a number of
- 20 ecological or physical characteristics that are
- 21 unusual to some level. Some are of extraordinary
- 22 value for wildlife. Some are natural communities
- 23 that are good examples of what existed here before
- 24 we showed up. Some are sites that are essential

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- 1 habitat for threatened and endangered species.
- 2 There's about 1500 of those sites statewide and some
- 3 of those are located here in McLean County.
- A natural area in and of itself doesn't
- 5 have any legal protection, but it does trigger the
- 6 consultation process. So I'm obliged and my staff
- 7 is obliged to give people advice as to how we feel
- 8 those sites might be adversely affected by any
- 9 proposal that's pending before them. That's a
- 10 little bit in contrast to a nature preserve or land
- 11 and water reserve. Those sites are dedicated or
- 12 registered and convey a conservation easement to the
- 13 State of Illinois which the State of Illinois holds
- 14 in trust.
- So a site like the Weston Cemetery Prairie is both on the INAI as a natural area and it is also
- 17 a dedicated nature preserve. So those do have legal
- 18 protection. It's a Class A misdemeanor to adversely
- 19 modify such a site in any way whatsoever without the
- 20 permission of the Nature Preserves Commission. So
- 21 there's a big distinction between a nature preserve
- 22 and a site that's merely on the inventory. I say
- 23 merely because merely is a much lesser level of
- 24 protection, but it's still an important natural area

- 1 whenever you see a wind turbine anywhere in the
- 2 state, it's one I've looked at before and one that
- 3 I've considered in terms of its potential adverse
- 4 effects.
- 5 I would like to emphasize that the law
- 6 doesn't ask me to tell you what the benefits of a
- 7 project are. It specifically tasks me to tell you
- 8 what the adverse effects are. So many people who
- 9 read my communications say, boy, you're sure being
- 10 hard on people and, you know, you're really being
- 11 critical, but technically that's my job. I assume
- 12 it's somebody else's job to tell you what's
- 13 wonderful about whatever somebody is proposing, but
- 14 that's not my task. So if my communication seems a
- 15 little slanted on the negative side, that's the main
- 16 reason why.
- 17 I'd like to get into my letter of February
- 18 5th to Mr. Dick specifically regarding this
- 19 particular project. If you have a copy before you,
- 20 I'll take these in order. In terms of the natural
- 21 areas, Weston Cemetery Prairie Nature Preserve INAI
- 22 site is located just north of U.S. 24 near the
- 23 village of Weston. It's close enough that somebody
- 24 standing in the nature preserve will certainly be

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- 1 that we like to protect or see protected.
- The Illinois Endangered Species Act makes
- 3 it a Class A misdemeanor to take a state listed
- 4 animal or a state listed plant without the
- 5 permission of the landowner. The wildlife that's on
- 6 the list is the property of the State of Illinois,
- 7 so you need our permission before you can harm it.
- 8 Plants belong to the landowner and so you need the
- 9 landowner's permission before you can harm that
- 10 plant. So that's also an important distinction.
- Now, the consultation process is the only
- 12 part of statute that's not a crime if you don't do
- 13 it. However, that provision of the statute is
- 14 endorsable through a writ of mandamus lawsuit, so
- 15 any person who may be adversely affected by the
- 16 pending action if consultation does not occur may go
- 17 to court and file a lawsuit against whichever unit
- 18 of government failed to go through the consultation
- 19 process. So it is a process that is important to
- 20 execute in most actions that come before the zoning
- 21 board.
- In this particular case, we're talking
- 23 about a wind energy facility. I have been reviewing
- 24 wind energy facilities in Illinois since 2007, so

- 1 able to see the wind turbines that are associated
- 2 with this project. Illinois doesn't have a law that
- 3 protects viewsheds. Some states do, but Illinois
- 4 does not. So while the Natural Areas Preservation
- 5 Act talks about a person's ability in a nature
- 6 preserve to visualize the presettlement conditions
- 7 of Illinois, that is a value that's often
- 8 compromised already at the time something becomes
- 9 dedicated. So at Weston Cemetery Prairie we have a
- 10 federal highway, we have a railroad, we have other
- 11 structures that are visible, et cetera, et cetera.
- 12 So being able to see something is not of particular
 - 3 concern to the department.
- And the recommendation here that there be
- 15 a one mile setback from the nature preserve, that's
- 16 a standard recommendation that we make in every case
- of a nature preserve in the vicinity of a proposed
- 18 wind project, and the reason for that is because we
- 19 feel that even though it's possible that there may
- 20 be some slight physical modification of the
- 21 conditions in the nature preserve, we don't believe
- 22 that those modifications will be significant in
- 23 terms of their effect on either the wildlife in the
- 24 preserve or the plants in the preserve.

For an INAI site, we typically recommend a half a mile. Now, there's nothing magic about a

3 half a mile except it's half of a mile, and again a

- 4 INAI site has no legal protection per se. Again,
- 5 that's a standard recommendation we make for INAI
- 6 sites regardless of what they are or where they are
- 7 or what they contain, and again, it's because we
- 8 feel that although at half a mile there may be some
- 9 effects, we hope that they won't be significant
- 10 effects at half a mile. We want that extra
- 11 assurance for a nature preserve because it's a crime
- 12 to adversely modify a nature preserve. So that's
- 13 why we ask for a mile for a nature preserve but only
- 14 a half a mile for an INAI site.

Most people who want to talk about wind energy and wildlife want to talk about birds. Birds

- have certainly been a popular subject in the popular
- 18 press about wind farms, and with the internet,
- 19 things never go away even though they may be 20 or
- 20 30 years out of date. So from where I sit, it's
- 21 obligatory for most developers of wind facilities to
- 22 show to whomever they're speaking that they're not
- 23 going to build an equivalent of the Altamont Pass
- 24 wind turbines in California which are the most

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- 1 response to him was there is no way to predict when
- 2 or if any cubic foot of air is going to hold a bird
- 3 at any particular time, and it has proven difficult
- 4 or impossible for us to predict what types of birds
- 5 will be killed at a wind facility or how many.
- We have at least 27 operating facilities
- 7 in Illinois at this point in time. I have seen
- 8 studies for most of them, and generally the
- 9 mortality is small compared to what people have read
- to on the internet and in California. A really deadly
- 11 turbine might kill six birds in a year, and you have
- 12 no way of knowing what kind of bird they're going to
- 13 be, and that's kind of a saving grace because there
- 14 are hundreds of species of birds that fly through
- 15 Illinois and the losses are divided amongst all of
- L6 those different species.

In the time that we've been tallying

- 18 losses, we have had only five birds on the state 19 endangered list that have been killed or injured by
- 20 a wind turbine. Four of those have been a
- 21 black-billed cuckoo. I don't know what it is about
- 22 cuckoos, we seldom discuss cuckoos in consultation,
- 23 I did mention them in my letter this time, and
- 24 that's because our experience has been we can't

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- 1 notorious bird killers in the world. Unfortunately
- 2 that's due to where they're located and what kind of
- 3 turbine they are. The type of turbine makes a
- 4 difference, and the 5,000 or so turbines initially
- 5 built at Altamont Pass were fairly small, they had
- 6 rapid rotation and they were built on trellis type
- 7 towers that provided purchases for birds of prey and
- 8 was also located in a mountain pass that funnels
- 9 large migrations of birds right through there. So
- 10 to this day, although many of those turbines have
- 11 been replaced with turbines with more modern
- 12 technology, it still kills quite a few birds
- 13 including quite a few golden eagles and still causes
- 14 quite a bit of consternation to people who are
- 15 really into birds.
- We have not experienced anything like that in the State of Illinois. Our geography is not such
- 18 that large migrations of birds are funneled through
- 19 specific sites. We have what we call broad front
- 20 migration. Basically the entire State of Illinois
- 21 is in the Mississippi flyway which extends from
- 22 Nebraska to Ohio. So early on I was asked by my
- 23 director why we didn't make more recommendations
- 24 about migratory birds and wind turbines, and my

- 1 predict where they're going to be, when they're
- 2 going to be there or how many of them are going to
- 3 get killed. We do have two facilities in the state
- 4 that have sought a permit from us because they have
- 5 killed cuckoos in two consecutive years, so if it
- 6 happens twice, it probably will happen thrice, and
- 7 so on and so forth, so we ask for that and we
- 8 receive that.
- 9 One of the losses was an osprey, a
- 10 juvenile osprey that apparently tried to perch on
- 11 top of a turbine nacelle, took a glancing blow from
- 12 the turbine and had a dislocated wing. Once it made 13 a trip to the vet, it was able to fly away the next
- 14 day and continue its migration, that was good, and
- 15 we haven't had an incident like that since, and that
- us all the way back in 2007.
- The other case was a black rail, kind of a
- 18 wetland bird, and it's really unusual that wetland
- 19 birds are killed at wind turbines. That one died at
- 20 a facility over in Henry County. And again, the
- 21 department is completely unable to predict where 22 these species are going to be or how.
- Recently a wind turbine was erected on the

24 south side of Chicago near Lake Calumet, and if

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- 1 Illinois has a place that's similar to Altamont Pass
- 2 it's Lake Calumet which sees several million
- 3 migratory birds every year fly through there both in
- 4 the spring and fall. We asked for a mortality study
- 5 for that turbine, which is relatively small compared
- 6 to the ones we're talking about today, and after an
- 7 entire year, they killed one dove. That was all.
- 8 We were really concerned because we have 28 of our
- 9 31 listed species migrate through that spot, but one

10 dove was the only casualty.

- So generally speaking, we're not too
- 12 concerned about the birds. Some birds are ground
- 13 nesting birds. The upland sandpiper is a good
- .4 example. We were initially concerned because they
- 15 have a very acrobatic mating flight that takes them
- 16 through high elevations rather rapidly. We've never
- 17 had a loss of an upland sandpiper that's been
- 18 tallied. We have issued several permits for that
- 19 just in case. But probably the greater threat is
- 20 during the construction period if there's a nest on
- 21 the ground that people don't notice. But to this
- 22 day we've not had an issue with that.
- Bald eagles. There have probably been
- 24 fewer than 40 bald eagles killed by wind turbines in

- 1 does require wet spots in soybean and cornfields.
- 2 It has to go through a molt for about a month while
- 3 it's here. And one of the things that we have
- 4 learned over the years is you will never see an
- 5 American golden plover within a quarter mile of a
- 6 wind turbine. They will just avoid them
- 7 assiduously. So that's a good example of how
- 8 wildlife can be affected without being killed.
- A lot of people I speak with seem to feel
- 10 like if it ain't dead or it ain't hurt, then there's
- 11 nothing to talk about, but the way Illinois is
- shaped with the best wind resources, there will be
- 13 places where there will be 150 miles of wind
- 14 turbines in a string sooner or later, and for birds
- 15 that will avoid them or won't fly over them or
- something like that, that will be an interesting
- 17 type of barrier. However, that's -- you know, no
- 18 one company is going to build a facility that large.
- 19 That's going to be, you know, like a whole lot of
- 20 apartment buildings on a block or a street. You
- 21 know, you can only hold each developer responsible
- 22 for what they themselves are doing not what the
- 23 industry is doing as a whole. And of course land
- 24 use is a local government prerogative, it's not a

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- 1 all of North America. When you read stories in the
- 2 press about hundreds of eagles being killed, those3 hundreds of eagles are golden eagles and they're
- 4 almost all of them in the west. And golden eagles
- 5 and bald eagles are different species and they
- 6 behave quite differently both in where they hunt,
- 7 how they hunt and how they fly. So golden eagles
- 8 are at risk from wind turbines; bald eagles not so
- 9 much. However, federal regulations, and that is a
- 10 species regulated by the federal government, treat
- 11 them the same. So everybody who's operating a wind
- 12 facility or plans to does have to have a discussion 13 with the federal Fish and Wildlife Service about
- 14 what risks they might encounter there. So
- 15 generally, the Department of Natural Resources
- leaves it to the federal government to talk about
- 17 bald eagles and have that conversation.
- You'll see mention in this letter about
- 19 the American golden plover. That's not a state
- 20 listed species, at least not today, and as a species
- that breeds in the arctic, they migrate south down the eastern Atlantic coast to South America in the
- 23 winter and come back through Illinois and Indiana in
- 24 the springtime, it's only here in the spring, and it

- state prerogative, so those decisions are made atthe local level.
- Bats have been a much more serious problem
- 4 with wind and it has come as a big surprise. Back5 in 2000, nobody expected there to be any problems
- 6 with bats. Afterall, we all know bats have sonar
- 7 and they can find a mosquito at 100 feet and zero in
- 8 on it and all this good stuff, so why in the world
- 9 would bats have a problem with wind turbines? But
- thanks to everyone's concern about dead birds, when
- 11 people were doing studies and looking for dead
- birds, they were picking up dead bats and a lot more
- 13 dead bats than they were picking up dead birds.
- So right away questions started being
- asked why are so many bats dying, et cetera, et
- 16 cetera. We still don't really know the answer to
- 17 that. We just know that they do. 98 percent of the
- 18 bats that are killed at wind turbines belong to
- 19 three species: the hoary bat, the eastern red bat
- 20 and the silver-haired bat. We call them tree bats
- 21 because they never hibernate in a cave. In fact,
- 22 they never hibernate at all. They're migratory like
- 23 birds are. The silver-haired bat breeds in the
- 24 summertime in Canada and it spends the winter in

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- 1 Texas, Mexico and Central America. The hoary bat
- 2 and eastern red bat do the same, but they migrate in
- 3 huge swarms of thousands and thousands and thousands 4 of bats.
- And some studies have been done with
- 6 thermal videocameras and stuff like that to see
- 7 whether the bats avoid wind turbines or what, and
- 8 the evidence is they just fly straight through.
- They ignore the fact that the turbines are there.
- 10 Why? Apparently they're not using their sonar when
- 11 they're migrating because they're not feeding. So
- 12 they either don't know that they're there or they
- 13 don't care. So the ones that make it through make
- it through and the ones that don't don't.
- 15 That's something that we're starting to
- 16 look at as a serious issues. Those three species
- were not on anybody's radar as a listed species. A
- recent study by Bat Conservation International and
- some of their scientists suggested that if we never
- build another wind turbine, these species will all
- 21 be on the endangered list within 30 or 40 years just
- 22 due to the annual toll that flying through the
- 23 existing wind farms takes.
- 24 Now, there are things with bats that can

- 1 not producing any electricity. So one of the things
- 2 that can be done is to it's called feathering the
- 3 blades to stop rotation until the wind is strong
- 4 enough to allow the turbine to produce electricity.
- That saves about 30 percent of the bats that would
- otherwise be killed.
- Again, bats have a seasonal migration,
- even the ones that live in caves. Typically the
- Fish and Wildlife Service is most concerned with
- August and September which are the peak months for
- movement, but those movements actually begin in the
- middle of July and can extend into October,
- sometimes into November. Bats are driven by
- temperature more than sunlight or day long period to
- move, so we're seeing lots of warmer springs and
- we're seeing lots of warmer falls, and so there's
- starting to be some variability in when bats are
- actually flying through. However, we can still rely
- on the standard periods to say, you know, you don't
- have to curtail your turbine all the time, just
- during the peak periods, and that would save a
- majority of the bats.
- 23 That's the basis for my recommendation
- 24 that talks about curtailing at 5 meters per second

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- 1 be done to manage the operation of turbines to
- 2 drastically reduce the numbers of bats that are
- 3 killed. Unfortunately there's nothing like that for
- 4 birds. A lot of things have been tried for birds,
- 5 painting the turbine blades different colors, that
- 6 sort of thing, but the physics of a rotating turbine
- 7 blade are it's moving so fast that the closer you 8 get to it the more invisible it becomes. And when
- 9 you're close enough to be struck, you cannot see it
- 10 coming. The birds cannot see it coming. So
- 11 painting it different colors doesn't really keep any
- 12 birds alive, but it does scare off a lot of other
- 13 wildlife and disturb the local residents and
- 14 everything else because it does make the turbines
- more visible from a distance. But that's not
- something we recommend as a control measure for 17 birds.
- Bats. Typically the management for bats 18
- takes two forms. The most reliable is called
- 20 operational curtailment. One method, one thing that
- 21 was discovered in doing these studies is that at
- 22 very low wind speeds below which a wind turbine can
- 23 produce power, it's still rotating, and about 30
- 24 percent of the bats that are killed die when it's

- 1 wind speed. That's the speed that would save about
- 50 percent of the bats that fly through. It's also
- 3 a speed that's considerably costly to the wind
- 4 turbine operator. The technology in the turbine
- 5 industry has been to manufacture turbines that can
- operate at a lower wind speed and that makes more
- places economically feasible to implement a project,
- but again it's at that lower wind speed that most of
- the bats die. So we're a little bit conflicted
- there on that sort of thing.

I have mentioned some aquatic species in

- 12 my letter. This is an area where I think the
- Illinois Department of Natural Resources may be
- virtually alone amongst states which have wind
- projects, et cetera, et cetera. The focus almost
- everywhere is on things that fly and that's because
- I think most people put their focus on the things
- that are moving which are the big blades up in the sky.

20 However, there are animals that live on

- 21 the ground, underground, and that live in our
- streams that can also be affected by things like moving shadows, by things like noise, by things like
- 24 vibrations, and -- but generally those types of

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- 1 impacts are not fatal. They might be exclusionary
- 2 and really alter animal behavior, might interfere
- 3 with mating or rearing young or something like that,
- 4 but those types of effects are much more difficult
- 5 to detect than carcasses falling out of the sky. So
- 6 it's much more difficult to document those things.
- 7 It doesn't make them less real, but it does make
- 8 them harder to measure. That's something we've been
- 9 looking at for a while.

Unfortunately, as many of you recognize, the State of Illinois is not flush with a lot of

- the state of filmois is not flush with a fot of
- 12 cash and the department is not staffed with as many
- 13 people as we used to have to put it mildly, and we
- 14 don't have the human resources or the fiscal
- 15 resources to do a lot of independent scientific
- 16 research on our own. So we're pretty much in the
- 17 position of asking industries that conduct
- 18 operations that we're concerned about to pitch in
- 9 and see if they will bear some of this burden of
- 20 finding out what's going on. So quite often I
- 21 develop recommendations that ask you to recommend to
- 22 your county board that you use whatever authority
- 23 you have to require a developer to do some of the
- 24 things we would like to see done in order to measure

- 1 information than you had before, but it's still
- 2 going to be up to you and your government to decide
- 3 what happens and when it happens and who has to do
- 4 it. It won't be up to the Department of Natural
- 5 Resources except in one case, and that case is if we
- 6 determine that the project is likely to take a
- 7 listed animal in the process, and we're at the high
- 8 end of likely here, not just possible but highly
- 9 likely, we will recommend something called an
- 10 incidental take authorization, and that is a permit
- 11 that can be obtained from the Department of Natural
- 12 Resources that authorizes a party to injure, kill,
- 13 pursue, hunt, collect, harass, you know, whatever
- 14 form of mayhem it is that may happen for a
- 15 particular species. Now, that's the only time the
- 16 Department of Natural Resources will ever say it's
- 17 okay to kill or injure some of those animals. It's18 the only time.
- So many times I've spoken to industry
- 20 people, not just in the wind industry but more
- 21 broadly speaking, people who might be liable for a
- 22 take are sometimes reluctant to seek that kind of
- 23 permit because they feel like it's a preconfession
- 24 of dastardly deeds or whatnot that we're going to

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- what these effects are and determine whether theyhave an adverse effect.
- 3 I probably didn't give a complete
- 4 explanation of the consultation process, and this
- 5 would be a good time to go back and emphasize that
- 6 what we are tasked to do is to give you information
- 7 and advice. The consultation process is not
- 8 designed to hand out mandates or regulatory
- 9 mandates. If it was regulatory, we would regulate.
- 10 We wouldn't ask you to do it, we would do it. The
- 11 fact of the matter is with 156 animals and 324
- 12 plants, for a lot of those species, we don't know
- 13 very much. We know what they look like, we can
- 14 identify them, they have a name, we kind of know
- 15 where they live, but how they behave, what's
- critical for their habitat, what's going to bother
- 17 them, what eats them, what they eat, many times we
- 18 don't have that information.
- So our information is incomplete, but we are tasked to give you an opinion. So we give you
- 21 an opinion, and people can argue about whether
- 22 that's a sound opinion, a good opinion, a bad
- 23 opinion, whatever it may be, but that's what it is.
- 24 Hopefully through our process we give you more

- 1 kill something. What it actually is is when they go
- 2 through our process, after every effort to avoid and 2 after every effort to minimize if they still early
- 3 after every effort to minimize, if they still can't
- 4 guarantee that there won't be a take, then they get
- 5 this kind of permit. So that kind of permit does6 require that the person holding it avoid and
- 7 minimize to the extent that they can any injury to
- 8 the animals, and what they can't avoid, they're
- 9 absolved of any criminal liability. That also
- 10 requires mitigation for the animals they can't avoid
- 11 taking.
- So many times we get public comments like,
- 13 dude, you know, what part of endangered don't you
- understand, you can't give them this permit, but it is actually a permit to take endangered species.
- The department has issued about 175 of those since
- 17 we acquired the authority to do so in 2000. We have
- 18 never actually denied one. We have had some people
- 19 walk away from the process because they didn't like
- 20 the conditions we imposed, but generally that's been
- 21 a very successful program. It allows us to say yes
- 22 in a limited extent if we determine that the take
- 23 that will occur is not likely to jeopardize the
- 24 survival or recovery of the species in the state.

