COMMONWEALTH OF KENTUCKY

BEFORE THE

PUBLIC SERVICE COMMISSION OF KENTUCKY

IN THE MATTER OF:

APPLICATION FOR APPROVAL OF	)	
RENEWABLE ENERGY PURCHASE	)	
AGREEMENT FOR WIND ENERGY	)	Case No. 2009-00545
RESOURCES BETWEEN KENTUCKY	)	
POWER COMPANY AND FPL ILLINOIS	)	
WIND, LLC.	)	

KENTUCKY POWER RESPONSES TO COMMISSION STAFF'S FIRST SET OF DATA REQUEST

February 12, 2010

AFFIDAVIT

Jay F. Godfrey, upon first being duly sworn, hereby makes oath that if the foregoing questions were propounded to him at a hearing before the Public Service Commission of Kentucky, he would give the answers recorded following each of said questions and that said answers are true.

Jay F. Godfrey

State of Ohio)
)ss
County of Franklin)

Subscribed and sworn to before me, a Notary Public, by Jay F. Godfrey this 11th day of February 2010.

Barbara R. Pletcher
Notary Public

My Commission Expires October 1, 2013

BARBARA R. PLETCHER
NOTARY PUBLIC • STATE OF OHIO
Recorded in Franklin County
My commission expires Oct. 1, 2013

AFFIDAVIT

Scott C. Weaver, upon first being duly sworn, hereby makes oath that if the foregoing questions were propounded to him at a hearing before the Public Service Commission of Kentucky, he would give the answers recorded following each of said questions and that said answers are true.

Scott C. Weaver

State of Ohio)
)ss
County of Franklin)

Subscribed and sworn to before me, a Notary Public, by Scott C. Weaver this 11th day of February 2010.

Diane P. Reichle
Notary Public

My Commission Expires 12/12/2014

NOTARIAL SEAL STATE OF OHIO

Diane P. Reichle
Notary Public, State of Ohio
My Commission Expires 12-12-2014

Kentucky Power Company

REQUEST

Refer to page 3, paragraph 5 of Kentucky Power's December 29, 2009 application ("the application"), which states that NextEra, the parent of FPL Wind, is the largest generator of wind power in the United States, with over 6,200 MW of wind generation resources in operation at the end of 2008. Provide the amount of NextEra's wind capacity located within the region that contains the PJM grid.

RESPONSE

Based on the information contained in the FPL Group 2008 Annual Report, NextEra's Wind facilities located in states within the PJM grid are detailed in the table below, where the column "PJM Wind (MW)" represents existing wind power capacity by state within PJM. A total of 412 MW of existing wind power capacity which is either currently owned or being developed by FPL / NextEra, a total of 12.4% within PJM.

A copy of the relevant portion of the FPL Group 2008 Annual Report is attached as page 3 of 3 of this response.

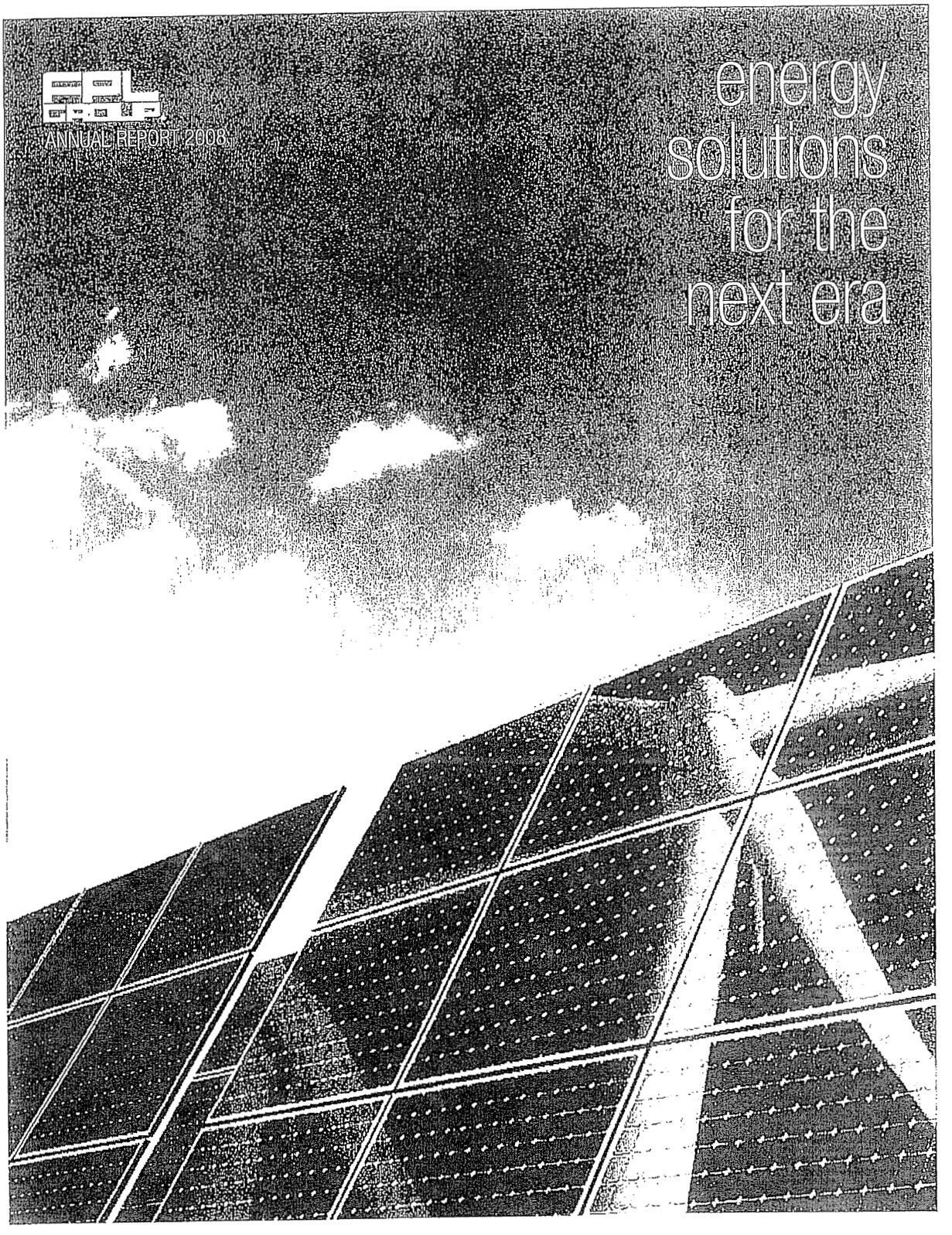
Existing Wind Capacity in PJM States*
Source: www.awea.org/projects