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- So that's part of our process there, but
- 2 what I wanted to emphasize to you was that what's in
- 3 my letter here, our style is recommendations,
- 4 because that's what they are, they're just
- 5 recommendations, they're advice. They're advice
- 6 that you can consider or reject or modify as you see
- 7 fit. You're free to consult other experts, other
- 8 people, listen to other opinions, draw other
- 9 conclusions than what we have.
- I make it a point and have, I've been
- 11 doing this for 22 years now, I don't have a stick
- 12 that I can beat anybody with, I don't have a lot of
- 13 money that I can incentivize them to do what I want,
- 14 I just have our credibility. So our credibility as
- 15 a department is important to us and to me
- 16 personally, so we make it a point not to make
- 17 recommendations that are extreme in any degree, in
- 18 either direction, extremely severe or extremely
- 19 liberal. We try to make them science-based. Many
- 20 times there is no science and you may hear a bit of
- 21 that tonight, but they are science-based. So that's
- 22 why it's advisory. Like I said, if we had the
- 23 science to know, we'd be regulating on that basis,
- 24 but we don't. So that's kind of our process.

- Department of Natural Resources for the possessionand retention of those animals.
- 3 Typically when they begin the monitoring
- 4 program, the developer will submit that program to
- 5 the department for the department's advice. Now,
- 6 the department can't necessarily specify exactly how
- 7 it will be done, who will do it, when it will occur,
- 8 how often they will look, et cetera, et cetera, but
- 9 we do comment back to them on what they propose as
- 10 to whether we feel it's adequate to characterize
- 1 what the losses will be.
- Now, we're not looking for a completely
- 13 accurate count of animals, it's usually a
- 14 statistical estimate, so we're looking at sampling
- 15 that's intensive enough to give us a reasonable
- 16 statistical estimate of what's happening. So we
- 17 look at the total number of turbines, the total
- 18 number of turbines they're going to actually
- 19 monitor, whether they're going to monitor a large
- 20 area around the turbine or whether they're just
- 21 going to look at roads and pads. There are a number
- 22 of different methodologies for doing this, there's
- 23 combined methodologies, et cetera, but generally we
- 24 comment back to them whether we feel the program is

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- And I'd just like to wrap it up a little bit here. I haven't mentioned every species on here
- 3 or every character of species, and I haven't gone
- 4 through the recommendations per se, but I'd like to
- 5 toss it back to you now. And if you have specific
- 6 questions, if you'd like to ask me about my
- 7 recommendations, I'd be happy to answer your
- 8 questions.
- 9 MR. DEAN: Well, first, I'd like to thank
- 10 for your input here, it's brought a great deal of
- 11 clarity for me myself, so I appreciate your time
- 12 this evening. Talk a little bit to me about the
- 13 process for reporting casualties? Who plays a role
- 14 in that process?
- **MR. SHANK:** Okay, fair question.
- 16 Typically, and this has been the history throughout
- 17 the history of wind energy in Illinois, when those
- 18 types of monitoring studies are done, they are
- 19 either performed by the developer or a party
- 20 retained by the developer. They usually hire an
- 21 environmental consulting firm who has qualified
- 22 scientists. Those individuals, because they'll be
- 23 handling the carcasses of wildlife, et cetera, et
- 24 cetera, are required to hold a permit from the

- 1 adequate to give us a statistical estimate. And if
- 2 we think it's not, we suggest what they might do
- 3 differently, but then they're free to implement the
- 4 program they wish. We can't actually do that.
- 5 So some studies are really good, some are 6 mediocre, and some barely deserve the name, and, you
- 7 know, that can happen. By and large, most of the
- 8 developers I've dealt with over time I would say are
- 9 very responsible in how they do the studies. They
- tery responsible in now they do the studies. The
- 10 want the answers as much as we want the answers
- 11 because they need to know.
- In particular with the bats, in many
- 13 counties there are populations of endangered or
- 14 threatened bats, and there are penalties to be
- 15 incurred if those bats are killed, even though
- 16 they're not being deliberately killed. Here in
- 17 McLean County, we just don't have very many records
- 18 of listed bats. We have a few along the lower
- 19 Mackinaw from many years ago, and again, because we
- 20 don't have people out looking every year and other
- 21 people don't have people out looking every year,
- 22 there could be listed endangered bats all along the
- 23 Mackinaw River, but there may not be.
- McLean County is kind of in the center of

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- 1 the state. Many of our listed bats spend the winter
- 2 in caves in Indiana or caves in Missouri and Iowa,
- 3 and they filter into Illinois from east and west,
- 4 which means if they find a nice place to settle down
- 5 for the summer, they don't make it to McLean County
- 6 or Logan County or some of these others. Now, the
- 7 migratory bats that are flying north and south, they
- 8 certainly do come through here and they come through
- 9 here by the thousands.
- So the studies generally are looking at
- 11 two things. One, you know, what's the rate that
- 12 we're killing bats at, and that can be expressed as
- 13 bats per turbine or bats per megawatt capacity,
- 14 there's various ways of taking that measurement, and
- 15 they're also looking to see whether they're killing
- any threatened or endangered bats, because if they
- 17 are, then there's regulatory things they need to get
- 18 lined up in order to take care of that. So -- and
- 19 again, they're looking at that rate because if the
- 20 rate's too high, then there's probably things they
- 21 should do to lower that rate. And if the rate's
- 22 low, well, then maybe they don't need to do
- 23 something like that.
- So generally they are qualified

- 1 prefer two or three years of monitoring. In this
- 2 case, I recommended three. That's kind of where the
- 3 Fish and Wildlife Service has settled, on three.
- 4 Once upon a time we were happy to get one year
- 5 thinking that at least in one year -- because our
- 6 main concern was are you going to kill a threatened
- 7 or endangered bat, and we figured if you were going
- 8 to do that on a regular basis, it would happen in
- 9 the first year. We've kind of moved away from that
- 10 notion. We need a little bit more data than that.
- 11 So two we've asked for a number of times, but now
- 12 we've settled on three as something that we're
- 13 asking and increasingly it's what the industry
- 14 encounters, so they're usually willing to do a three
- 15 year study.
- And that, from our standpoint, it's not
- 17 necessary if the turbines are going to be there for
- 18 25 or 40 years to do it every year. If you do it
- 19 for three years when you first start operating,
- 20 we're going to have a very good idea of what's going
- 21 to happen year in and year out, so doing it yearly
 - 2 is not necessary.
- Now, in the one case in the state where we
- 24 have issued a permit to take endangered bats, we did

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- 1 individuals that we are familiar with that apply for
- 2 a permit from our department. Those individuals
- 3 receive that permit. They are required by law to
- 4 report to us at the end of the year the complete
- 5 tally of animals that they've collected and picked
- 6 up, where they picked them up and that sort of
- 7 thing. Most of these studies do require that the8 bat carcasses be retained in a freezer at the site,
- 9 so if there's any question about what kind of bat it
- 10 is, it's available for a second or third-party to
- 11 examine. Bats of the Myotis species, the little
- 12 brown, the northern long-eared bat and the Indiana
- 13 bat, are sometimes difficult to distinguish,
- 14 especially if they've been smashed by something. So
- 15 I'm not aware that -- well, I am aware. Sometimes
- 16 if there's a question about what kind of bat it is,
- 17 they'll even resort to a DNA analysis to see if they
- 18 can identify the species. So that's not unheard of.
- 18 can identify the species. So that's not unneard of.
- 20 it's costly, but that can happen.
- So generally these studies are done for
- 22 two or three years. Any one year can be what it is.
- 23 You know, it doesn't really establish a trend or
- 24 what's typical or what's likely to happen. So we

- 1 require two years of monitoring to see what was
- 2 going on, and then if they wanted to change their
- 3 operational management, they would have to do
- 4 additional years of monitoring each time they
- 5 changed the wind speeds at which they would curtail,
- 6 but we also required that at year 15 they would do a
- 7 study and at year 20 they would do a study so that
- 8 we would get a picture -- and it was a 20 year
- 9 permit, so we wanted a picture over the entire
- permitting period of what was going on with thosespecies.

Again, there's only one permit like that

- 13 out there at this point in time because so far
- 14 there's only one that's warranted it, although I did
- 15 learn this week the federal government has issued a
- 16 second permit like that to another operation which
- 17 doesn't have a permit from us yet, so we'll be
- 18 pursuing that issue with them, but I guess -- I hope
- 19 I've answered your question and maybe more.
- MR. DEAN: No, no, thank you. Yes, that
- brought a lot of clarity to it. Do the employees of the wind farm typically do or do not weigh in on the
- 23 carcasses?
 - **MR. SHANK:** Typically not. However, most

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- 1 of them have a policy where a technician in the
- 2 course of their normal duties, if they encounter a
- 3 carcass or find a carcass, they are to report it to
- 4 the group that is doing the monitoring or the
- 5 contractor that's doing the monitoring. And, you
- 6 know, I have encountered developers who don't want
- 7 to hire anybody and they say our technicians will
- 8 take care of that, and, gosh, their technicians
- 9 never find anything, but they're probably, you know,
- 10 worried more about the football game last night or,
- 11 you know, who's going to be in the World Series than
- 12 looking for bats on -- actually a dead bat is not
- 13 much bigger than a mouse. Unless you really know
- 14 what you're doing, unless you've been trained well,
- 15 they're hard to find. The most effective way is to
- 16 look with a trained dog. Not everybody uses dog
- 17 teams. In fact, it's kind of rare that people do,
- 18 again because of the cost.
- But a well-trained individual, one of the
- 20 things they have to do in these studies is measure
- 21 their own efficiency at finding a bat carcass. So
- 22 we allow them to take some of the bat carcasses they
- 23 collect and salt them out there and then send the
- 24 people out there to look for them and see how many

- 1 and we look at scavenger efficiency.
- 2 MR. DEAN: Okay, thank you.
 - MR. SHANK: You're welcome.
- 4 MS. TURNER: I have a quick question
- 5 about --

3

- 6 **MR. SHANK:** Sure.
- 7 MS. TURNER: -- Henline Creek, and your
- 8 recommendation is that no turbines are sited within
- 9 one half mile of the Mackinaw River INAI site, and
- then in parentheses you have Henline Creek, which I
- assume means is included in that.
- MR. SHANK: Right, yes.
- MS. TURNER: However, the portion of
- 14 Henline Creek that is in this particular project has
- 15 been described as a little bit different than the
- 16 rest of Henline Creek. Can you comment on that?
- MR. SHANK: Well, the reason that Henline
- 18 Creek is on the Illinois Natural Areas Inventory is 19 because of the aquatic fauna that are in it. It has
- 20 a very high fish index which means there's lots of
- 21 different species of fish that use it, and it has a
- 22 very high mussel index as well and includes some
- 23 endangered mussels, the slipper shell mussel. Many
- 24 of those species don't need a whole lot of water.

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- 1 they come up with, and that is factored into the
- 2 statistical calculations later on.
- We also have them measure the efficiency
- 4 of local scavengers. A certain number of birds and
- 5 bats that are killed are devoured by coyotes or
- 6 raccoons or mink or whoever else happens to be out
- 7 there, house cats maybe, before they're found, and
- 8 so that's measured as well by putting carcasses out
- 9 and then seeing how long they last before something
- 10 carries it off or eats it. I personally have seen a
- 11 coyote move from one turbine to another and quarter
- 12 the ground under that turbine and ignore all the
- 13 ground in between one turbine and the next, and
- 14 they're clearly looking for that free meal that
- 15 they've learned is there.
- We did have one case in western Illinois
 where one year the scavenger efficiency was only 15
- 18 percent, then the next year it was 60 percent. So
- 19 obviously, you know, animals that live more than one
- 20 year can learn where the free food is and take
- 21 advantage of that. But you have to take account for
- 22 that from one year to the next when you're taking
- 23 these measurements or your statistics are going to
- 24 be way off. So we do look at searcher efficiency

- So the Henline Creek has been designatedas an INAI site from the Ford County line downstream
- 3 to its confluence with the Mackinaw. Once upon a
- 4 time it was its very own Illinois Natural Areas
- 5 Inventory site. It was the Henline Creek INAI site.
- 6 At some point in the past, somebody in the
- 7 department decided they should aggregate some of
- 8 these things because there was just so many INAI
- 9 sites to keep track of or whatever their reasoning
- 10 was, and they took the Mackinaw River main stem and
- 11 Henline Creek and some of the nature preserves and
- 12 water reserves that are owned by the Parkland
- 13 Foundation and lumped them all in as the Mackinaw
- 14 River INAI site, and they did that throughout the
- 15 state with a number of other smaller creeks. The
- 16 lower part of Rooks Creek in Livingston County is
- 17 part of the Vermilion River INAI site. So it can be
- 18 easy for people to overlook the fact that these
- 19 things are considered valuable.
- Now, as far as some parts are not like the others. Portions of the creek differ in terms of
- 22 their riparian vegetation along the banks, the lower
- 23 portions of Henline have some trees and woods and
- 24 grasslands that the upper part lacks, but the key

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- 1 thing in these channelized streams where you've got
- 2 a drainage district at some point in the past, maybe
- 3 even currently, and extensive field tiles, that they
- 4 very, very often moderate the water temperature, so
- 5 there's not much fluctuation in the water
- 6 temperature. And it's usually pretty cool, in the
- 7 50 degree range, and can be very cool even in the
- 8 summertime. And the fish just love that, the
- 9 mussels just love that.
- And so I have a lot of pictures of places
- 11 like Henline Creek that look like any other drainage
- 12 ditch in the state, don't look like much in the way
- 13 of habitat, don't have rapids and they don't have
- 14 pools and ripples and things like that or don't
- 15 appear to, and yet they are teeming with endangered
- 16 wildlife.
- 17 **MS. TURNER:** So on -- you mentioned that 18 studies are important also.
- 19 MR. SHANK: Yes.
- MS. TURNER: And in one part, I believe it
- 21 was up on Rooks Creek and then an unnamed tributary,
- 22 you suggested either staying away from it or doing a
- 23 study. But yet on this one, you didn't mention
- 24 doing a study, on Henline Creek or the INAI site, so

- ye got 1 practical, there certainly are things we would like
 - 2 to see done because, as I mentioned earlier, quite
 - 3 often we're giving advice where we don't have the
 - 4 science.

5

- MS. TURNER: Right.
- 6 **MR. SHANK:** And here the physics of wind
- being what they are and tall things vibrate in the
- 8 wind and that sort of thing, there's certainly a
- 9 plausible basis for emanations of a vibratory nature
- 10 or the motion, the flicker shadows, et cetera, et
- 11 cetera, if the orientation is correct, et cetera,
- 12 that can extend some distance from the machine, but
- 13 we have no idea exactly what form those
- 14 modifications take, nor do we have any good idea of
- L5 what their significance is.
- .6 It could well be that there are physical
- 17 effects that you can measure in the stream that
- 18 don't bother anything. That would be good to know.
- 19 It could be that there are effects in the stream
- 20 that do bother things and that would be good to
- 21 know. And there could be effects that exclude
- 22 animals that are there now from ever being there
- 23 again. That would be very important to know.
- MS. TURNER: So again what you're saying

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- 1 I'm wondering if you feel that the risk there for
- 2 damage is too high to do a study? I understand the
- 3 study, the recommendation of a study on the
- 4 others --
- 5 **MR. SHANK:** Okay.
- 6 **MS. TURNER:** -- but I'm wondering why the
- 7 lack of recommendation?
- 8 MR. SHANK: Okay, that's a fair question.
- 9 Okay, because Henline Creek is an INAI site, when
- 10 you're in the business of giving people advice and
- 11 recommendations, it's almost like any other
- 12 negotiation, you start high and go lower. If the
- 13 recommendation is to stay back a half a mile, then
- 14 to come along right off the bat with "or you can do
- 15 this or you can do that or you can do that," then
- 16 not much attention is going to be paid to the half
- 17 mile recommendation. And my preference is, because
- 18 that's the recommendation that we make for all INAI
- 19 sites no matter what they are or where they are,
- 20 that close attention be given or due regard be given
- 21 to that half mile recommendation.
- So in this case I didn't recommend other
- 23 things because my hope was that, you know, we could
- 24 stay away. If that's not feasible or that's not

- 1 is right now you don't know those things.
- 2 MR. SHANK: That's right.
- 3 **MS. TURNER:** Okay.
- 4 MR. SHANK: We don't know those things.
- 5 **MS. TURNER:** Okay.
- 6 **MR. SHANK:** And as I mentioned before.
- 7 Illinois DNR is probably alone among states right
- 8 now who are even raising these issues. Other people
- 9 are content to worry about what gets knocked out of
- 10 the sky. We're a little bit more concerned about
- 11 other things. And in the terms of aquatics, almost
- 12 all the work that's been done with wind turbines and
- 13 aquatic organisms has been done in Europe with
- 14 offshore wind farms and they are looking at marine
- 15 fishes and marine mammals. And there's been a lot
- 16 of work done with those and certainly there -- the
- 17 construction of turbines offshore can result in the
- 18 immediate death of things because they're driving
- 19 piles and those concussions. Fortunately, we don't
- 20 have to deal with anything like that with a
- 21 terrestrial wind farm. And they've demonstrated
- 22 very well that marine mammals will avoid those
- 23 facilities, whether they interfere with their
- 24 communications or whatever, but they've also found

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1 that they attract a lot of fish to the structures.

So -- but almost no one, I'm not aware of

3 any studies directly related to wind turbines where

- 4 people have looked at impacts in a stream or in a
- 5 river. Other scientific things going on with noise
- 6 and streams, everybody's heard of our Asian carp
- 7 barrier in the Des Plaines River where we're trying
- 8 to keep Asian carp from getting into Lake Michigan,
- 9 that's basically an electronic barrier, but noise is
- 10 an element there. We use air cannons to put noise
- 11 in the water. Minnesota is using underwater stereo
- 12 speakers to broadcast certain frequencies of sound
- 13 in an effort to keep Asian carp out of some their
- 14 locks.
- So there's certainly scientific evidence
- 16 that noise affects fish behavior and fish behavior
- has a lot to do with mussel colonization, et cetera,
- 18 et cetera. So it's plausible that there could be
- 19 effects, it's plausible that those effects could
- 20 adversely affect some of the species that are in a
- 21 river, in a stream, but we don't know what those
- 22 are --
- MS. TURNER: Okay.
- MR. SHANK: -- and we don't know how

- 1 opportunity to visit a wind farm. If you put your
- 2 hands on the structure, you will feel the
- 3 vibrations. If you step away from the structure,
- 4 put your hands on the ground, you won't feel a
- 5 thing, but that's you and you're not a fish and
- 6 you're not a mudpuppy salamander, et cetera, et
- 7 cetera. And again, many people I talk to make the
- 8 mistake of thinking if it doesn't bother me it's not
- 9 going to bother wildlife. But we're pretty
- 10 insensitive creatures based on a lot of things that
- 11 are out there, and for them, it's always a life or
- .2 death thing to respond to stimuli.
- So the 500 feet to a half mile thing,
- 14 there's -- the main reason for it is a perennial
- 15 stream is basically that, because the water's always
- 16 running in it, there's always water in it, so
- 17 there's always aquatic wildlife in it, but it's not
- 18 necessarily anything special in terms of its natural
- 19 quality.
- So while it seemed to me appropriate,
- 21 given streams that we don't know what's in them, we
- 22 haven't surveyed all the streams that are present
- 23 here, to provide them some protection from what
- 24 those effects might be with a 500 foot setback.