State	PJM Wind (MW)	FPL/NextEra (MW)
DC	0.0	0.0
DE	0.0	0.0
IL	1435.4	217.5
IN	799.2	0.0
KY	0.0	0.0
MD	0.0	0.0
MI	0.0	0.0
NC	0.0	0.0
NJ	7.5	0.0
OH	0.0	0.0
PA	748.0	128.5
TN	0.0	0.0
VA	0.0	0.0
WV	330.0	66.0
Totals	**3320 MW**	**412 MW**

*Represents wind total in the state, regardless of RTO

WITNESS: Jay F Godfrey

- Excerpt -



- Excerpt -

NextEra Energy Resources Facilities	Location	No. of Units	Fuel	Net Capability (mw) [a]
Wind				
Ashtabula Wind	Barnes County, ND	99	Wind	148
Cabazon [b]	Riverside County, CA	53	Wind	40
Callahan Divide [b]	Taylor County, TX	76	Wind	114
Capricorn Ridge	Sterling & Coke Counties, TX	208	Wind	364
Capricorn Ridge Expansion	Sterling & Coke Counties, TX	199	Wind	298
Cerro Gordo [c]	Cerro Gordo County, IA	55	Wind	41
Crystal Lake I [b]	Hancock County, IA	100	Wind	150
Crystal Lake II	Winnebago County, IA	76	Wind	190
Delaware Mountain	Culberson County, TX	38	Wind	28
Diablo Wind [b]	Alameda County, CA	31	Wind	21
Endeavor Wind	Osceola County, IA	40	Wind	100
Endeavor Wind II	Osceola County, IA	20	Wind	50
Gray County	Gray County, KS	170	Wind	112
Green Mountain [b]	Somerset County, PA	8	Wind	10
Green Power	Riverside County, CA	22	Wind	17
Green Ridge Power [b]	Alameda & Contra Costa Counties, CA	1,463	Wind	159
Hancock County [b]	Hancock County, IA	148	Wind	98
High Winds [b]	Solano County, CA	90	Wind	162
Horse Hollow Wind [b]	Taylor County, TX	142	Wind	213
Horse Hollow Wind II [b]	Taylor & Nolan Counties, TX	130	Wind	299
Horse Hollow Wind III [b]	Nolan County, TX	149	Wind	224
Indian Mesa	Pecos County, TX	125	Wind	83
King Mountain [b]	Upton County, TX	214	Wind	278
Lake Benton II [b]	Pipestone County, MN	138	Wind	104
Langdon Wind [b]	Cavalier County, ND	79	Wind	118
Langdon Wind II [b]	Cavalier County, ND	27	Wind	41
Logan Wind [c]	Logan County, CO	134	Wind	201
Meyersdale [b]	Somerset County, PA	20	Wind	30
Mill Run [b]	Fayette County, PA	10	Wind	15
Montfort [b]	Iowa County, WI	20	Wind	30
Mount Copper [b]	Murdochville, Quebec, Canada	30	Wind	54
Mountaineer [b]	Preston & Tucker Counties, WV	44	Wind	66
Mower County Wind [c]	Mower County, MN	43	Wind	99
New Mexico Wind [b]	Quay & Debaca Counties, NM	136	Wind	204
North Dakota Wind [b]	LaMoure County, ND	41	Wind	62
Oklahoma / Sooner Wind [b]	Harper & Woodward Counties, OK	68	Wind	102
Oliver County Wind I [c]	Oliver County, ND	22	Wind	51
Oliver County Wind II [c]	Oliver County, ND	32	Wind	48
Peetz Table Wind [c]	Logan County, CO	133	Wind	199
Pubnico Point [b]	Yarmouth, Nova Scotia, Canada	17	Wind	31
Red Canyon Wind Energy [b]	Borden, Garza & Scurry Counties, TX	56	Wind	84
Sky River [b]	Kern County, CA	342	Wind	77
Somerset Wind Power [b]	Somerset County, PA	6	Wind	9
South Dakota Wind [b]	Hyde County, SD	27	Wind	41
Southwest Mesa [b]	Upton & Crockett Counties, TX	106	Wind	74
Stateline [b]	Umatilla County, OR and Walla Walla County, WA	454	Wind	300
Story County Wind	Story County, IA	100	Wind	150
Vansycle [b]	Umatilla County, OR	38	Wind	25
Victory Garden [b]	Kern County, CA	96	Wind	22
Waymart [b]	Wayne County, PA	43	Wind	65
Weatherford Wind [b]	Custer & Washita Counties, OK	98	Wind	147
Wilton Wind [b]	Burleigh County, ND	33	Wind	49
Windpower Partners 1991–92	Alameda & Contra Costa Counties, CA	279	Wind	28
Windpower Partners 1992	Alameda & Contra Costa Counties, CA	300	Wind	30
Windpower Partners 1993	Riverside County, CA	115	Wind	41
Windpower Partners 1993	Lincoln County, MN	73	Wind	26
Windpower Partners 1994	Culberson County, TX	107	Wind	39
Wolf Ridge Wind	Cooke County, TX	75	Wind	112
Woodward Mountain	Upton & Pecos Counties, TX	242	Wind	160
Wyoming Wind [b]	Uinta County, WY	80	Wind	144
Investments in joint ventures [d]	Various	969	[d]	98
Total Wind				6,375