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- 1 significant they are. So studies that would go that
- 2 direction would be extremely valuable.
- 3 **MS. TURNER:** Great, thank you.
- **MR. KURITZ:** Why would we make the jump
- 5 from a half mile recommendation clear down to 500
- 6 feet?
- 7 MR. SHANK: Very good question, thank you
- 8 for asking. Again, the half mile is a standard
- 9 recommendation we make for INAI sites. Going down
- 10 to the 500 foot thing, that's -- this is stated as a
- 11 perennial stream that's not an INAI site. So again,
- 12 when we're talking about these setback distances and
- 13 effects, things that have to do with energy
- 14 dissipation operate on a wave principle. It's
- 15 called the inverse square law. If you double the
- 16 distance, you cut the effects by a quarter, I mean
- 17 down to a quarter. So 500 feet is better than 100
- 18 feet, it's better than 300 feet. Half a mile is
- 19 better than 500 feet. So those are arbitrary
- 20 numbers on my part. There's nothing magic about 500
- 21 feet as opposed to 475 or 520. It's just that's a
- 22 nice even number and it does prevent putting a
- 23 turbine right on the bank.
- So I don't know if you've ever had the

- 1 Again, there's nothing compelling about 500 feet.
- 2 It's just like with any buffer zone, more is better
- 3 than less to a certain point, and then you
- 4 experience diminishing returns beyond that point.
- 5 But again, we don't know where that point is with
- 6 these things.
- 7 So I do not think 100 feet given a turbine
- 8 that's over 500 feet tall is any protection
- **9** whatsoever. 500 feet may afford some protection.
- 10 How much? I don't really know. Half a mile, I'm a
- 11 lot more comfortable with that, and I'm very
- 12 comfortable with a mile, but again, the more you
- 13 extend the buffer, the less -- the more you lessen
- 14 the effect. But I will be the first to confess that
- 15 500 feet is a number basically out of thin air.
- 16 There's no studies out there that say 500 feet is
- 17 the magic mark that you have to meet.
- So -- and again, that's one reason we're
- 19 just giving you recommendations rather than
- 20 regulatory guidance. So if your consensus as a
- 21 group is that 500 feet is worthy to implement,
- 22 that's great. If you want it to be less, that's
- 23 good. If you want it to be more, I'm perfectly fine
- 24 with that. You won't get any argument from me.

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- 1 MR. KURITZ: Thank you.
- **2 CHAIRMAN FINNIGAN:** Questions from staff?
- 3 MR. DICK: No.
- 4 **CHAIRMAN FINNIGAN:** The applicant?
- 5 **MS. ANTONIOLLI:** One moment. Mr. Shank,
- 6 thank you for your clarifications tonight. I wanted
- 7 to ask you about our proposed responses to your
- 8 recommendations. That would be EDPR's proposed
- 9 responses. And generally would you find that the
- 10 proposed responses are reasonable the way that we
- 11 have submitted them in Exhibit 14?
- MR. SHANK: I've had a few hours to look
- 13 them over. I received them today from you and I
- 14 appreciate that. I would characterize them as
- 15 reasonable. They're certainly not out of bounds.
- 16 We can discuss them in greater detail I'm sure, and
- 17 I'm sure we will, and there may be questions about
- 18 those things, but they appear to be reasonable
- 19 proposals to me.
- MS. ANTONIOLLI: Okay, thank you.
- 21 **CHAIRMAN FINNIGAN:** Mr. Luetkehans.
- 22 OUESTIONS BY
- MR. LUETKEHANS:
- Q. They didn't want to talk about the

1 light of recommendation number two. Number two is

- 2 the recommendation that I am consistently making for
- 3 all wind energy facilities that come to my
- 4 attention, and I am going to continue issuing that
- 5 recommendation for facilities in the future.
- 6 Q. Do you still believe that the measure if
- 7 implemented would prevent the prohibitive taking of
- 8 endangered or threatened bats and reduce the
- 9 mortality of nonlisted bats by approximately 50
- 10 percent?
- 11 A. Well, it will reduce the mortality of 12 nonlisted bats by 50 percent. Our experience has
- been that if you are curtailing at wind speeds below
- 14 5.0, if there are threatened and endangered species
- 15 that might be taken, they are likely to not be taken
- 16 if that curtailment is in effect.
- Q. Let's talk about IDNR recommendation number five for a moment if we could.
- MS. WALLEY: Mr. Luetkehans, I'm sorry, I don't mean to interrupt. Earlier you had objected
- 21 to the map and you asked for a foundation. Were you
- also objecting to the EDPR answers to the
- recommendations? I ask only because you're
- 24 addressing them now with the witness.

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- 1 reasonableness or the other things you wanted to
- 2 ask -- you wanted to talk about, so we'll talk about
- 3 those for a second.
- 4 A. Sure.
- 5 Q. I assume you don't make your
- 6 recommendations haphazardly, you have a basis for
- 7 them, correct?
- 8 A. Yes.
- **9** Q. And they're well thought out based on the
- 10 best scientific knowledge you have at the time; is
- 11 that correct?
- 12 A. That is also correct.
- Q. In these -- well, let's go through IDNR
- 14 recommendation number two. You've seen EDPR's
- 15 response, correct?
- 16 A. Yes.
- Q. Do you still recommend that the county
- 18 consider imposing a requirement for the curtailment
- as you set forth in your recommendation?
- 20 A. Well, if you're asking me whether I would
- 21 withdraw the recommendation, the answer is no. It's
- 22 a reasonable and appropriate recommendation. It's
- 23 not up to me to decide whether the counterproposal,
 - 4 if that's how we characterize it, is satisfactory in

- MR. LUETKEHANS: Yeah, I did not object.
- 2 I think that this board needs to take into account
- 3 their responses are one thing and then their
- 4 statements -- their unsupported statements that
- 5 relate to no studies, I think the board needs to
- 6 take that into effect as to weight --
 - **MS. WALLEY:** I understand.
- 8 MR. LUETKEHANS: -- because they haven't
- 9 had anybody come in and say there are no studies,
- 10 but --
- MS. WALLEY: Do you have any issue with me passing them out?
- passing them out?MR. LUETKEHANS: Oh, absolutely not. I'm
- 14 sorry, I didn't --
- MS. WALLEY: That's okay. That's all Iwas asking.
- MR. LUETKEHANS: And I didn't object because I had no problem with them.
- MS. ANTONIOLLI: So if there was no
 objection to that being entered into the record as
 Exhibit 14 and I moved earlier to do so, would that
 be acceptable to the board to move that into the
 record now?
 - CHAIRMAN FINNIGAN: Yes.

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MS. ANTONIOLLI: Thank you. 1

MS. WALLEY: I apologize for the 2

- interruption. If you want to continue, Mr. 3
- Luetkehans. 4

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16

MR. LUETKEHANS: Thank you.

BY MR. LUETKEHANS: 6

- Q. If we could go to your recommendation 7 number five. Mr. Shank. 8
- 9 A. Yes.
- Q. If you had your -- I know it's not your 10
- 11 decision and you just make a recommendation, but if
- you had your way or your druthers, would you rather 12
- have the 500 feet setback from the perennial streams 13 14
 - or would you rather have the study?
 - A. Well, that's an interesting question. As things stand statewide, we don't have the
- information that studies would provide. If I had my 17
- druthers, I would rather have the studies because 18
- 19 that could help us establish what the effects are,
- 20 what the magnitudes of those effects are, et cetera,
- 21 et cetera, and we could then translate that to other
- projects, et cetera, et cetera, or we could learn 22
- 23 that there are no significant effects and therefore
- 24 we dispense with those recommendations further.

- different distances by the same model of turbine
 - under the same weather conditions and that would be
 - 3 very useful. So I wouldn't necessarily throw 500
 - feet out as one of the benchmarks, but it wouldn't 4
 - have to be the only benchmark. 5
 - 6 Q. As to recommendation number six, you're
 - 7 not recommending a study as it relates to the half
 - mile of the Mackinaw River INAI site, are you?
 - A. No, I did not recommend that. I
 - 10 recommended a half mile setback from the Mackinaw
 - 11 River INAI site. Again, that's a recommendation.
 - Again, the basis for that is scientifically somewhat 12
 - 13 tenuous for the same reason that the 500 foot
 - setback is somewhat tenuous. It's our belief that 14
 - 15 at a half a mile any physical effects that are going
 - to occur are unlikely to be significant, but we 16
 - 17 don't know that they would be insignificant. So
 - again, observing that half mile setback, while we 18
 - 19 believe it would be protective of the INAI site, we
 - couldn't prove that it would be and we couldn't 20
 - 21 prove that it wouldn't be.
 - Q. And, in fact, you said that a mile would 22
 - be even more protective, but you're not asking for
 - that, correct? You're only asking for a half mile.

A. That's correct, and the reason for that

is tasked with defending those from adverse

difference is for a nature preserve, the department

modification. We would be in a position to seek to

prove that there was an adverse modification and to

seek to prosecute the parties responsible. We don't

have that kind of authority in relation to an INAI

But your recommendation is still a half

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- The position we're in now is one of high 1 2 uncertainty where the best information we can put together suggests that there are effects, but again 3
- we have no idea of their magnitude. So studies 4
- would illuminate many of those questions, and if I 5
- had my druthers, I'd prefer to have some studies 6
- 7 some where some when that would answer those
- questions. 8
- Q. Okay, but the question then becomes I 9 assume you would still want some form of setback, 10
- correct? You wouldn't want it 50 feet or 100 feet. 11
- A. That would depend on, if there were going 12 to be studies and there was not going to be a 500 13
- foot limit, what was proposed. Distance is clearly 14
- a factor here. If someone wanted to propose I'm 15 going to put a turbine right on the bank and see 16
- what it does, I don't think that would be necessary 17
- to do. I'd be reluctant to say that would be okay. 18
- But as to what's the appropriate distance a turbine 19
- to be for a study, it would be nice to have some 20
- less than 500 feet, and it would be nice to have 22
- some more than 500 feet. And a study design could 23 be created that would allow you to evaluate the
- turbines at 500 feet, it would be nice to have some 21

Q. The only question I really have is do you 22 23 think some studies prior to the installation of the turbines, like they've proposed putting them in here 24

mile. A. Yes. 11

site.

- MR. LUETKEHANS: Nothing further, thank 12 13 you. Thank you, Mr. Shank.
- **CHAIRMAN FINNIGAN:** Would anyone in the 14 15 audience have questions of this witness? Come forward. 16

MR. TAYLOR: I'll make it quick, I promise. Travis Taylor, 28686 North 3050 East Road,

Chenoa, Illinois. 19

QUESTIONS BY

21 MR. TAYLOR:

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- 1 possibly in the fall or early next year. Do you
- 2 think that an early study that would prolong that a
- year or a year and a half to two years prior to the
- 4 turbines going in and then the study during and then
- 5 after would be better than just a study starting
- 6 when they're installed or what is a good time frame
- 7 for those?

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A. That's a very good question. The crucial

9 part is when the turbines are placed into operation

10 because it's their operation that's going to create

- 11 the effects that would do that. I think there's an
- 12 opportunity to conduct the existing conditions
- 13 studies while the turbines are under construction,
- and I think there's probably this year sufficient
- opportunity to do that, and the turbines probably
- wouldn't go into operation until the following year
- and that would be adequate time. I don't know that
- 18 it's necessary to delay the actual construction by a
- 19 year or several years in order to establish the
- 20 preexisting conditions because it's the operation of
- 21 the turbines.
- 22 I'm frequently asked this in terms with
- 23 the listed bats. Where we think there are listed
- 24 bats, I tell people you can build the turbines, you

- 1 Q. I'm sorry, I came with one other question.
- 2 A. Oh, that's all right.
 - Q. You mentioned earlier that maybe it would
- 4 help with the study with a turbine inside the 500
- 5 and then a study at the 500 and then --
 - A. Uh-huh.
- 7 Q. -- probably a thousand I'm guessing past
- 8 that or a mile. Do you think that that's something
- **9** that could be added to a suggestion so that if they
- 10 did the study they could do the three different
- variations? I mean if the turbine layout worked so
- 12 that you could get results off of that.
 - A. Well, I would expect -- and this proposal is rough at this point. It's not completely
- specific as to the actual details of what the study
- would do, how it would be conducted, et cetera, et
- 17 cetera. We would have to take a look at that. If
- 18 any aspect of the study actually requires handling
- 19 fish and wildlife, they need a permit from us for
- 20 that, and that would be the time to discuss exactly
- 21 how the study would be performed. And so, you know,
- 22 whether it's 250, 500, 1250, 1000, you know,
- 23 whatever those types of parameters might be, or it
 - could be that the planned placement that they

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- just can't turn them on, so -- and that's kind of
 the approach here. You can build them. As long as
 they're not running, they're not going to cause the
- 4 effects that we're trying to identify.
- 5 So I think there's probably -- you know, 6 they talk about these things going up very quickly,
- 7 and, you know, eight or nine months is relatively
- 8 quickly for a power plant, but it's not
- 9 instantaneous. And here in this particular case we
- 10 don't have any -- particularly in relation to
- 11 aquatic species, we don't have anything that would
- be adversely affected by the actual construction
- 13 process unless there were some serious breaches of
- 14 erosion controls and storm water management plans.
- 15 That would be a key thing that would have to be in
- 16 place because it would be a shame to have, you know,
- all the mussel habitat get silted up all of a sudden
- 18 before you've had a chance to see what's there. So
- 19 that would be kind of a requisite to make sure that
- 20 there was good erosion controls in place and
- maintained throughout the construction process, but
 I think the turbines construction wouldn't have to
- 23 be delayed in order to establish a sufficient
- 24 foundation for what's out there.

- already have, various turbines there would be at appropriate distances to find out what's going on.
 - Their proposal they have, I think, for
- 4 Rooks Creek is they have two turbines that are at or
- 5 below that 500 foot distance. I don't think they
- 6 would propose shifting them to match a study. They
- would propose similing them to material study. The
- 7 would say, well, here's where they are at, let's see
- 8 what they do. And unfortunately, and I've been
- 9 saying this for at least ten years, you can
- 10 speculate a lot about what's going to happen when
- 11 you put up a wind turbine, but basically you have to
- build it and find out. And when you do find out,
- 13 the answers that you get are pretty good for that
- 14 turbine and that particular wind farm and you can't
- 15 necessarily take those answers to some other wind
- 16 farm because the physical context is going to be a
- 17 little bit different.

 And to make
- And to make that point, many applicants over the years have referred to the Fowler Ridge
- 20 project in Indiana, which is famous because it was
- the first to kill an endangered Indiana bat. That project deployed three different kinds of turbines,
- 23 but many people who cite those studies fail to
 - remember that there's three different kinds of

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insects.

- turbines there. And when you split the data up by 1 the type of turbine, you find that one type of 2 3 turbine was really deadly, one was kind of middling deadly, and the other one hardly killed anything.
- So if you take the average and try to take it somewhere else, you're really misrepresenting what's 6 going on. So you have to take a close look. 7

Now these turbines that are going to be deployed here are the first of their kind to be deployed in Illinois, so we'll have to see what they do. They're a little higher than a lot of the others. They have larger capacity than some of the others, so it's difficult to compare them to turbines that are already in place here in McLean County or that are in place anywhere else in the state because they're different, they're different machines made by different manufacturers, and so we'll just have to find out what's up with these

But it is an opportunity to get some good answers and hopefully a situation that won't damage anything. But if the studies do demonstrate that there's adverse effects, then the discussion we're going to have is what can we do about that, what can

been a few questions that -- I haven't heard a lot

of these questions asked about the wildlife and

3 that's about insects.

A. Insects, okay.

Q. I think we all can agree that there's good bugs and there's bad bugs, a lot of bad bugs, but,

7 you know, aside from some of the pests, how about

the impact on some of the positive insects, the

9 pollinating insects, bees? I know we do a lot of effort into trying to control spray drift to lessen 10

11 the impact on bee colonies. Is there an impact that these turbines can have on pollinating insects like? 12

A. Okay, that's a fair question. I'm not aware of any indication or studies or suggestions that important pollinators are adversely affected by the presence or operation of wind turbines. The blades do accrue a coating of insect innards over time and periodically have to be cleaned, and some of the pests are -- well, thank you very much -- do fly high enough. I mean obviously the bats are up there doing their thing. Not just in migrating during the summertime, the rest of the year they're also being killed because they're out there eating

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- we do to mitigate that? And again, because the 2 types of effects I'm expecting, if there are any,
- have to do with the operation of the turbine, then 3
- we'll be looking at turbine operations in terms of 4
- wind speeds and that sort of thing. Or some of the 5
- movements of animals up and down these streams are 6
- 7 seasonal, so there may be certain months we don't
- want those turbines to operate or we don't want them 8
- to operate at certain speeds, but we'll have to see 9
- what the outcome of the study would be before we 10
- could determine that. So I don't know if that 11
- answers your question or not. 12

turbines once they're built.

- Q. I think it was just fine, I appreciate it. 13
- A. Okay. 14

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- MR. TAYLOR: Thank you. 15
 - MR. SHANK: You're welcome.
- **CHAIRMAN FINNIGAN:** Any other questions? 17
- **MR. SHANK:** This is kind of like a straw. 18
- I keep wanting to take a sip. 19
- MR. POWELL: Jeff Powell, 32897 East 2700 20
- North. 21

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- **OUESTIONS BY**
- MR. POWELL: 23
 - Q. Hi. I'm glad you're here because there's

But just like some species of bats use a 1 different altitude than other species do, I think 2 most of the pollinators tend to stay low when 3 they're flying about. And regardless of the type of 5 turbine that's out there, most of them have a lower blade sweep of over a hundred feet in the air, so I really don't expect that there would be an adverse impact on pollinators from blade strike.

Now, whether there's electromagnetic field emanations or vibratory things that might bother bees or pollinators, I haven't seen any indication of that type of stuff at all. We have, you know, bug devices that are out there that are supposed to repel mosquitos through sonic waves and that type of thing, but the type of frequencies that you get from a wind turbine are really on the low end rather than the high end, so I really don't expect that there would be impacts on pollinators that wouldn't be directly related to the disruption of flowering plants and that sort of thing.

Q. Would you consider the monarch butterfly as one of those that flies low? I know they're not on the endangered species yet, but they're getting pretty close.

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A. I appreciate that.

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- Q. And that's a topic of concern for somepeople.
- A. Yeah, the department is working closely with the Fish and Wildlife Service to see if we
- can't prevent that species listing. Monarchs do
- migrate all the way to Mexico and up into Canada and
- back again, but it's not the same butterfly. Those
- 9 that come north are the great-grandchildren of the
- ones that were in Mexico late in the fall. Some of those do make it all the way back to Mexico and
- 12 they're pretty tattered when they get there.
 - So it's not really clear to me and I don't think it's clear to anybody else whether they try to get up high and ride the wind currents or whether
- get up high and ride the wind currents or whether they're fluttering along treetop level. They do
- have to eat fairly often, so I imagine they don't
- 18 get up there too high. I don't think -- I think
- most of the insects that end up on a turbine blade
- 20 are beetles of one kind or another, aphids and other
- 21 things that are either light enough to get carried
- up there by an upwelling wind or are up thereanyhow.
- But we have had some wind farms built

- 1 in the loss of pollinating insects. I think there's
- 2 probably other things operating in the environment
- 3 that are much more serious. Could be. I'm not
- 4 saying butterflies are never whacked, but I'm not
- 5 aware of that. And of course if they are, they're
- 6 stuck to that turbine blade up there and they're not
- 7 falling on the ground to be picked up with
- 8 everything else. So I can't give you any better
- 9 answer than that.

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- Q. Just a side note, they can kill as many Japanese beetles as they like.
- A. I second the motion.
- Q. That brings me to my last question.
 - A. Sure.
- Q. You talked a lot about bats, and the
 concern I have at my home with my family is mosquito
 control. And I find it hard that that's something
 to gauge, but, you know, common sense only can tell
- me that if they're killing bats, then there will be
- 20 more mosquitos because the bats aren't there to eat
- 21 them. Would you agree with that?
- A. That's a fair statement, but let me offer this caution. A couple years back the U.S.
- 24 Geological Survey issued a press release that

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- where we have had regal fritillary butterflies and
- 2 that's been a concern, but the concern has been more
- 3 with the construction traffic because butterflies
- get sucked into radiators, so there we've asked for
- 5 lower speed limits and things like that in
- 6 construction traffic and again care not to disrupt
 7 the types of vegetation that would be feeding them
- 7 the types of vegetation that would be feeding them
- 8 or that they would feed on.9 So for the monarch, y

So for the monarch, you know, milkweed is an important thing, any kind of milkweed not just the common milkweed, but again road traffic is a hazard for monarchs. I dread the day it's ever put

- on the endangered list because I don't know what we're going to do about that because, boy, it's
- 15 everywhere. We're pledging to establish a billion
- more stems of milkweed over the next couple years in
- 17 Illinois in an effort to bolster the monarch
- 18 population. That's assuming that pesticides are not
- a big factor in their troubles. I'm not convinced
- that it's solely the absence of milkweed that's causing the problem, but it's the one everybody's
- 22 focussed on right now.
- But I have not seen a discussion of wind farms or wind turbines anywhere being a major factor

- announced that the Mexican free-tailed bats in Texas
 consumed I don't know how many million of tons of
 boll weevils and consequently they were saving
- boll weevils and consequently they were savingfarmers \$60 billion a year in pesticide costs
 - because they were consuming all this tonnage.

And a lady from central Illinois called me up and she asked how much more pesticide the farmers

- were going to have to buy around Paxton because of
 the wind farm over there. And I said none. And she
 said, well, why? And I said, well, we don't have
- 11 Mexican free-tailed bats in Illinois, we don't have
- boll weevils in Illinois, and so, you know, thatstudy is only applicable to Mexican free-tailed bats
- and boll weevils, so we don't know. But I said
- 15 here's the thing. I don't know any farmers, and I
- said and you don't either, who decide how much pesticide they're going to purchase based on what
- 18 they think bats are eating. They're going to test
- 19 their fields, decide whether the infestation is
- serious enough, and then they're going to treat it as though there are no bats anywhere in the
- as though there are no bats anywhere in the universe. It's not a consideration.

So, you know, bats do consume millions of tons of insects a year, I'm not belittling that at

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- all, and I am sometimes distraught when I'm working 2 with a mosquito abatement district that wants to go
- out and spray every square foot of 36 square miles 3
- to kill mosquitos because then what are
- insect-eating birds and bats going to live on if
- you -- because almost all the pesticides, well,
- 6
- we're spraying for mosquitos, yes, you are, but the pesticide you're using is going to kill everything.
- 9 It's not species selective.

So I have a much bigger concern with our 10 extravagant use of pesticides than I do with that, 11 but your point is well taken and this is one of the 12 concerns for the devastation amongst the nonlisted 13 tree bats which do a lot of the consumption of 14 insects as they travel about. We would certainly 15 miss them, we would feel the impact of that, and I 16 17 think more farmers more frequently would have to treat more than they are now because I think 18 19 infestations would rise to greater levels. There 20 are an awful lot of bats over a cornfield when the corn rootworm moths are out and that's what they're 21 eating. So that is a factor, whether it's mosquitos 22 or other pests, and that's a consideration.

would have left them over in Asia because they sure

- like my house and they like a lot of other people's
- 3 houses, but again that's one of the risks. When you
- start messing around with a balanced ecological
- system, you start shifting the balance, you really 5
- 6 don't know what's going to happen, you don't know
- 7 what species are going to bust out all over the
- place, you don't know which ones are going to

when you're really modifying things.

- 9 disappear, and so you're always rolling the dice
- 11 Q. I guess that brings me to my last question 12 is we were talking about the IDNR recommendations. 13
- I know that when you put a parking lot in town, they have, you know, a rule about, you know, for so many 14
- 15 spaces you have to put so many trees to offset the,
- you know, concrete or the asphalt space that you're 16 17 putting out.
- 18 A. Uh-huh.
- 19 Q. Would it be -- would the IDNR recommend 20 that the company have safe harboring areas for some 21 of these species to offset what they're taking from the environment? 22
 - A. Well, we call that mitigation and our ability to require mitigation is pretty much limited

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there now that kill bats other than diseases, which

And again, of the things that are out

- 2 is the major thing -- and by the way, this is an
- opportunity for me to clarify. You'll often see in 3
- the media the bats are taking a double whammy, 4
- there's the white-nose syndrome and there's wind
- turbines. The bats killed by wind turbines don't 6
- suffer from white-nose syndrome because they don't 7
- hibernate in caves, and if you don't hibernate in 8 caves, you're not going to come down with white-nose
- syndrome. And the bats that do hibernate in caves 10
- and come down with white-nose syndrome are rarely 11
- killed by wind turbines. They constitute less than 12
- 5 percent, sometimes less than 2 percent. So it's 13
- not that the bats are taking a double whammy from 14
- white-nose syndrome and wind turbines, because 15
- they're different kinds of bats respectively that 16 are doing that. 17
 - That's off your topic, but yeah, losing bats is a factor in insect control, but again most
- 20 people who are concerned with the economic inroads
- of insects, insect pests, really don't factor in 21
- natural predation on the insects as a control 22 method. I mean they introduced the Asian ladybug to 23
- try to deal with the soybean aphid. I wish they

- to threatened and endangered species. It's always something that can be considered, but first you have
- to have a reasonable way to measure what the impact 3
- is, and then you have to devise means or methods 4
- that can try to make up for that, and that's really 5
- what you're trying to do when you're talking about 7 mitigation. That's different than minimizing your
- 8 impact. That's making up for the impacts you can't avoid. 9

Certainly when we talk about endangered species, mitigation is part of what we're talking about. For the nonlisted species, we don't talk about it that often. I mean it's the same principle, it could be applied, but that would largely be voluntary I think on the part of the developers.

MR. POWELL: Thank you.

MR. SHANK: Thank you. 18 19

CHAIRMAN FINNIGAN: Any other questions? I don't think so. So we really appreciate your time here tonight coming up and talking to us and a lot of things are clearer for me I know.

MR. SHANK: Well, thank you and it's my pleasure.

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CHAIRMAN FINNIGAN: We're going to take a 1 ten minute break. 2

(Recess at 7:32 p.m. to 7:43 p.m.) 3

CHAIRMAN FINNIGAN: Ready for you, Mr. 4 Luetkehans. 5

MR. LUETKEHANS: We would call Mr. Kurt 6 Kielisch. At this time we would ask that SLG 7

Exhibit 24 be put into evidence as Mr. Kielisch's 8 c.v. 9

CHAIRMAN FINNIGAN: Would you like to be 10 sworn in. 11

MR. KIELISCH: Yes, please.

CHAIRMAN FINNIGAN: You don't have to 13

stand up. Just sit down, that's fine. 14

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(Mr. Kurt Kielisch was duly sworn.) 15

CHAIRMAN FINNIGAN: Would you state your 16 name and address and spell your last name? 17

MR. KIELISCH: Sure. My name is Kurt Carl 18 Kielisch. 19

CHAIRMAN FINNIGAN: You've got to turn 20 your button on. Bottom, bottom right. 21

MR. KIELISCH: My name is Kurt Carl 22

Kielisch, Kurt with a K. Carl with a C. Kielisch. 23

24 K-I-E-L-I-S-C-H. I live at 2422 Forest Manor Court.

don't you just proceed with that --1

MR. KIELISCH: I do.

MR. LUETKEHANS: -- and I'll keep my mouth

shut.

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MR. KIELISCH: Okay. I was asked to give testimony on the impact of a large wind turbine farm on rural residential property in McLean, so I put together this PowerPoint. All right, wouldn't you know it. There we go, we're fine. And the first thing I want to do is just explain how I go about this, that there are really two values that an appraiser looks at when they develop an opinion of value. One is called the qualitative and that's the yes/no question, and the other is quantitative and that's the how much question. So an example of the yes/no question would be does or do high voltage wind turbines, sorry, have an impact to residential property value, yes or no? And then of course the

Okay, this is really not behaving. Okay, technical difficulties right in the beginning. Stay on the left one, gotcha.

quantitative is, if it's yes, how much? And that

would give you your predicted impact.

Okay. So the purpose was to discover what

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Neenah, Wisconsin. 1

2 **MR. LUETKEHANS:** I'll try and make this real quick. Mr. Kielisch, is this -- is what's been 3

labeled SLG Exhibit 24 a current copy, a copy of 4

your current curriculum vitae? 5

MR. KIELISCH: Yes.

MR. LUETKEHANS: And on there does it list 7 your experience, your academic background, your 8 certifications, as well as seminars you've taken and 9 given, et cetera? 10

MR. KIELISCH: Yes.

MR. LUETKEHANS: And you've been certified 12 to testify or qualified to testify before many courts over the last decade or two?

MR. KIELISCH: Yes, I have.

MR. LUETKEHANS: Unless there's something else, we just ask that SLG Exhibit 24 be admitted into evidence as his curriculum vitae and showing his qualifications and ask that he be designated as an expert.

MS. ANTONIOLLI: No objection.

CHAIRMAN FINNIGAN: We will do that. 22

MR. LUETKEHANS: Mr. Kielisch, you have a 23 24

PowerPoint presentation you'd like to give. Why

impact this has and the very first thing is that

2 value equals perception. Perception drives value.

To understand perception, you have to look at what 3

is the buyer -- and perception is in the buyer's 4

eyes. Market value is derived by the buyer not the 5

seller. We're assuming a willing seller at this 6

7 point. So it is the buyer who drives that value.

And so what is the public's perception? That's the 8

first thing you want to look at when you're looking

at a qualitative analysis, and that we do in a

literature study, a literature review.

And the second is what studies are out 12 there? And that we looked at, we found eight 13 studies, some of them were our own, and that 14 develops the quantitative analysis. And then the 15 third step was a local study and we completed this 16 local study in the northern part of Illinois here 17 not too far from here on a wind farm there, so I'm 18 going to look at each one of those. 19

Let's look at the literature study, and to look at the literature study, what we're really looking at is what is the print media, what is the audio media, what's the visual media, and mostly what is the internet media. The internet is really

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- driving opinions in today's market. So when we did
- that, we found some general conceptions here. Wind
- farms have been associated with neurological and
- physiological disorders, in many cases sleeplessness
- and headaches as being some of the symptoms. That
- 6 was the University of Minnesota study. Advocates
- and WHO counter in their own study that there was no
- such evidence. However, that was in -- check my 8
- notes here. That was in 1995. And then four years 9
- later the WHO reversed themselves on this position 10
- 11 and said they do now have a concern that there are
- health issues relating to wind turbines, 12
- 13 particularly in the area of the low frequency noise
- or the NFL. And to really understand that, that is 14
- the noise you don't necessarily hear, you feel. You 15 16 feel that type of noise.

Now health solutions. Well, they were suggested to increase setbacks to 1500 feet up to one and a half miles. One study suggested a

- mandatory 2 kilometers, which is, got to do the good 20
- math on that, 1.6 miles if I'm not mistaken, from 21 any residence, filter inverters on both the turbines 22
- 23 themselves and in the substations, and to bury all
- 24 collector lines.

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- more birds actually killed by windows than there are
- by wind farms at this point. And there's a mention
- of bats in greater danger and predatory birds are
- killed. A particular study that was done in Wyoming
- came to that conclusion of why were they losing so
- 6 many of their hawks and their eagles in the areas of
- wind farms, and they discovered that predatory birds 7
- were being killed because they have no fear when 8
- 9 they're in the sky, they are not subject to a
- predator, and they're always looking down not so 10 11

much in front of them. 12

The other thing that we came up with in the literature was that property values, a big concern about property values, which of course is the focus of my conversation today. Wind advocates deny that there is any negative impact, and they claim and often -- as a matter of fact, one CEO claimed it was a made-up issue. Most studies on wind farms, the larger studies, are paid for by the wind industry and they have found no significant

- 21 impact. The REPP study which is a, sorry, that's the Renewable Energy Policy Project group, they 22
- 23 found that actually property values increased with
- the presence of wind turbines, and they're looking

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And hazards are evident too with wind 1 2 turbines, something to be considered, and this is what came up in the whole literature review is they 3

- are subject -- the turbines themselves are subject 4
- to accidents and failures. As a matter of fact, the 5
- last time I gave testimony, on my way down through 6
- the -- I think it was right around Aurora, Illinois,
- there was a wind turbine on fire, which I thought
- was interesting, and there's various reasons for it,
- but they are subject to accidents and failures. 10
- They have ice throw, something that should be 11
- concerned about in the north. The blades -- blades 12
- also throw due to weaknesses, there has been 13
- evidence of that, although not very common, and 14
- danger to planes, low-flying planes and crop dusters 15
- in particular. Most crop dusters will not dust in 16
- an area where there are wind turbines. And the 17
- nuisance, the flicker effect and things of that 18
- sort. 19

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There's conservation. You heard a lot about that today I suspect, as I came in late and I

- was listening to some of that testimony. Protecting 22
- 23 of the natural viewshed is a concern on the
 - conservation. Birds killed. Of course, there's

- at property values including residential property
- 2 values. Of course, critics found that loss
- unacceptable and illogical. Many small studies 3
- found value losses of 15 to 37 percent, and this was 4
- 5 a conclusion of a Michigan township zoning approval
- board similar to yours that was doing a study on 6
- that. Aesthetics are of course impacted as well as 7
- making the properties difficult to sell and
- experience of longer listings. 9

There is an economic impact positively.

- 11 Tax revenues are increased at the local treasury
- from the project. Often there is money in there for 12 13 the local townships and things of that sort.
- However, property values do take a hit on this and 14
- 15 eventually the assessments go down as the properties
- are difficult to sell or are selling at a much lower 16
- 17 rate in assessments. Job creation is often said to
- be a positive and that's only during the time of 18
- 19 construction. After that, typically a work crew is
- left, possibly 15 to 18 individuals working 20
- 21 full-time. And then the negative perception that
- makes the residential attraction is really becoming 22
- 23 undesirable. As a matter of fact, one -- some
- individuals kept using the term an industrialization 24

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of rural America. 1

So where does that put us in the 2 3 qualitative analysis? To stack this up in a scale, you would see that under the no impact, there is 4 some evidence, but most of that comes from the advocates and they state there is no proof. On the, 6 yes, there is an impact, a lot of concern from many different industries. The health industry is part 8 9 of this, independent studies by universities and things of that sort, and a general concern from the 10 11 realtors and others about the impact to value. So on the qualitative side, we'll have to say that 12 there was a strong suggestion that there is an 13 impact to answer that yes/no question. 14

15 So let's look at some studies. Actually the first one I'm going to skip over because I've 16 heard that the Berkeley study was not discussed 17 here. This is a national study, very big, it's 18 19 actually been revised already. There are -- it was created by the DOE, Department of Energy, at a half 20 21 a million dollar grant. I have a lot of critique on this, studied it intensely, interviewed the authors 22 23 of this, Ben Hoen and the others of this study, but 24 I will skip it because that wasn't discussed

wind turbine, and about half of that, 3686 per

property if it was between 1 and 2 kilometers away. 2

3 However, they said that since this fell into their

10 percent statistically insignificant factor, 4

therefore the 10 percent loss that was indicated was 5

6 not significant in their analysis. The study was

7 really designed more to measure the accuracy of the 8

assessments more than the impact analysis.

9 Contrary to that, Ben Lansink, an appraiser, certified general appraiser up in Canada, 10 11 he did a comparative analysis of five properties, and in his comparative analysis, these five 12 13 properties were purchased by the wind farm and then the owners moved out and then the wind farm 14 15 approximately two to three years later sold these properties. And what Ben did is he did a cost 16 17 analysis on the date that they purchased to ensure that these properties were bought at market value 18 19 and then he did a trend analysis to predict what they should have sold for at the time they sold. 20 21 And with that, he found losses ranging from 9 to 50 percent, with an average of about 39 percent. All 23 of these properties were relatively close to the wind turbines, less than a kilometer away.

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2 did show generally is that they said that there was some losses shown, but they were not significant as 3 far as statistics go. However, they did have a 4 chart where poor vistas indicated a 21 percent loss 5

earlier. But I can tell you that what this study

and below average vistas a 9 percent loss, and they 6 7

had a statistical 5.5 percent loss, but they stated that it was not of significance. 8

There is a study that was done in Ontario, 9 Canada, this was done by the MPC, and the MPC is 10 basically the government entity that is in charge up 11 in Canada of setting and creating the property 12 assessments for government. What they did is they 13 looked into this and they did a study on 14 assessments. The only problem is that this study 15 really was designed to see whether or not their 16

assessments were accurate, and they made the assumption that if the assessments were accurate, 18

that they would be showing a depreciation by the 19 wind farms. 20

Well, actually their second test they did show a depreciation by the wind farms. As you can see there, it was a \$6,451 per acre, I mean per property that was less than 1 kilometer away from a

And then we have Glen Taylor. Briefly 1 2 Glen Taylor is a certified general appraiser in Wyoming, and he did a study of the Chevron Wind Farm 3 in Evansville, Wyoming, and he concluded that 4 5 there's a detrimental impact to property value, that was the yes/no question, and that properties closer 6 to the turbines were most affected, which of course 7 would seem logical if wind turbines are creating a 8 viewshed issue. 9

Then we get to the studies that we

completed. Appraisal Group One study, Appraisal Group One was the old name of our company, we have since changed it to the Forensic Appraisal Group, and this study was based in Fond du Lac and Dodge Counties, Wisconsin. The first thing we did is we did a realtor's survey and in this survey we surveyed 36 realtors and these realtors were all surveyed that were in the area of the wind turbine, okay, so they were in the same counties as the wind turbine in close proximity. This survey was a very detailed survey which had graphics on it so everyone was envisioning the same thing, at least hopefully, at least they all had the same picture, and several questions were asked. They were -- also made sure

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- that all of these realtors were experienced realtors. We didn't want any newcomers in the 2
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What happened is that on the conclusion, 4 that they concluded 60 percent, a minimum of 60 percent, upwards of 74 percent, of all the realtors 6 concluded that the presence of a wind turbine in 7 close proximity, and you see the various distances 8 we had there, 600 feet from a turbine, 1,000 feet 9 from a turbine, and one-half mile from a turbine, 10 11 that all of those would result in a negative impact to property value and residential value, and we are 12 talking about 1 to 5 acre parcels for the most part 13

- and then we did ask them a question of 10 to 20 acre 14
- 15 that dealt with what's called the gentleman's farm or hobby farms. In all cases that they found 16
- losses, and you could summarize this that the losses 17
- ranged anywheres from a 24 percent loss upwards to a 18
- 19 39 percent loss. Of course, they also concluded
- that the closer the property was to the turbine, the 20
- 21 greater the loss. They also stated that given the
- choice between in front of the property or behind 22 23 the property, in front would result in a greater
- 24 loss.

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- Then we did the WE Energies Blue Sky 1 2 Greenfield Wind Farm, and in this wind farm we had 68 sales total. What we did is within the area of 3 the wind farm we only found six sales. There were 4 many more than -- not many more sales, there were 5 many more properties in that area, but only six of 6 them sold. And then what we did is we went to the outskirts of that wind farm to make certain there was no viewshed in the view of any of the other 9 sales and then we picked sales -- 68 sales from the 10
- outside. These are all 1 to 5 acre parcels. 11 And what we found here, we used the simple 12 regression technique after adjustments were made for 13 time and some other factors. The green dots -- the 14 green dots indicated the properties that were 15 unaffected, in other words, they were like your test 16 set, and the -- looks like the blue dots, yes, and 17 the blue dots were the ones that were in the wind 18 farm itself. And you can see the regression line or 19 the trend line that was plotted. It had a factor of 20 83 percent or an R square of 83 percent which is 21 very good. When you're looking for R squares and 22
- 23 trend lines, you want 50 percent or over. That trend line is describing the actions on the line and

its predictability according to the sales that you

- have. In this case, 83 percent of the differences 2
- was explained by the trend line.

And then the sales that were impacted, you 4 can see that they were all under that trend line,

and then the distances were measured to give you the 6 delta or the differences. This showed of course 7

8 there was differences upwards to 74 percent. The

average came more to like 35 to 39 percent. 9

Then we did another right in that same 10 11 area, it was Invenergy, very difficult name, Forward Wind study, and this was 1 to 20 acre residential 12 13 lot sales, and you can see in this study there were

34 sales total, six were influenced by the wind 14

15 farm, 28 were not. Again, we plotted the two points, the two trend lines. We had a trend line 16

for the unimpacted at 43.83, slightly under 50. 17

However, the trend line for the impacted was at 18

19 almost 79 percent, which was very good. Under that

aspect, you can see that for the most part these 20

21 sales were trending under the nonimpacted sales, again indicating a loss ranging 12 to 47 percent, 22

23 averaging 30 percent.

24 Then we have the Clarkson study in 2011,

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- and this Clarkson University study, this was done by 2
- Heintzelman and Tuttle, and what they did is they went to upper state New York and they looked at over 3
- 11,369 sales over a nine year time period, and these 4
- were improved properties and agricultural 5
- properties, and they used a hedonic or a multiple 6
- regression technique to try to extract the impact of 7
- the wind turbines, and they also used what's called
- a blocking concept. So a blocking concept is they would block groups of types of properties. So it 10

was a multi-tier type study.

But to summarize it, it answered the 12 13 yes/no question that, yes, the wind turbines did have an impact to property value that were in 14 15 relatively close proximity and in sight. The distance from the farm or the wind farm is a factor 16

to its impact. That when it was a tenth of a mile 17 away, the impact was 32 percent as an example. When 18

19 it was 3 miles away, the impact went down to 14

percent. So they found properties within 1 to 3 20

21 miles away that were impacted at a range of 16 to 31

- percent. And this study was actually done 22
- 23 independently. This was not sponsored by anyone.
- This was a study that was done by two, one being a 24

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Ph.D., the other a Ph.D. candidate, and the study was later used for the Ph.D. candidate's thesis.

2 3 We have Coral Springs Development study, and this is in Wyoming. A small little study, but I thought very impactful. This studies what happens when a wind turbine farm gets announced. This farm 6 was never built. It was called the Hermosa West Wind Energy Project. It was announced, and the 8 development had seven lots, and it had three of 9 those seven lots were sold prior to the 10 11 announcement. One tried to sell after the announcement, and it was bought at \$100,000, listed 12

it at \$100,000, ended up selling it for 75,000, 13

indicated a 25 percent diminution in value. All the 14 15 listings on the property as you can see up there

16 were also lowered by the -- after the announcement

of the wind farm to try to sell them. At the

completion of this study, none of those were sold 18 19 nor were there any pending sales, and the realtor commented that the one thing that was killing his 20

21 studies was the proposed wind farm. 22

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Then we have lastly the Big Sky Wind Farm. That was Lee and Bureau Counties. That was a study of ours and what we did -- and there's the Big Sky

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1 The first one ended up with a 23 percent diminution and that wind turbine was 1.72 miles away from the nearest -- I'm sorry, the sale was 1.72 miles away from the nearest wind turbine. 4 Interestingly, the comparable we used was about a 5 6 little less than a mile away from the nearest wind turbine, but you could not see the turbines because 7 of the position of the comparable, and we discuss 8 9 that off to the right under the notes.

The second matched pair indicated a 21 percent loss after everything was adjusted for. There the distance to the wind turbine from the sale was .32 miles and the distance from the comparable was 5.58 miles, so it had no viewshed whatsoever of the wind turbine.

And then the next one we did, that one was -- that's the same sale again because we found two comparables to it, so again .32 miles away from the nearest wind turbine and the comparable was 9.4 miles away. That indicated a 13 percent diminution in value.

And our next matched pair which would be number three, that -- and this one, that the distance to the wind turbine was .34 to the nearest

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- Wind Farm, and what we did is we created three zones. 2 on the wind farm. We created the zero zone we
- called it. That was the zone that you were -- if 3
- you drew a line from all the wind turbines and you 4
- were inside that zone, that was zero zone. And then
- we had zone two which went outside of that zone 6
- approximately one mile, and then we had zero
- three -- I mean then we had zone three which went

outside approximately three miles. 9 10

And we found six sales, and these sales were all found not in the zero zone. As a matter of fact, there was just as many properties in the zero zone, but we could not find any sales in it. The sales were actually on the outskirts in zone one and zone two. And these sales, we did a matched pair analysis, what are called paired analysis if you like, and we did six of these matched pairs. And what we did is we found, as you would in a matched

- 18 pair, that you find properties that are equally 19
- substitutable and then you make adjustments for 20
- 21 those things which are different. Now, I won't bore
- you with the logistics of how we did it, but the 22
- 23 details are discussed on the side and the support
- for the adjustments are also discussed on the side.

one and the comparable was 5.2 miles away with no 2 viewshed of the wind turbine, and that indicated a 3 12 percent diminution in loss.

And then our fourth matched pair was a property that was .53 miles to the closest wind turbine and that the comparable was 7.99 miles away. That indicated a 25 percent diminution in property value. And one thing I should point out about this study is that when we looked at these properties, we made certain that the -- what you would call the impacted sale, that was the one within close proximity to the wind turbine, had a view of that wind turbine and that appeared to make a big impact.

That map there shows you the matched paired analysis where the sales were all located. We did not unfortunately on here show you where zone zero, one and two was, but that's how we structured this study.

So in summary from that study, you could see that did it answer the qualitative question yes/no? Yes -- at least that study did that, yes, there was an impact. The impact ranged from a low of about 11 to 12 percent upwards to 25 percent on improved properties.

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So when we look at the summary of things 1 that we see here, that no sales are found in the 2 zero zone, and I made some comments here about some of the sales and why two other sales that we had was not utilized. One, there was no good comparables for the 40 Pump Factory Road sale, and the 1950 6 Shady Oaks Road, it was not a wind turbine 7 influenced sale. 8

So in conclusion of my presentation here is literature study answered the question of yes and no, and it appears that in the literature study when you look at what the comments of the people are saying, particularly on the internet and other published material, there's overwhelming weight on, yes, wind turbines do have an impact and there is a great concern for it.

16 17 When you look at the studies, which is the quantitative analysis, that they bear out. That for 18 19 the most part that, yes, there is an impact. These impacts tend to range -- these impacts tend to range 20 21 between 12 to 25 percent on the conservative side, we saw others that were up in the 50 percentile, and 22 that would be true in the sense at very close 23 proximity with a, you know, what was it, about a 380 24

comparison or market trend analysis, that is R squared, which actually in my experience they always are with a market trend because you're grouping tons of different types of properties together. What you're really looking for is looking for trending, whether things are going up or down in the market to 7 help you in your time adjustment.

And -- but then he made this assumption, and this is where it became trouble to me, is his assumption was, well, let's assume for a moment, however, that this trend is significant, even though he stated it was not. And, you know, I guess as a professional appraiser I really question, well, why would you do that when you already said it wasn't significant. So what is that really telling you? What he's really measuring is he's measuring market trends in different areas which is not going to tell you a whole lot if you don't do a comparative analysis of property A to property B, one that's within the influenced area, if you will, compared to one that is definitely out of the influenced area, and that I did not see that he did.

Q. Why is R squared so -- why is the R squared number so important?

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foot wind turbine, in its shadow. 1

2 So the question is and of course the question to me as an appraiser is: Is this 3 significant evidence to indicate that there is an 4 impact? And my conclusion would be, yes, there is an impact, a financial impact to both the community 6 7 and the individual property owners in the presence and close proximity to a wind farm. 8

OUESTIONS BY

MR. LUETKEHANS:

- Q. Mr. Kielisch, just a couple follow-up questions. Have you reviewed Gary DeClark's
- PowerPoint presentation? 13
- A. Yes, I did. 14

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- Q. Did you agree with his conclusions? 15
 - A. No, I did not.
- Q. Why not? 17
- A. His basis of his conclusions, he did 18
- mention there were some studies, he didn't really go 19
- 20 into what they were, I could guess what they were, I
- mentioned some of them today, but really it seemed 21
- like the foundation of his study was a market trend 22
- analysis comparative -- comparison, and he
- rightfully said that when he did that market trend

- A. Well, in R squared -- and there may be a little too much put onto R squared, and I'm not a
- statistician. I have taken several statistics 3
- courses, I do use statistics in my analysis, I also 4
- have on my staff two individuals who are 5
- statisticians, they are on my contract staff I call 6
- 7 them, and so I left all the hard number crunching
- and interpretation to them. But an R squared is
- actually a measurement of fit, and what it's trying 9
- to see is how much of this line on this trend, if 10
- vou will, if you use a trend line, how much on that 11
- line is being determined by the factor that you are 12
- trying to measure? And if you hit an R square of
- 13
- over 50, and it's an R square of .5 is what it's 14
- called, that's 50 percent, that's considered good, 15
- and anything up from there is considered very good. 16
- As you know, some of mine, I had R squares in the 78 17
- percent range. So R square is really a measurement 18
- of fit and that's what -- to see how well that 19
- factor that you're trying to measure is being 20 21 explained.
- Q. Are matched pair analyses often done in 22 23 your business to determine effects of nearby
 - developments, whether they be wind turbines or

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- 1 something else?
- 2 A. Yes.

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- 3 Q. Okay.
- 4 A. Very common.
- Q. In fact, that's probably the most usual,
- 6 the most used process by appraisers, correct?
 - A. Yes. If you look at essentially -- if any
- 8 of you have had an appraisal recently done or one
- 9 done in the past purchasing a property and they have
- comparable sales and then they compared your subjectproperty to the comparable sales and they have
- property to the comparable sales and they have several factors of comparability, that's a matched
- several factors of comparability, that's a matched pair, all right? That's a comparative sales matched
- pair, if you will. So it's very commonly used and
- it's used a lot when you do not have a lot of sales
- to use. You can't use statistics when you only have
- 17 five or six sales. You really need about 15
- 18 observations to even start a statistical analysis.
- 19 Usually you would need at least 30. 60 is fairly
- 20 good.

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- MR. LUETKEHANS: I have no further questions. I would ask that SLG Exhibit 25 be
- 23 admitted into evidence. That's the PowerPoint
- 24 presentation.

- start butting heads, in statistics which actually
- 2 came from social sciences, if you didn't have enough
- 3 observations, you could go find more, all right? So
- 4 if you didn't have enough smokers, you could go find
- 5 more. Well, you can't do that in real estate, you
- 6 can't manufacture sales, and that's a real problem.
- 7 And so we looked at this development and when it
- 8 started and we -- that was our time zone, when it
- 9 started to the date of when the study was done, and
- 10 those were the only sales in that whole area, so we
- 11 couldn't manufacture those. Would we wanted to have
- 12 had more? Yes, that would have been more
- substantial, particularly if you start showing
- 14 massive variations on the six. All six were
- indicating under the trend line, and we had 60, 62
- sales outside of those factors which gave us a good
- 17 trend line.

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MR. KURITZ: Okay, and with your matched pairs, how do you rule out the other influences, this property's big and got a lot of land but it's a

- this property's big and got a lot of land but it's little rundown or it hasn't been -- hasn't been
- 22 updated or anything like that, and this is a newer
- 23 property, a newer property, the same thing, so it
- brings a higher non agreem fact price. How do we
- brings a higher per square foot price. How do you

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- **CHAIRMAN FINNIGAN:** That would be fine.
- 2 That's what you have in front of you? Yes.
- 3 Questions from the board?
- 4 MR. KURITZ: What prompted you to do your
- 5 blue -- your Blue Sky study?
 - **MR. KIELISCH:** Excuse me?
- 7 MR. KURITZ: What prompted you to do the
- 8 blue -- your Blue Sky Wind Farm study?
- 9 MR. KIELISCH: We are -- that study was
- sponsored by a citizens action group that was --
- they were arguing and battling the approval of that
- 12 Blue Sky -- not the Blue Sky, of a different wind
- farm, and they hired our firm to do a study on the
- 14 impact.15 N

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- **MR. KURITZ:** Okay, and you only had six sales in it and you're saying that you need -- or you need 20 to 30 to actually do a good study unless you use the comparables or the matched pair.
- MR. KIELISCH: Well, actually I have 68 sales in this, and to run a good trend line, which that did -- the six were the variables, okay, or the
- factors that were being influenced. That is a low number, you would like more, but one interesting
 - thing, and this is where statistics and real estate

- compensate for those differences? Or one's listedin a school district where everybody wants to go and
- 3 the other one's in a school district that's
- 4 really --

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MR. KIELISCH: Yes, excellent questions,

- 6 and that's where the experience of the appraiser
- 7 comes in. You select the comparable sale that is
- 8 most like the one that you're trying to measure. So
- 9 you want comparability in size and gross living
- area, in design, in size of the acreage, age, you
- 11 know, what's called street appeal, all of those are
- part of it. So every one of these properties were
- visited and researched, confirmed and interviewed
- 14 with the buyer and the seller so that we get a good
- picture of the inside and the outside of the
- properties, and then we selected them for the leastamount of adjustments as possible.
- And just as you said, it's important to get those that are most comparable. So if I have,
- say, a home built in 1985, it had 1700 square feet,three bedrooms, two baths, on one acre, that's what
- 22 I'm looking for and then we get as close as we can.
- 23 Once we've got as close as we can, then we can start
 - making the adjustments. And all of the adjustments

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- 1 have to be made under some basis. You can't just
- 2 say, well, that's what I feel. That was actually
- 3 done in the past, it's no longer done today, but you
- 4 have to have some basis for that. In ours, we had
- 5 several bases, we did market studies, we did cost
- 6 analysis, we did effective age breakout analysis to
- get the conditions, we interviewed the buyers and
- the sellers and the realtors.

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MR. KURITZ: Okay.

MR. BANGERT: Did you research the -- from the time that these properties were put up for sale to the time that they were purchased, did you measure the amount of time for these affected properties versus unaffected? Was there a departure in how long it took to sell them?

MR. KIELISCH: Yes. The time of sale was 16 measured. We didn't do a statistical -- any 17 statistical analysis on that. We did what's called 18 19 observation analysis, an observation, and it appears that, you know, this comparable sold in 35 days, my 20 21 influenced property took 95 days, but that was part of our interviews with the buyers and the sellers 22 23 and the realtors if they were involved. And all the 24 realtors that were involved, they all did say that

1 list all the property characteristics, in other

- 2 words, woods, view, terrain, topography, things of
- 3 that sort. All of them were rural, all of them had
- 4 to have septic and well, they were in different
- 5 school districts, but in that particular area the
- 6 school districts didn't really matter, they were all
- 7 considered good. You talk to anybody, their school
- 8 district is good. So they were all basically the
- 9 same type of school district, so we didn't have to
- 10 make adjustments for that. And that was raw land.
- 11 So we would make adjustments for those different
- characteristics and then we plotted those on the graph.

The improved properties, as you see in the matched pair, that we're specific in our adjustments and what we adjusted for, and again we used the same type of analysis. You start with the sales price, compare the dates, from the dates you make a market trend adjustment if there is one warranted, and actually in the Illinois one, there were no market trend adjustments warranted, all the sales were very close to each other, and we did a trend analysis in that area and found no justification during that time period to make a trend adjustment.

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- they did take longer to sell. And then in the
- 2 Wisconsin studies, in those studies, that we did not
- 3 do it there. We simply did the land value analysis.
- 4 We did not do a time analysis.
- 5 **MR. BANGERT:** And was the reduction in the 6 sale price a departure from the appraised price or
- 7 how did you establish what the loss was? I mean --
 - **MR. KIELISCH:** Oh, on which ones?
- 9 **MR. BANGERT:** Well, the affected 10 properties.

MR. KIELISCH: Okay. All right. Well, on the studies that were land only, that what we did there is we took the -- we moved everything to an established date, a dummy date, okay, so all of the sales were moved because they covered, you know, about a two, three year time period in the Wisconsin

- about a two, three year time period in the Wisconsin ones. We took all of those sales and we put it on
- 18 the same date. And actually we always use the last
- entry date of the last sale will be our adjusted
- 20 date. Then we do a market trend analysis, we adjust
- all the sales to that date, and then we look at each
- 22 property to see if there's any property
- 23 characteristics that were different. We created
- 24 sales sheets for every one of those, and they would

- Then we -- that adjusts the value to
 what's called the time adjusted value, and then from
 there we adjust for the land and then for the
 residential improvements, the various issues under
 residential improvements, and then any extras that
 that property had. Some you'll see had a pole shed,
- 7 others had different other factors that went in, and
 - we made adjustments for those too.

 MR. BANGERT: Thank you.
 - MR. KIELISCH: Sure.

MS. TURNER: A couple questions. Have you -- how long ago was the Blue Sky study done?

MR. KIELISCH: That one was done about four years ago.

MS. TURNER: Have you gone back to see if there have been more sales and tried to make it statistically viable?

MR. KIELISCH: No, we have not.

MS. TURNER: And then -- and the same with the Wisconsin one, when was that done?

MR. KIELISCH: That was the Blue Sky.

MS. TURNER: Oh, I thought that --

MR. KIELISCH: Greenfield.

MS. TURNER: Okay, I thought that was the

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Montana one. What about the Invenergy, where was that one done? 2

3 MR. KIELISCH: That was Wisconsin as well. MS. TURNER: Also, okay, so they're both 4

Wisconsin. And when was that one done? 5

MR. KIELISCH: That was done at the same 6 time. 7

8 **MS. TURNER:** Okay.

MR. KIELISCH: And we did not -- we have 9 not done any follow-up on that. 10

MS. TURNER: Okay, but it's probable that 11 there have probably been more sales in there done 12 would you say --13

MR. KIELISCH: I would hope so, yes. 14

MS. TURNER: -- yeah, okay, that you could 15 come back. Now, a couple of things. Why -- I 16

understand that you have the blue dots, say, on the 17

Blue Sky and you're showing a difference because 18

19 you're saying they have views to wind farms.

However, there are green dots on there that are 20

21 below your R2, scale 2. Can you explain to me? I

guess I'm not really understanding what you're 22

23 trying to show.

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MR. KIELISCH: Okay, on the Blue Sky

crossing mostly on top. What this shows is on the

average compared to home -- compared to lots that

3 were outside of the influence, generally speaking

that those sold for a lesser price. 4

MS. TURNER: Okay, and so what you're 5 telling us is that the 62 sales, when you say they 6 were not influenced, you're saying they had no views of wind farms. 8

MR. KIELISCH: Correct.

MS. TURNER: Okay. On the literature review that you did, could you tell me what percentage of your literature was published in peer reviewed literature versus internet literature?

MR. KIELISCH: Sure. I would say approximately -- of everything that we cited, there would have been at least 20 to 25 percent were published articles in peer reviewed, medical articles --

MS. TURNER: Okay.

MR. KIELISCH: -- economics articles, 20 21 things of that sort.

MS. TURNER: So 75 percent -- 20 to 25 percent was peer reviewed.

MR. KIELISCH: Correct.

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Greenfield one?
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MS. TURNER: Yeah.

MR. KIELISCH: Okay, sure. All right,

what we're showing there is that trend line. You 4

see that light blue line --5

MS. TURNER: Right.

MR. KIELISCH: -- that comes across?

Okay, that's the predicted trend line. That's where 8

we're talking all these sales into composite. This 9

is where the predicted values would be at every 10

location down below under acres or the X axis which 11

is the size. Now certainly in order for you to get 12 such a trend line, you are going to have sales under 13

and over because the trend line is measuring the best fit looking at all the averages and trying to 15

fit it together. 16

If I would have done a trend line on these sales, these six sales, okay, first of all, they're

so close together that you would have a line that 19 would be about that long [indicating]. It wouldn't 20

really show you anything other than the average 21

between those six sales which would be quite a bit 22

under. So certainly you're going to have sales 23 under the trend line as well as over, hopefully 24

MS. TURNER: And so 80 to -- 75 to 80 1

2 percent was not, is that what you're saying?

MR. KIELISCH: Yes. Now let's define peer 3 reviewed before we go forward. I -- when I answered 4

this question, I answer it academically --

MS. TURNER: That's what I want. 6

7 MR. KIELISCH: Okay.

MS. TURNER: All right.

MR. KIELISCH: -- all right, as opposed to 9 published comments in publications that people are 10 reading. 11

MS. TURNER: Sure. 12

> MR. KIELISCH: All these citations are from published --

> > MS. TURNER: Sure.

MR. KIELISCH: -- papers, magazines.

MS. TURNER: But publishing is -- I can 17 publish. 18

MR. KIELISCH: Certainly you can.

MS. TURNER: It's the academic peer review 20 that's generally considered the standard, correct? 21

MR. KIELISCH: Well, that's very 22 23 debatable.

MS. TURNER: I see, okay. 24

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same.

1 MR. KIELISCH: Yeah. We won't get into 2 that discussion --

3 MS. TURNER: Right.

4 MR. KIELISCH: -- unless you want to.

MS. TURNER: And you don't -- there aren't

6 copies of any of the studies in this, is that

7 correct, that you cite?

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MR. KIELISCH: That is correct.

9 **MS. TURNER:** Okay.

MR. KIELISCH: However, I do have a report written for this as well.

MR. LUETKEHANS: We can provide all thestudies if you wish. We were trying not to overloadyou.

MS. TURNER: No, I appreciate that, that'sfor sure, I do. Thank you.

MR. KURITZ: Everything that you presented then was residential property in a rural setting?

MR. KIELISCH: Yes.

MR. KURITZ: So you did no comparisons of farm sales and the impact of having turbines on property versus not having turbines on property did to farm ground?

MR. KIELISCH: That is correct.

to 1 on all of the sales that did not sell and why.

MS. TURNER: And did you do a comparison of the number of sales in a wind turbine area versus one that didn't have a wind turbine area that would be a like rural area?

MR. KIELISCH: Certainly. In the Wisconsin one, we did because we picked like areas. And in the wind turbine area we found six sales in one and six in the other in the two wind turbines, and we found 34 outside and 62 outside in the same time period, so -- and the density is about the

CHAIRMAN FINNIGAN: How long does it take you to do a study like this, like the one in Wisconsin?

MR. KIELISCH: That can take -- well, we're getting more efficient at it now, but I would say we -- we have a staff of appraisal data technicians, we call them ADTs, they work a lot like a paralegal does in a law firm, we have appraisers, and then we have contract statisticians. And it would take probably anywheres from 80 to 120 hours of ADT work, it would take about 15 to 20 hours of a senior appraiser's work, about another 15 to 20 of a

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1 MR. KURITZ: Okay.

MS. TURNER: I did have one other

question. The fact that there were six properties

4 sold and there weren't more sold, what percentage of

5 properties was that that sold and why weren't there

6 more?

MR. KIELISCH: Well, I do -- I do discuss that in the report and I do state that it's purely theoretically why there were not more, okay, because we did not go and interview all the people who tried

to sell and didn't sell, but the theory behind it is

that it was much more difficult to sell within the

impacted zone. When we went to the Illinois one, we

found no, no sales whatsoever. Now, whether they wanted to sell or not, we don't know. That's a very

difficult question to answer because in rural

properties, as you well know, you often have your

own property that's close to mom and dad or close to

19 the farm or neighbors or something like that, and

even though there may be a negative influenceinfluencing your property, you're not willing to

take that hit and you're just going to stay where

you are. That's basically the general comments that

we stated. That we did not do a thorough analysis

junior appraiser's work, and then of course the

2 statisticians charge us what they charge us at their

3 rates. So it -- something like this would easily

4 take, if you go at it full-time, you could get a

5 study like that done with our office in probably a

6 month, but usually we spread it over like a two or

7 three month time period.

CHAIRMAN FINNIGAN: I guess my question would be we have two wind farms in McLean County and you never talked about anything in McLean County. I just wondered if you were, you considered -- why a study wasn't considered for our area.

MR. KIELISCH: Well, I -- you know, I would love to do one, but someone would have to foot that bill, and easily that bill can come to, you know, 20 to \$30,000.

CHAIRMAN FINNIGAN: Thank you. Questions from staff?

MR. DICK: Have you ever done studies for other generating type facilities, like coal or nuclear?

MR. KIELISCH: No, I have not.

CHAIRMAN FINNIGAN: Would the applicant have questions?

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- 1 MS. ANTONIOLLI: Yeah, just a few.
- 2 QUESTIONS BY
- 3 MS. ANTONIOLLI:
- **Q.** On slide 13 you mention the Berkeley
- 5 National Laboratory Study 2009.
- 6 A. Yes.
- 7 Q. And is there a reason you didn't mention
- 8 the more recent 2013 study done by the Berkeley
- 9 National Lab?
- 10 A. Because it's a rehash of their old study.
- 11 They just added personnel to try to combat one of
- 12 the critiques, and one of the critiques against them
- was that no one in the original Berkeley study had
- 14 any experience whatsoever in real estate general or
- 15 real estate appraisal or ever made a living in real
- 16 estate. They were all statisticians working at the
- 17 university. And so from that critique, I believe
- 18 they added another individual, I'm trying to recall
- 19 his name right now, he was an appraiser from Texas,
- 20 he joined them along with another individual. They
- 21 relooked at the data that they did and they
- 22 basically said it was done right.
- Q. And the 2013 study, would you agree, was
- 24 much more comprehensive and provided more?

- 1 Q. And other than the matched pair study, I
- 2 can't help but notice that some of these other
- 3 studies that you did interviewing -- let's see, let
- 4 me get to that page. So the studies that you did
- 5 interviewing appraisers, most of it was in the time
- 6 frame where houses were sold in 2009 to 2012 and
- 7 earlier.

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- 8 A. Yes, and it was realtors not appraisers.
- 9 Q. Realtors.
- 10 A. Right.
 - Q. And did these studies factor in the impact
- 12 of the global economic crisis at that time and the
- impact that that could have had on home sales?
 - A. Yes.
- O. And how does it do that?
- 16 A. It does that through a market trend
- analysis, and that's why I mentioned before the
- 18 first thing you do in these studies is you do a
- market trend analysis and that will give you how the market is trending and then you adjust accordingly.
- Q. Okay, and have those been updated since
- 22 the time that they were done, completed between 2009
- 23 and 2012?
- 24 A. No.

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- 1 A. It did provide some more details. They
- 2 didn't come up with any differences in their
- 3 opinion. And again, many of the critiques that we
- 4 originally had still held true.
- 5 Q. And what was the conclusion of that study?
- 6 A. That there was not a significant impact.
- 7 O. On'
- 8 A. On property values due to wind turbines.
- 9 Q. Okay. So in the matched pair analysis
- 10 that you did and that's back -- I'm not sure what
- slide that is because they're not numbered, but the
- 12 Big Sky Wind Farm analysis. You said the study was
- done four years ago, and maybe I missed this, are
- 14 there dates on when those sales occurred?
- A. Yes. Yes, the dates start -- it's in the
- 16 first big box. You go down under terms, date of sale.
- 18 Q. My copy is a little blurry. Can you show
- **19** me?
- 20 A. Sure.
- MR. LUETKEHANS: It's about the seventh
- 22 line down, Amy.
- A. It would be right there [indicating], date
- 24 of sale.

- 1 Q. Okay.
- 2 A. You mean has that study been updated?
- Q. Has that study been updated?
- 4 A. No.
 - Q. And would you expect that perceptions of
- 6 wind farms would change over the past ten years or
- 7 so?

- 8 A. My personal perception or --
- **9** Q. Perceptions of home buyers.
- 10 A. Have they changed?
- Q. Would you say that -- so in the first
- slide, you say, let's see, slide three, that value
- 13 is perception.
- 14 A. Correct.
- Q. And would you say that since these studies
 - 6 have been done, that perceptions of wind farms by
- 17 buyers could have changed?
- A. I have not seen it and it's my opinion it would not have.
- Q. But you haven't provided more recent updated studies.
- 22 A. That's correct.
- Q. So you wouldn't know for sure.
- A. For absolute for sure, no.

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1 Q. Okay.

2 MS. ANTONIOLLI: Okay, that's all the questions I have.

CHAIRMAN FINNIGAN: Thank you. Any
questions from the audience for this witness? I
can't believe it.

MS. MORAN: I waited just a minute just
for shock value. Deann Moran, it's D-E-A-N-N, last
name is Moran, M-O-R-A-N. Address is 503 North
Orange Street in Lexington, Illinois.

QUESTIONS BY

12 MS. MORAN:

Q. So you had mentioned that some of the property values -- I was writing things down. You mentioned sales differed between homes that you could see a wind turbine versus homes that you could not see a wind turbine?

18 A. Correct.

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Q. So wouldn't it be fair to say that homes on the outside of a town kind of being surrounded by wind turbines, that if they could see that on the horizon, sales of -- your property value would go down?

A. Yes, that's what the Tuttle study

61 Page 763

1 question. This is part of property value, is it 2 not?

MS. ANTONIOLLI: Well, he testified that
he didn't evaluate any McLean County homes, so
that's why I object.

Q. Okay, then would you say that the -- for
us, the number two proposed special use we are
under, they're trying to prove that we are -- it

9 will not diminish the property values, so do you10 agree that our property values --

MS. ANTONIOLLI: Again, I object. I mean she's talking about McLean County issues.

MR. LUETKEHANS: No, wait a second. She's asking the question --

MS. MORAN: I'm asking about my home.

MR. LUETKEHANS: -- which is standard two. She's asking the question which is standard two, and she has the right -- she has the right to ask that and he can answer it.

MS. ANTONIOLLI: She's asking specifically how it applies to property values in McLean County which he did not testify to.

MR. LUETKEHANS: He's testified to property values generally, and maybe the question --

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1 indicated.

Q. Correct. So don't you think that the
decrease in home value may be impacted by those -okay, so you will say that those on the outside of
town that could see the wind turbine would be

6 impacted versus someone who has tree lines or

7 something that it can't be, that they can't be seen?

A. Right. The aesthetics is one of the big issues with the wind turbines when you're a distance

away. I wouldn't say it's the only issue when vou're in close proximity. Then the other issues

you're in close proximity. Then the other issues start coming in as I spoke on earlier, the health

13 issues, the noise, the flicker effect, but as you

14 get further away, it becomes the aesthetics. So

that which blocks the aesthetics would also blockthe influence.

Q. Have you ever seen any -- here in McLean

County, we have property value assessments that get mailed out.

MS. ANTONIOLLI: We're getting beyond the scope of his testimony, so I would object to this general line of questioning.

Q. This is -- okay, would you agree to the

fact that -- oh, I'm just going to reask the

if she asks does he have any reason to believe that

the same general trends would not occur in McLean

County, I guess she can ask that first.

MS. ANTONIOLLI: Well, the special use standard asks for whether property values have been diminished in the immediate area.

CHAIRMAN FINNIGAN: I think you can talk about general trends but maybe not McLean County.

A. Okay. So the question was? I'm not certain I understand the question.

Q. Yeah, I'm just basing off of them meeting the criteria, and I can't ask that question because I live in McLean County.

MS. MORAN: Thank you.

MR. KIELISCH: You're welcome.

MR. TAYLOR: Can I ask a question now?

MS. MORAN: You go, Travis.

MR. TAYLOR: Try not to make it so
confusing. Travis Taylor, 28686 North 3050 East
Road, Chenoa, Illinois.

CHAIRMAN FINNIGAN: Bring it a little closer to you.

MR. TAYLOR: Is that better?
QUESTIONS BY

Min-U-Script®

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MR. TAYLOR:

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- 2 Q. Okay. I guess I don't exactly know how
- 3 long after the studies were done was the data
- 4 collected. Is it something that was immediately
- 5 following or is it something that was like five
- 6 years later on the study I guess is the way I want
- 7 to ask that for the studies you presented?
- A. Sure. At the time of the study, the data
- 9 was collected in a contemporary fashion, meaning
- that we collected all the sales up to the date of the study.
- Q. Okay. And how many -- you said it was
- 13 like three years combined?
- A. Well, it depends on which study you're
- talking about. What we tried to do is, like in the
- two Wisconsin studies for instance, the Invenergy,
- 17 whatever, thank you, those two Wisconsin studies,
- 18 what we did there is from the point where it became
- active, where the turbines became active to the
- 20 point of our last data entry where we could actually
- 21 receive the data, that would have been contemporary
- 22 at that time, so that time period was probably about
- a two, three year time period. And then in the one
- 24 in Bureau, Illinois, what we did there is we looked

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And so if you're using assessments and

- 2 you're also assuming at this point the assessor
- 3 looked at each property individually, valued each
- 4 property individually that year, which they don't
- 5 do, and they -- you're also looking at that they
- 6 valued all the aspects of the property, which
- 7 assessors tend not to do, they only tend to value
- 8 the land. And the improvements, landscaping, other
- 9 factors that add or delete from value is not
- something that they usually factor in. So I wouldnot and I never have used assessments as any basis
- 12 for a study.

MR. TAYLOR: I think that's all my questions. I appreciate everybody.

CHAIRMAN FINNIGAN: Thank you. Any other questions? I think Mr. Jolly is on the list though.

You're on Mr. Luetkehans's list, aren't you?

MR. JOLLY: Yes, I am. You're not allowing me to ask?

CHAIRMAN FINNIGAN: You can give your question to Mr. Luetkehans and he can ask it.

MR. JOLLY: Okay, that's all I have.

CHAIRMAN FINNIGAN: Any other questions?

MR. LUETKEHANS: Redirect please.

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at contemporary sales, we had to find sales first,

- 2 and the sales defined where our comparables would
- з be.
- 4 Q. Okay. I'm trying to think of how to
- 5 phrase this next question. With the amount of wind
- 6 turbines here in McLean County currently and past
- 7 previously, do you think a study on those, not based
- 8 off of solely tax records but based off of an
- 9 individual basis, would give us a better idea of
- where we would be standing since we have so many in
- 11 the county?
- 12 A. I would absolutely agree with that. I
- would not and I never do use assessments as a base
- or a factual base to value. Assessments -- and I
- worked in assessment for a while. The whole purpose
- of assessments is to get fair and equitable
- valuation for the basis of taxation. Now the states
- 18 do require these to represent market value, but
- 19 there's a big -- there's a lot of leniency in what
- 20 that really means. And what a mass appraisal model
- 21 does is it simply looks at averages and it does not
- 22 do what I did, for instance, in the matched pair.
- 23 In the matched pair, I'm looking for a home just
- 24 like this, not an average.

1 QUESTIONS BY

MR. LUETKEHANS:

- Q. Do you believe the Blue Sky, in the Blue
- 4 Sky Invenergy studies you had, that you did, that
- 5 you had enough sales for that study to be
- 6 statistically viable?
- 7 A. I do. According to appraisal standards, I
- 8 would, yes.
- 9 Q. Okay. Were any of the Blue Sky, quote,
- 10 influenced sales above the trend line?
- 11 A. Above the what line?
- Q. The trend line.
- 13 A. No.
- Q. So they were all below the trend line.
- 15 A. That is correct.
- Q. Okay. Are you aware of any matched pair
- analysis of wind turbines that has ever been peer
- 18 reviewed?
- 19 A. I am not.
- Q. Appraisers' reports are not the type that
- 21 are peer reviewed, correct?
- 22 A. Correct, by the definition of peer
- 23 reviewed, yes.
- Q. But they're tested often in court, they're

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- tested often in hearings like this, correct?
- A. Correct. 2
- Q. And, in fact, have you ever used a matched 3
- pair analysis in court?
- A. Many, many times.
- Q. Were some of your sales mixed use of 6
- residential and farm use?
- A. No. all the sales used in the Illinois one 8
- were rural residential and all the sales in the
- Wisconsin were rural residential or the larger lots. 10
- 11 We call those, nickname those hobby farms.
- Q. Okay, but they all had residential 12
- components. 13
- A. That's correct. 14
- 15 Q. And they were all in rural farmland areas.
- 16
- Q. Hence, that's the only -- because that's 17
- the only place you put wind turbines, correct? 18
- 19 A. Yes.
- Q. You seem to be pretty knowledgeable on 20
- 21 wind turbines. Do you follow wind turbine studies
- closely, those that are published? 22
- 23 A. I try to, yes.
- 24 Q. Are you aware of any studies showing that

- Normal. Thank you very much, Mr. Finnigan. This will be brief. 2
- 3 So on February 21st, I gave testimony
- regarding IDNR's recommendations and the EDPR's
- responses, but regarding recommendation number six 5
- regarding Henline Creek, when I prepared my 6
- 7 testimony, I based it on information resulting from
- the Invenergy hearing wherein the recommendation was
- interpreted as meaning a setback of a half mile from 9
- Mackinaw River and 500 feet from part of Henline 10 11 Creek.

And so I learned after giving that testimony regarding this case that the county had later received a clarification from IDNR that the recommendation actually went a half mile setback from all parts of Henline Creek listed as an INAI and I did not realize that. That accounts for the confusion when Amy Winterland questioned me and, Mr.

So I didn't realize in the interim that some things had changed from what I was first told, so I really appreciate -- apologize for any confusion. I appreciate the opportunity to revise

just the part of my testimony related to IDNR

Finnigan, when you asked me.

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- perception has changed over the last five years or
- 2 so of wind farms, of wind energy projects?
 - A. No, I have not.
- Q. Is there any reason to believe that this 4
- diminution of value that you talked about and found
- in all your studies is limited to areas outside of 6
- McLean County? 7
- A. No. 8

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- Q. Do you believe that same finding would 9
- occur in McLean County? 10
- A. I believe it would. 11
- MR. LUETKEHANS: Nothing further, thank 12 you. You're done. 13
- **CHAIRMAN FINNIGAN:** Do you any other 14 witnesses, Mr. Luetkehans? 15
- MR. LUETKEHANS: No, sir. 16
- **CHAIRMAN FINNIGAN:** I think we have one. 17
- Mr. Capparella would like to talk tonight because he 18
- can't be here tomorrow night, so we're going to call 19
- him forward. 20
 - MR. CAPPARELLA: And I have this too.
- Yes, thank you. I was previously affirmed, okay. 22
- 23 It's Angelo, A-N-G-E-L-O, Capparella,
- C-A-P-P-A-R-E-L-L-A, 907 South Fell Avenue in

- recommendation number six which is avoid siting
- 2 turbines within a half mile of Henline Creek. 3
 - So EDPR's proposing a modification to
 - reduce the avoidance from a half mile to a minimum of 500 feet in the case of five turbines, and what I
- wanted to testify towards is that I would support 6
- this under the following required conditions, which 7
- are as follows. Require a robust monitoring survey 8
- of fish and mussels both before and after
- installation using a design that is approved by and 10 with results submitted to the IDNR.
- 11 12
- Second, should any negative impacts be found to be caused by those five turbines, require 13
- that two steps would follow. A study would be 14
- initiated to better understand the cause of the 15
- impact and also that EDPR would continue working 16
- with IDNR to develop a mitigation plan to offset the 17
- negative impact on Henline Creek with the goal of no 18
- net loss of aquatic biodiversity within the INAI 19
- section as a whole of Henline Creek, and the precise 20
- approach would obviously depend on the nature of any 21
- impacts. Mr. Shank today mentioned one possible 22
- 23 approach, for example, in terms of avoiding or
 - basically not operating them during certain seasons

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if there's fish migration being affected or something like that. But there's a whole wealth of

possibilities or a whole variety of possibilities

that could be done. 4

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And then my third ask would be that in 5 allowing this modification, to require a robust 6 storm water pollution prevent plan with additional 7 measures to ensure that protective provisions are 8 continuously intact during construction, things such 9 as weekly inspections and inspections after 10 11 significant rain events. I know over the years I've seen these so-called SWPPP plans, S-W-P-P-P plans, 12 have been quite variable in how they're used in 13 subdivisions and things like that, so that's why one 14 size doesn't fit all. What you want is a plan that 15 was really designed to achieve a goal, and in this 16 particular case, the goal would be to ensure that

there is no erosion or other impacts on Henline. 18 19 So with those kind of stipulations, I would be supportive of EDPR's proposed modification 20 21 in terms of this, and I guess can now add to that that we've learned tonight from Mr. Shank the 22 23 incredible value in utilizing EDPR's design to do 24 studies to just really look at this whole aquatic

the framework of a proposal, and then you mod -- you

- refine it to determine what the best kind of study
- 3 design would be based on the turbines' placement and
- planned operation time, et cetera. So I wouldn't 4
- 5 want to at this point say what would be best, but I
- would ask that EDPR be responsive to IDNR's 6
- 7 recommendations and from their scientists as to what
- would be the best sort of framework to do that so 8
- 9 that we really do have an adequate time series of
- data, which is kind of what you're getting at I 10
- 11 think, to make sure that we really know what's going
- on over time, because as we know with our climate 12
- 13 here in central Illinois, you can have really good
- wet years and some really horrible drought years, 14
- and so you really need to be sure that you're 15
- covering that kind of natural variability as well in 16 order to be able to exclude that as a factor and 17
- instead get more towards any potential impacts from 18
- 19 the turbine itself.

CHAIRMAN FINNIGAN: Questions from staff? MR. DICK: Would you want to clarify who would be doing that study? Is WEST a reasonable outfit to be able to do this study?

MR. CAPPARELLA: Oh, yes, I'm very

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- issue. And so I think all the modifications that I
- supported from the previous testimony plus this 2
- modification I think are all justified and things 3
- that I'm comfortable with that I learned tonight. 4
- It sounds like, not to put words in his mouth, but 5
- Mr. Shank certainly seems open to on behalf of IDNR, 6
- and that EDPR in conversations I've had with them
- seem very open to it as well. So I would just -- I 8
- think we're getting all on the same page which is 9 comforting to me, so thank you. 10

MR. DICK: Dr. Capparella's first exhibit was Neutral Exhibit 1. We'll call this Neutral Exhibit 1A.

CHAIRMAN FINNIGAN: Any questions from the board?

MS. CARLTON: We were one short in that handout.

MR. BANGERT: What do you propose the time line is for how long the study would take place or this robust monitoring?

MR. CAPPARELLA: I think that will be best 21 determined through active interaction with IDNR. As 22 23 Mr. Shank said tonight, it's a back and forth to really determine if the framework -- first, you have

- familiar with WEST's reputation and they have very
- 2 competent biologists who really care about the
- 3 resource, and EDPR does as well, I know their
- division does as well. The thing that makes me more 4
- 5 comfortable with them doing this study and hiring
- WEST to do it or an equivalent company that they 6
- have confidence in is that they do have a pretty 7
- good track record of wanting to be industry leaders
- in doing these studies to try to figure out just
- what is going on, if anything is going on in terms 10
- of impacts from turbines, because only until we 11
- really know can we even decide how to change 12
- 13 operations or site design or mitigate all of this

kind of stuff. 14

As Mr. Shank indicated tonight, while 15 there's certainly kind of good theoretical reason to 16 be of some concern, we really don't know on a lot of 17 this and we're getting ahead of science in this 18

19 particular case, and I'd like to see the science

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23 that happens.

And again, I wouldn't say that if I

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- thought that, well, we find out they're causing
- terrible things and yet we're already committed. So
- that's why I insert in here that there has to be
- mitigation. If negative impacts are found, there
- has to be the willingness to mitigate, to solve,
- mitigate, whatever, so that we have no net loss to 6
- Henline Creek. So I wouldn't want to see it as a
- sacrificial lamb in that sense. I do want to make 8
- sure there is a commitment if impacts are found that 9
- we do all that can be done to reverse those so that 10
- 11 we get back to where we are in terms of Henline
- Creek and its biodiversity. 12
- MR. DICK: Thank you. 13
- CHAIRMAN FINNIGAN: Would the applicant 14
- 15 have questions?
- MS. ANTONIOLLI: No. 16
- 17 CHAIRMAN FINNIGAN: I don't know what
- happened to Mr. Luetkehans. Would anyone in the 18
- 19 audience have questions? We'll wait just a second. I don't know that he has anything, but I don't want 20
- 21 to pass him up. He says no, so I think you're off
- the hook. 22
- 23 **MR. CAPPARELLA:** All right, thanks a lot.
- CHAIRMAN FINNIGAN: Appreciate you coming 24

1 it.

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- 2 **CHAIRMAN FINNIGAN:** Thank you. I think 3 we're back to the list, Phil.
- **MR. DICK:** Travis Taylor? 4
- MR. TAYLOR: How many of you are there? 5
 - CHAIRMAN FINNIGAN: Seven and -- ten.
- MR. TAYLOR: Just in case I forget 7
 - something while I'm reading it, I just want to make sure.
 - **MR. DICK:** Want me to hand them out?
 - MR. TAYLOR: Yeah, if you don't mind.
- **MR. DICK:** More than one? 12
- 13 MR. TAYLOR: Yeah, there's two. This
- references this, so I wanted to make sure you had 14
- both of them available. And I thought I had some
- maps. And I got one more set of maps for you guys, 16
- too, just referencing my house. You guys have a 17
- copy of the map that has my house and circles on it 18 19 so that you can specify. Yes, I can have one for
- 20 you too.
- 21 MS. ANTONIOLLI: Thank you.
 - **MR. TAYLOR:** There's ten of these.
- 23 CHAIRMAN FINNIGAN: I'm going to swear you
 - in before we get started while they're hashing this

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- out. 1
- 2 (Mr. Travis Taylor was duly sworn.)
- **CHAIRMAN FINNIGAN:** State your name and 3 address.
- 4
- 5 MR. TAYLOR: Travis Taylor, 28686 North
- 3050 East Road, Chenoa, Illinois, 61726. You're
- 7 going to label some exhibits and I'm going to write
 - one down.
- MS. WALLEY: Did you want your exhibits 9
- marked as an objector, as a proponent or as a 10
- 11 neutral?

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- 12 **MR. TAYLOR:** I'm an objector for the most part, I mean I -- within reason, but they can be 13
- marked as an objector. 14
- 15 MS. WALLEY: Okay, so we're going to make your map Objectors Exhibit 5, and your narrative 16 17 which starts "Three years ago" Objectors Exhibit 6.
- MR. TAYLOR: And the neighbor agreement. 18
- 19 MS. WALLEY: Yes, and the wind project 20
- neighbor agreement would be Objectors Exhibit 7. 21 MR. TAYLOR: Sorry I made a mess out of your desk already.
- 23 CHAIRMAN FINNIGAN: We will enter those
- in. 24

back.

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- 2 MR. CAPPARELLA: Yeah, thanks so much for working me in. 3
- **CHAIRMAN FINNIGAN:** Getting blind-sided is 4 not really --5
- MR. CAPPARELLA: Yeah, no. 6
- 7 **CHAIRMAN FINNIGAN:** Well, we got one more question. 8
- 9 **MR. BANGERT:** How did you arrive at five 10
- turbines? **MR. CAPPARELLA:** That is what -- that is 11
- what I understand are the number of turbines that 12 are within the one-half mile, less than one-half 13
- mile but more than 500 feet from Henline Creek. 14
- That was my understanding from the company, and if 15 they want to clarify that, that would be good, but 16
- my understanding, there were five turbines that were 17
- within that 500 feet to one-half mile and therefore 18
- would be in violation of a one-half mile 19 recommendation. 20
- **MR. BANGERT:** Thank you. 21
- CHAIRMAN FINNIGAN: I think you're good 22 23 this time.
 - MR. CAPPARELLA: Okay, thanks, appreciate

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1 MR. TAYLOR: Thank you.

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2 MS. ANTONIOLLI: If I may, so the wind 3 project --

4 **CHAIRMAN FINNIGAN:** Yes, sorry I didn't 5 ask you first.

MS. ANTONIOLLI: That's okay. The wind
project neighbor agreement, we don't -- this doesn't
look like something that the company is familiar
with, and I would just object to it being entered
into the record.

MR. TAYLOR: It was mailed from you guys to my address.

MS. ANTONIOLLI: It looks like it's been altered and I'm not sure how many --

MR. TAYLOR: I removed my name. I can give you a copy with my name and address still on it if you guys want to make copies of it. That would be all right too.

CHAIRMAN FINNIGAN: Is that your only objection?

MS. ANTONIOLLI: Yes.

MR. TAYLOR: I can provide an original with all of it on it if that would be better, but can I give you that for now and then provide the

children and they are the fifth generation

2 unincorporated McLean County residents. We have

3 always lived in McLean County. We were educated in

4 McLean County schools from preschool through

5 college. Both our house and our barn are over a

6 hundred years old. In fact, the barn was recently

7 designated as a centennial barn based on its rich

8 history. It's the perfect place to raise our

family.

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In this wind project, this perfect homestead we love is so coolly referred to as Receiver ID 15. We have been approached by EDP several times in an effort to discover the project and have been sent a wind project neighbor agreement. However, there is hardly anything neighborly about the contract. I would like to provide you with a copy for your records.

On the very first page, it states that EDP desires to obtain a waiver to the setback requirements as outlined by the county. Furthermore, they seek easement rights and entitlement over, across and under my property. If the contract is signed, I must also obtain their approval to build any new structures on my property

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1 rest later? Which one do you need, the map?

MS. WALLEY: The narrative.

3 **MR. TAYLOR:** The narrative.

4 **MR. LUETKEHANS:** I'm sorry, this is 6. Is there a 5? I missed the numbers.

6 **MS. TURNER:** The narrative is 6 and the 7 map is 5.

MR. LUETKEHANS: Okay.

CHAIRMAN FINNIGAN: Looks like it's just your name and your tract number, so we can -- that's all that's been taken out; is that right?

MR. TAYLOR: Yeah, I can show you the original right here. Legal can see it if they like. It's just my name and my tract, so that's --

CHAIRMAN FINNIGAN: If that's all it is, we can admit it.

MR. TAYLOR: Okay, thank you. Are we ready? All right, this is from my wife and myself both. We worked on this together.

20 **CHAIRMAN FINNIGAN:** Pull it close to you 21 so we can hear you.

MR. TAYLOR: All right, there we go.
Three years ago, my wife and I bought our forever

24 home in the country outside of Chenoa to raise our

that may be 65 feet in height. It also states that

2 they acknowledge that at times, due to unforeseen

3 events, the sound levels could cause -- sound levels

4 caused by the project may exceed the maximum

5 allowed, limit level allowed. The company wants all

6 of this essentially control over my property for

7 half the cost of our property taxes a year. This is

8 not a neighbor helping a neighbor, but instead

acknowledges the project is going to affect my home,property and family.

Our biggest concern to this project, and 11 there are many, is that people affected by the 12 project have one or two, perhaps even three, wind 13 turbines proposed near their home. We, on the other 14 hand, have between 11 and 13 turbines within one 15 mile, which is more than the number of houses within 16 the same distance. If you extend this to a mile and 17 a half setback required by corporate city limits and 18 towns, the number becomes 20 turbines. This number

towns, the number becomes 20 turbines. This number
represents 35 percent of the total project around my
3.5 acres.

Per your seven standards on special use permits, the second relates to the project not being harmful to the use and enjoyment of my property.

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This excessive amount of turbines close to the home
 will be sure to severely impact the enjoyment of my
 property, property that EDP has asked to take
 control over.

This is not only -- if this were not 5 enough to show the negative effects that this 6 project will have on my home and property, EDP also 7 wants to run transmission lines directly south of my 8 9 property with a setback of only 603 feet from my home. Additionally, EDP projects that the shadow 10 11 effect on my home will be over two hours a day and will affect my home 80 days out of the year. In 12 terms of sound effect, EDP projects that our house 13 is -- our house are at the top of the legal limits 14 and will be over if you take into consideration the 15 margin of error from the study, which was the 2 dB 16 or dBA. I cannot recall exactly the way that that 17 went down, but it's I believe dB. Please be sure to 18 19 note that these projections do not take into account 20 the other wind project in the works just two miles

away.
So then I ask that you hear my concerns.
As you know, I have attended many of the Invenergy
meetings and more importantly all of the EDP

1 acres does not come anywhere close to the percentage

2 of ground covered by the proposed turbines. I

3 believe it's over 4,000 acres for the entire project

4 is what I read. Require a setback from my home, my

home of -- require a setback from my home of
turbines such as the original 2,000 I believe you

7 guys had before the meetings.

Additionally, I did do some further research, and many other studies in Canada and overseas have found that they've had less issues with 1,000 meter setback, which is in the 3,000 foot range from houses, and they've had much less complaints.

Require EDP to move turbines 83, 85 and 95 or remove or move them further away as they do -- they will have the most effect on our house. Require EDP to move the transmission line to the mile section north of my property between 29 and 3000 North Road as they have available participating land and there are no homes in the area. Not only do I feel that the transmission line is too close to my home, my well is even closer to the proposed line. Additionally, this is a low-lying area and my property drains to that location.

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meetings and have become more -- become informed.
 This project will affect my home. There is no
 question about it. The company has admitted this to
 us.

Tonight I'm asking for the following. Do 5 not approve the special use permit. This would 6 allow additional time for independent research and 7 research -- and research on the combined effects of 8 the two projects working as one. Do not approve 9 this special use permit in order to allow additional 10 time to look into the solar fields which you guys 11 have approved recently, just like the ones already 12 approved. These appear to have much less effect 13 on -- impact on the neighbors, neighboring 14 properties, and instead have more effect on the 15 landowners who have the right to sign their -- sign 16 over their own ground and make their decisions about 17 18

And if you do, if you do vote to approve the project, please require a significant reduction in the number of turbines allowed to be so close to my home. 20 within a mile and a half is too extensive and intrusive. This number represents 35 percent of the total number of turbines while my 3.5

Require EDP to move the access road to 2300 North Road instead of 3050 East Road so construction traffic is not passing along my home where my two small children -- well, I have one and one on the way -- will be playing outside. Again, EDP has appropriate landowner ground to allow for the change to occur easily.

Require EDP to immediately ensure we preserve current cell phone reception, TV and internet as we have no complaints about these services currently. It is not safe to live in the country without cell phone services for any amount of time.

And no one buys a home in the country to stay inside of it. We work in our barns, we garden, we enjoy cookouts and the wide open quiet space. We pay property taxes on all of the property not just the house. I love my home, my property and the history that it holds. Please protect it and my family's future. Thank you for hearing all of my concerns, Travis Taylor.

So I mean I think from the map it pretty well speaks for itself. And the contract I've read and my wife's read. We spent many nights in

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discussions upon all of that. So if you guys have 1 any questions, feel free to ask me. 2

3 MR. DEAN: What's your fear of the underground cables? 4

MR. TAYLOR: There's a couple. The 5 biggest is the drainage tile on that side of my 6 house, a lot of the drainage runs that direction, 7 and then secondly, we still have a dug well, so it's 8 only looking to be about 35 feet deep. The property 9 lies low on that side and drops off, I've never 10 11 actually put a laser to it, but I'm assuming between 12 and 15 feet grade change, and then if they go 12 down that additional five feet for the buried cable 13 according to the ag mitigation agreement, I mean 14 they're looking at 20 feet, and I'm kind of worried 15

about where they're going to be sitting at our water 16

table regardless when they're not that far off the 17 property where the well is. I mean I would like 18

19 some assurance on it before, you know what I mean,

somebody goes digging up next to your house and 20 21 they're like, whoa, wait, what are we hitting down

there, you know. 22

23 **MR. DEAN:** As far as the drainage is 24 concerned, the ag mitigation agreement would ensure Page 791

they said that they kind of -- I don't know for a fact, I mean we'd have to -- I'm doing the best with

3 what I can recall out of the conversation. If you

have more questions, feel free to ask them. 4

MS. TURNER: That's fair.

MR. TAYLOR: But they said with the parcels that they have -- to get the number of turbines needed with the parcels that they have,

this is what they -- their best is was my 9

understanding. That they don't have much wiggle 11 room to get what they want and this is where they ended up regardless. They said it was an opinion at 12

13 that point.

> So there is quite a few houses, I mean there's one, two, three including us, and then two more, five within a mile on our road pretty close to each other, I mean walking distance. We can walk down at night and talk to our neighbors. Most of them we've known our whole life, so --

> CHAIRMAN FINNIGAN: You said that the turbines that you're most concerned about are 83, 85 and 95?

MR. TAYLOR: Yeah, those seem to be the ones that --

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that was done properly and prepared. 1

MR. TAYLOR: Yes, I'm hoping that's not after my basement floods, though, since we've never had a problem in the past.

MR. DEAN: You'll want to get some names and numbers of who to contact right away.

MR. TAYLOR: Absolutely, and I mean that's something my wife and I, we're concerned about as well, you know. They have a phone number to contact right away, but even if you do that, what's going to re -- you know, if they don't answer and take care of it right away, who's the next person that's going to be accountable for it? You know, that's a big concern.

MS. TURNER: Have you had any discussion with them, with EDP, about the specific location of specific turbines?

MR. TAYLOR: We've talked. We've not gone 18 into any great deal. They did express -- one of our 19 biggest concerns initially was our group is --20 there's a group of houses, houses not too far off 21 from my house, and we asked why they would locate so 22 23 many near such a densely populated rural area per

se, and they expressed that it was an opinion and

CHAIRMAN FINNIGAN: So how close are those 1 2 to your house just roughly?

MR. TAYLOR: She gave me the exact 3 numbers. One is 1600 and some feet and one's 1700 4 5 and some feet and I think the other one's 17 or 1800. They're all -- if you gave me a 2,000 foot 6 setback, it would remove them. 7

CHAIRMAN FINNIGAN: So if they were back 2,000 feet, you wouldn't have a problem with them

MR. TAYLOR: I would feel much better about the noise, I mean based off the studies, and I met with you guys, I feel like it would give me a better fighting chance against them at 2,000 feet as opposed to where they currently stand.

CHAIRMAN FINNIGAN: Okay, thank you. **MR. KURITZ:** So you're most worried about the ones within a half mile.

MR. TAYLOR: Yes.

MR. KURITZ: And the ones out to a mile --20 21 MR. TAYLOR: There's a lot of them.

MR. KURITZ: Yeah, there are. And the 22 23 mile and a half is --

MR. TAYLOR: It is what it is. Yeah, I

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- mean it's just when you start adding up the numbers, 1
- it gets a lot of numbers really fast. So if -- I 2
- mean, if you took or moved the three that are all
- up, all right up on us, I would feel a lot better
- and I know my wife would about it. I mean once you
- 6 get out to a mile and a half, they said the shadow
- flicker and all that stuff, I mean we're going to
- have a big effect regardless of what happens, but
- the ones closest to us seem to have been noted as 9

the most impactful. 10 11

And the updated sound study that she gave you guys they also sent to me because it was over my

- house. Some of the stuff, it went up by marginal 13
- amounts, like .1 and .1 I believe on both of them, I 14
- 15 don't have it up, but they're both really close to
- the legal limit, like within a decimal on the 1,000 16
- hertz band. It was within 1 dB I believe at that 17
- range of the legal limit, so even in the agreement 18
- 19 they sent, they said it could go over. So if they
- remove those three that we're most concerned about, 20
- 21 that would probably alleviate that problem as well.
- MR. KURITZ: Have you talked to them about 22 23 negotiating some of those contract things in and
- 24 out?

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- **CHAIRMAN FINNIGAN:** Questions from staff? 1 MR. DICK: No. 2
- 3 CHAIRMAN FINNIGAN: Would the applicant have questions?

MS. ANTONIOLLI: No.

6 **CHAIRMAN FINNIGAN:** Would anyone in the audience have questions of this witness? I think you're off the hook. 8

MR. TAYLOR: All right.

CHAIRMAN FINNIGAN: Push the little 10

11 button. You got a question? 12

MS. TURNER: No, I just want to make a comment. Just thank you for your participation, that's why we're here, and I appreciate you taking advantage of it.

MR. TAYLOR: I appreciate everybody taking time tonight.

MR. DICK: Tim Jolly. 18

CHAIRMAN FINNIGAN: Like to be sworn in?

20 MR. JOLLY: Sure.

21 (Mr. Tim Jolly was duly sworn.)

CHAIRMAN FINNIGAN: State your name and 22 23 address and spell your last name. I don't think we have to worry about it, but you got to do it anyway.

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- **MR. TAYLOR:** They said that it is a 1 2 neighbor agreement, that they have increased the amount to sign. The signing bonus was originally 3 set at a thousand without our names on the contract 4 or two thousand --5
 - MS. ANTONIOLLI: Yeah, I would object to private confidential conversations we've had with them.
 - MR. TAYLOR: They never said that it --MR. LUETKEHANS: I'm sorry, what's private and confidential about it --
- **MR. TAYLOR:** It was never expressed as 12 confidential. 13
 - **MR. LUETKEHANS:** -- when you're talking to a property owner?
 - **MR. TAYLOR:** It was never expressed as confidential and I never said or agreed to that. It has been increased once from 2,000 and 6,000.
- MR. KURITZ: I was talking about some of 19 the restrictions that were bothering you. 20
- MR. TAYLOR: Oh, they -- we had a long 21 list of concerns, but they never agreed to change 22 23 any of it, any of it. The dollar amount is the only thing I've ever seen changed. 24

- MR. JOLLY: Okay, Tim Jolly. My address 1 is 26759 East 2700 North Road. The property that 2
- 3 I'm concerned about is 30781 2700 North Road.
- That's the farmstead that's been in our family and 4
- we're working on currently to move there. And just
- for your reference, it's closest to the T97 tower.
 - Okay? Okay, a couple things real quick. I'll try to get through this quickly. I've
- mentioned it before. It's undisputed that these are
- killing machines. They're nonefficient and they're
- not dependable, they -- as an electrical source. 11
- They need a backup because they don't produce power 12
- 100 percent of the time. We've seen and heard in 13 testimony how it has effects on hunting grounds and 14
- 15 certain species of birds. They are from annoyance,
- they are -- the wind turbines are an annoyance and a 16
- nuisance to people living nearby by motion and 17
- flicker and by noise and vibration. They generate 18 electricity about 30 percent of the time which means 19
- 70 percent of the time they are worthless. This is 20
- 21 an antique technology. These windmills or windmills in general at that time have disappeared back in the 22
- 23 1930s and '40s when electricity came to the
- 24 countryside. Windmills were used for pumping water

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and grinding grain for livestock.

1 McLean County has two wind projects right 2 3 now. Were they really the financial saviour when they came to this county? The one thing that really 4 bothers me probably the most is that it turns the best farmland in the state, maybe even the U.S., 6 useless to produce food. I called the McLean County tax assessor office, a fellow by the name of David 8 Johnston. He told me that from 2008 to 2018 McLean 9 County lost 27,577 acres of farm ground. That's 10 11 prime farm ground. In just a ten year span, 27,577 acres, 43 square miles. EDP testified that each 12 13 turbine location took 4 acres out of production. That would be 960 acres at Twin Groves, 420 acres at 14

I asked you before? Over one square mile of the 18 19 most productive farmland. On the farm we also fabricate and fix a 20 lot of our own equipment. We also recycle scrap 21 from copper, scrap iron, aluminum and things as it 22 23 seems feasible. As a commodity, the prices have

been low for several years, now sometimes not even

White Oaks, and you've got 55 turbines for EDP, 118

for Invenergy, 173 turbines taking 692 acres out of

production over one square mile. Where does it stop

homestead because it is an annoyance or even a nuisance to live in the footprint at these setbacks.

3 597 for my estimation is approximately 1650 feet,

basically the minimum of a setback that it should 4 be, and these are 550 feet tall. 5

Let alone the hassle of the increase in 6 traffic. We're nice -- it's nice to be in the 7 country where you don't see so many cars and 8 vehicles. When you get big companies coming in, 9 you're going to see a lot of vehicles every single 10 11 day. They tear up the roads, the roads are closed, my concern is emergencies and things of that. And 12 13 just the travel. The Lexington school co-ops five sports with Colfax, they'd be driving through this 14 15 area, and kids don't know what a speed limit is, and it's even more dangerous when they're on gravel. 16 Then in 30 years they tear it all up and do it 17 again, start on the reclaiming it, and that's if 18

Is it really green? It uses fossil fuels to make the product, thousands of gallons of fuel to transport to the site, thousands of gallons of fuel to put up the turbines, thousands of gallons of lubricant in the turbines, thousands of gallons of

they even decide to do it.

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- worth the gas to get it to Pontiac. So I called
- 2 Pontiac salvage yards, and their current price is
- \$100 a ton for steel, 36 cents a pound for aluminum, 3
- 1.80 a pound for copper, quite different from the 4
- reclaiming project that was described here. If I
- remember right, it showed \$210 for scrap iron to go 6
- to Chicago with the trucking included and then 7
- bringing an empty truck back. I think that's way 8
- out of proportion. I did call Chicago today. The
- steel is \$150 a ton, aluminum 40 cents a pound, and 10
- 2.60 for copper, not that much difference from 11
- Pontiac. 12

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Another concern I have is property values. First of all, it's been stated, I believe in the county board meeting, property rights are not an absolute. In other words, I need to respect my my neighbor has a turbine, it increases his land value because they get a large payment for signing their contract, a very large payment every year,

13 14 15 16 neighbors and my neighbors need to respect me. If 17 18 19 20 plus bonuses for signing up substation wires, et 21 cetera. That in itself diminishes my land value 22 23 compared just because I didn't sign my rights away and agree to be gagged. It also diminishes my

- lubricant to maintain it, thousand of gallons of
- 2 fossil fuels to decommission it. Then also it takes
- 3 thousands of tons of limestone out of our rock
- quarries just north of where the project is put. 4
- These rock quarries are known for their high calcium
- 6 and lime that us farmers use in our fields. That
- would be depleting that resource to put it down as a 7
- road. When the roads are picked up, they're going
- to be worthless. The roads that are put down are 9
- going to be wore out in 30 years. It will be mixed 10
- 11 with dirt, it will be worthless. That is the -- the
- limestone, the ground limestone is for buffering the 12
 - pH in our fields.

A lot of the past I've seen -- a lot of these posts that I've seen that have been put out by EDP where the windmills are proposed to be are in low ground too, either in ravines, actual waterways, things that I'm concerned as to water erosion around these windmills when they possibly could be put there. It doesn't make sense to me. I would never put a building in the middle of a washout.

If you want evidence, my family is the evidence. We have never been in a situation that has already affected us both emotionally and

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- financially as my decision to get involved in this
- process. We were fine before these huge companies 2
- came here and dangled their carrots. We will be
- better off if they put their project -- or we will
- be better off if they put their project where it is
- better suited, not here. 6

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- Mr. Larry Ryan testified at the last
- hearing to a problem that he had and that's 8
- something I don't want to have happen as Travis 9
- indicated also. So the record shows that there has 10
- 11 actually been a complaint in these -- in these
- projects. I guess I want to know what has been done 12
- to help him on the county level. These type of 13
- projects do not belong here. 14

15 And as far as the AIMA agreement, my question is who enforces it? I've seen nothing that 16 shows who enforces it. Are you, the zoning board, 17

- going to be in charge of enforcing it? Who's going 18
- 19 to enact it? Who is going to make sure that they
- are living up to their agreements? It's something 20
- 21 that's in a gray area that doesn't seem to have an answer. 22
- 23 I will add that T97 is the one closest.
- 24 directly south of our house. Right now it's like
 - Page 802

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- looking at an endless pool. I don't even see but one building on the horizon because we're at the 2
- moraine where it goes off and it's just serene farm 3
- ground. T97 would be square behind our house. 4
 - I don't like the way that the measurements
- are made from the house. We have rights to our 6
- whole property. We have a building site 7
- approximately five acres. I anticipate raising 8
- livestock. I'm a fifth generation farmer. My son
- is graduating from college this year. We now have 10
- our first grandson. I want it to carry on and I 11
- want it to be the way it is, the way that God 12
- intended it, farm ground. Thank you. 13
- CHAIRMAN FINNIGAN: Thank you. Boy, you 14 timed that just right. 15
- MR. JOLLY: I was watching. I'm learning, 16 I'll put it that way. 17
- **CHAIRMAN FINNIGAN:** Questions from the 18
- board? 19
- MR. DEAN: I would like some clarification 20
- maybe from staff about the AIMA agreement, how it's 21 going to be represented. Is the county going to 22
- 23 have to deal with that? Maybe this is not the
- - correct time to ask staff. I should be -- yes, and

- he doesn't know, he just asked the question. Can you help me out, Phil?
- 3 **MR. DICK:** We can talk about that, but it's probably not the right time to ask it.
 - MR. DEAN: Understand, thank you.
- 6 MR. JOLLY: Would you be able to provide
- me with that information please? I mean in the 7
- future. I'm not expecting -- I don't want to put 8
- you on the spot right now here, but I mean in the 9 future. 10
- 11 **MR. DICK:** To a large extent, what the county is doing is mimicking the requirements of the 12
- AIMA agreement and so there will be standards that 13 we would enforce too, but we would expect that the
- 14 15 Department of Agriculture will have some force to
- help ensure that they enforce that agreement. 16
 - MR. JOLLY: So you're saying the state will be enforcing it?
- 19 **MR. DICK:** The state will be enforcing it, but we will have standards, stipulations as part of 20
- 21 the special use that will be similar to those requirements. 22
- 23 MR. JOLLY: Will that be going through a 24
 - hearing process, in other words, public input?

- **MR. DICK:** The stipulations are already on 1 2 the record as far as what we are recommending.
- Those will be discussed here by the zoning board. 3
 - MR. JOLLY: With public input.
- MR. DICK: Well, this is what you're doing 5 6 right now is public input.
- MR. JOLLY: We're here for the windmill 7
- company. We're not here for the AIMA agreement. 8 MR. DICK: Oh, the AIMA agreement, that's 9 10
- between the Department of Agriculture and the applicant. 11 12
 - **MR. JOLLY:** And the applicant.
- MR. DICK: Yes. 13
- MR. JOLLY: So they will enforce what they 14 should have to do. 15
 - MR. DICK: Yes.
- MR. JOLLY: Okay, I just want to 17
- understand correctly. 18
- **CHAIRMAN FINNIGAN:** Any other questions? 19
- 20 **MR. DEAN:** I want to understand correctly
- as well. So the AIMA will be enforced by the 21 Department of Agriculture, but we will have 22
- 23 stipulations in -- that will mirror those, and so
 - the county would also have the same requirements as

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the AIMA. Is that what I understand, Mr. Dick? 1

MR. DICK: Very similar. 2

3 **MR. DEAN:** Okay, thank you. So there's really two prongs here is what I'm trying to point 4 5

MR. JOLLY: Kind of like the IP -- the 6 Pollution Control Board, that you should take the 7 regulations. You stated that those regulations were 8 the county board regulations; is that correct? 9

MR. DICK: Yes. 10

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11 MR. JOLLY: So they -- according to the letter, then they should be the same as what the 12 state regs are, right?

MR. DICK: Well, it's not quite the same. 14 15 We don't -- our regulations don't duplicate the AIMA, but they do reference the Pollution Control 16 Board regulations.

MR. JOLLY: Okay, just so that it's my understanding that the Pollution Control Board had regulations and that McLean County adopted them as identical. Okay. And I'm sorry, anything else?

CHAIRMAN FINNIGAN: Would the applicant 22 23 have any questions?

24 MS. ANTONIOLLI: No. created, like I said, continue in the future. It's

not just during construction. I personally have

3 worked on four wind farms. I was on Twin Groves

Phase I and II, I was at the Minonk Wind Farm, and I 4

was also on the Carlock Wind Farm. I've got 5

6 approximately 8,000 hours on these projects and

7 approximately four years working on these projects.

And of my 19 years of laboring, these were the most 8 9 prosperous of my career.

And for the people that do work on these projects, it gives them insurance for their families, it gives them money in their pocket, and because they have extra money from these type of projects, they spend it in the community. You know, they have money to go shopping, they have money for that roof that they've needed fixed for years, they have money to buy a car, for restaurants. I mean it's just -- all the way around, there's more money coming back to the community because of a project like this.

I would also like to state I do not feel that we are going against any of these landowners that are objecting it. I believe they all have their valid concerns and I can appreciate where

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CHAIRMAN FINNIGAN: Would anyone in the audience have questions? Thanks for coming up.

MR. JOLLY: Thank you. Thank you for your 3 4 time.

MR. DICK: Ronny Paul. Ronny Paul. 5

CHAIRMAN FINNIGAN: Would you like to be 6 sworn in? 7

MR. PAUL: Yes. 8

(Mr. Ronny Paul was duly sworn.) 9

CHAIRMAN FINNIGAN: State your name and 10 11 address, spell your last name.

MR. PAUL: It's Ronny Paul, P-A-U-L, 2012 Fox Creek Road, Bloomington. I get to follow two emotional testimonies again. I came up here last time and I talked a lot about the tax money this is going to create for our schools, how badly we need that, and then how not only do the wind farms create jobs during construction, but with the tax dollars it allows renovations to go in the coming years as

well. You know, every year they're getting the tax 20

money, there's money to do more construction, which 21 hires more of our members. 22

23 I'm a member of Laborers Local 362 and have been for 19 years. So the jobs that are 24

they're coming from. I think I stated before last

2 time that I'm not up here advocating for this to be

built by any means necessary. I think with the 3

stipulations and regulations that you guys are 4

5 putting on them, that that should be followed, and

under no means necessary am I advocating diminishing 6

somebody's property value or any ill will towards 7

any of them that have to live in this project. But 8

there is a definite need for this income for our 9

communities and we have to do what's best for all 10

involved. And for our members and for us, it's

obviously the jobs and the money and future jobs 12 13

this will create.

So in closing, I can remember growing up when we first got our first microwave, and everybody always was talking like these microwaves, you don't want to eat that food, you'll get sick, you know, that's where the philosophy nuke it came from, you know, you're going to get some disease from eating something that was cooked so fast, but yet here we

20 are years later and everybody's got them. Also the 21

same thing with the invention of the cell phone, oh, 22

23 they'll cause brain cancer, but yet here I bet everybody's got a cell phone in their pocket. 24

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So I guess the moral behind that is change is hard, and some people have a hard time with

change and it's the fear of the unknown. And I can totally understand where they're coming from, but in

- 4
- this day and age, with the country going the way it
- is, we're either going to use up all of our fossil 6
- fuels or we're going to have to make a change. 7

And I think this is, like the gentleman 8

- stated, prime farmland, and I can agree with that, 9
- but over four years of working on these things, I've 10 11 worked with a lot of people that have built these
- all across the country. First job we were on, Tony 12
- Russo from Seattle, he worked on a wind farm in 13
- Hawaii where they build them up the ridge line 14
- 15 because the wind blew so good. I mean I'm talking
- these people build them in Texas, Kansas, you name 16
- 17 it. Every person I've worked with on these wind
- farms said they've never seen the wind blow like it 18
- 19 does in McLean County. So I understand this is
- prime farm land, it's also prime wind land, and 20
- 21 that's why there's so many here, and I think we need
- to take advantage of it. Thanks. 22
- CHAIRMAN FINNIGAN: Any questions from the 23
- 24 board? Staff?

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- build wind farms, so they will come in and they'll
- come in and they'll bring some work force with them.
- 3 Usually the work force is to direct the work, the
- foremen, the superintendents, things of that nature,
- but every wind farm that we have had here, the 5
- majority of workers has been local. But there is a 6
- 7 chance obviously that they're -- I mean they're
- going to have people from other places here, yes, 8
 - but the majority of them will be local workers, yes.

MR. POWELL: Okay, I was just looking for some clarification on that, so thank you.

MR. PAUL: And it is our hope that that 12 will continue, so --13

MR. POWELL: Okay, thank you.

CHAIRMAN FINNIGAN: Any other questions? 15 Got one more. 16

MR. TAYLOR: Travis Taylor.

MR. DICK: Would you speak up? 18

MR. TAYLOR: Travis Taylor. Just one question. Would you live close to the wind farms?

21 Like how close do you currently live and would you

be willing to live closer? Do you think it would 23 bother you?

24

MR. PAUL: Well, you know, I debated

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MR. DICK: No.

CHAIRMAN FINNIGAN: The applicant?

MS. ANTONIOLLI: No. 3

CHAIRMAN FINNIGAN: Mr. Luetkehans?

Anyone in the audience have questions? Got one. 5 Play nice. 6

MR. POWELL: Of course. Jeff Powell, 32897 East 2700 North, Chenoa.

MR. DICK: Could you get closer to it? MR. POWELL: Jeff Powell, 32897 East 2700

North, Chenoa. I can respect your desire to work and make a living and feed your family. That's

something I think, you know, we can all agree with 13

for sure. The reason why I came up is I just wanted 14 some clarification. 15

I read a quote in the paper from your local that there was a hope that they would use local labor on these projects. Now, is that a guarantee? Could they bring outside work to fill the needs that they have and how would you guys

MR. PAUL: I could say in the past that 22 when a contractor comes in to do some of these, you 23

know, they're not -- our local contractors don't 24

handle that if that happened?

whether to bring some of these things up, but it's

like would I rather live next to a wind farm than 2

where I grew up? The answer to that is yes, I would 3

much rather live next to a wind farm than where I 4 grew up. 5

MR. TAYLOR: Would you rather live there 6 than where you currently live I guess? And I don't know where -- if where you currently live is better than where you grew up. I mean I know that's --

MR. PAUL: Well, here's the thing. You know, mom and dad bought a house on the west side when I was just born, a nice little neighborhood, real quiet. Then in the '80s things started coming along with the drugs and we had crack houses on the corner. I hear people say that people shouldn't be allowed to build something on their land, their neighbor's land because it affects your property value. How much do you think a drug house does to your property value?

MR. TAYLOR: I guess you're kind of doing the same, the comparison, I guess, is kind of there for me. like --

MR. PAUL: I would rather live next to a wind farm.

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MR. TAYLOR: So I think that's all my 1 2 auestions.

CHAIRMAN FINNIGAN: Any other questions? 3 I think you better run while you've got a chance.

MR. PAUL: I'm out of here. 5

MR. DICK: Eric Penn. 6

CHAIRMAN FINNIGAN: Like to be sworn in? 7

MR. PENN: Yes. 8

14

(Mr. Eric Penn was duly sworn.) 9

CHAIRMAN FINNIGAN: Want to state your 10 name and address, spell your last name. 11

MR. PENN: Eric Penn, P-E-N-N, 1016 12

McGregor Street, Bloomington. 13

CHAIRMAN FINNIGAN: Go ahead.

MR. PENN: I am an officer of Laborers 15 Local 362 as well as Ron Paul. We probably should 16

have compared notes before we had our speeches. 17

Mine is real similar to Ronny's, but I'll give it 18

19 anyway. I'm an officer of Laborers Local 362

located in Bloomington. I'm speaking in favor of 20

21 this proposed wind farm project as I have previously

on three other wind farm projects. 22

I was fortunate enough to work on Twin 23 24 Groves wind projects, Phase I and II. I represent fight for these jobs. Thank you for your time.

CHAIRMAN FINNIGAN: Thank you. Questions? 2 3 Staff? Applicant? Mr. Luetkehans? Anyone in the audience have questions? You got off easier than 4 anybody tonight. That will be it for tonight. 5

MR. PENN: Thank you.

CHAIRMAN FINNIGAN: Thank you. We are going to reconvene tomorrow night at six o'clock, so we'll see you then.

MS. ANTONIOLLI: Can we talk for just a minute about anticipated scheduling for when rebuttal will start now that opponents have rested their case?

CHAIRMAN FINNIGAN: I don't have any -- I don't know how many people you have on the list for testimony?

MR. DICK: This is it. There's one on 17 here. 18

19 MS. WALLEY: Mr. Haney, did you already provide testimony? 20

MR. HANEY: (Shakes head).

MS. WALLEY: Okay. I show 14 that have yet to provide testimony.

MS. ANTONIOLLI: And we'll go through

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- the men and women that could possibly work on this 2 project. I could ask each one of our members to
- give their testimony and tell you what these jobs 3
- mean to them personally, but to save time, I am 4
- speaking on their behalf. 5

Most construction jobs are temporary just 6 like this one that I'm speaking in favor of tonight. 7

With these jobs, our members are able to maintain 8

their health insurance, earn pension credits towards 9

retirement as well as earning a living wage, a 10

living wage that in turn is spent right here in 11

McLean County to help pay for mortgages, make car 12

payments, buy groceries, eat at local restaurants, 13

send their children to local schools and help 14

support other businesses. 15

Past wind farm projects here in McLean County have generated over 140,000 man hours for our members which equals roughly around \$4 million in gross wages. I know there are some that argue that let's not base your decision on whether -- on money, whether to base their decisions on this project to

21 approve or disapprove, but until we figure out how 22 to pay for these things without money, I will

continue to speak at these wind farm hearings and 24

those before we begin rebuttal. 1

MS. WALLEY: Yes, ma'am.

MS. ANTONIOLLI: Okay. So we have Mr. 3 DeClark who will provide additional evidence in

5 rebuttal and can we make time for him tomorrow night

or do we need to wait to see if we get through 6

those? 7

MS. WALLEY: Unless they all turn out to be expert witnesses who are entitled to 30 minutes apiece or they have an extended cross-examination, I would think we would, but I can't tell you with a hundred percent certainty. I don't know if anybody has -- like I said, I don't know if any of these are experts or anything like that. Nothing has been indicated to that extent.

> MS. ANTONIOLLI: Okay, thank you. (Adjourned at 9:56 p.m.)

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February 27, 2018
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   1 STATE OF ILLINOIS
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) SS
    2
               COUNTY OF FORD
    3
           I, June Haeme, a Notary Public in and for the County of Ford, State of Illinois, do hereby certify that the following hearing was taken at the McLean County Government Center, 115 East Washington Street, Bloomington, Illinois, on February 27, 2018.

That the said hearing was taken down in stenograph notes and afterwards reduced to typewriting under my instruction and that the transcript is a true record of the testimony given at the hearing.
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    7
           transcript is a true record of the testimony given at the hearing.

I do further certify that I am a disinterested person in this cause of action; that I am not a relative, or otherwise interested in the event of this action, and am not in the employ of the attorneys for either party.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this 8th day of March, 2018.
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                                                                                           JUNE HAEME, CSR
NOTARY PUBLIC
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                "OFFICIAL SEAL"
              June Haeme
Notary Public, State of Illinois
My Commission Expires:
September 28, 2020
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