Kentucky Power Company

REQUEST

Refer to page 4, paragraph 10, of the application. Explain how American Electric Power Service Corporation ("AEPSC") developed the 60/40 weighting percentages for price and non-price factors in ranking the proposals received in response to its June 1, 2009 Request for Proposals for renewable energy resources.

RESPONSE

The Company's Application, Page 4, paragraph 10 and Mr. Godfrey's testimony (Page 18, lines 4-6), incorrectly noted that AEPSC used a 60/40 weighting in its evaluation of the bids submitted under the competitive renewables RFP. The RFP actually stated that the weighting was 80/20.

AEPSC used an evaluation process encompassing several iterations that take into account both price and non-price factors. The non- price factors were established and utilized as a screening tool to support analysis on the viability of the proposed project. Conforming projects are then ranked by price in which price is the sole factor in the selection process.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 8, paragraph 24, of the application. Of the 24 states and the District of Columbia that have adopted a Renewable Portfolio Standard, provide the number and names of states that no longer have a traditional cost-based regulatory environment such as exists in Kentucky.

RESPONSE

As of January, 2010, 29 states and the District of Columbia, have adopted a Renewable Portfolio Standard (RPS), as cited by the Database of State Incentives for Renewables & Efficiency (http://www.dsireusa.org). Based on information provided by the U.S. Department of Energy (http://apps1.eere.energy.gov/states), and updated as of October, 2008, 14 of the 29 states identified as having an RPS are characterized as having deregulated competitive markets for electric power. Those states identified by the DOE as having deregulated competitive markets for electric power include: Connecticut, Delaware, Illinois, Massachusetts, Maine, Michigan, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island and Texas as well as the District of Columbia.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 12, paragraph 37, of the application, which states that the federal production tax credits for wind developers offers benefits over the ten-year-credit eligibility period. Explain how benefits over a ten-year period will be captured "[f]or Kentucky Power's customers over the 20-year term" of the wind power agreement with FPL Wind.

RESPONSE

The federal production tax credit (PTC) is, in essence, a ten-year federal subsidy provided to the wind energy project developer. This benefit serves to "buy-down" the cost of renewable energy because it allows the wind developer to offer the wind energy to wholesale customers at a lower price and still recover their required return on capital investment made. Without the federal subsidy the costs would be higher and would be passed along to the Kentucky Power customer during the 20-year term of the contract. See the response provided in KIUC 1st Set, Item No. 7 for additional background information.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to the cover page of the Direct Testimony of Jay F. Godfrey ("Godfrey Testimony"). Explain whether this testimony is identical to the testimony of Mr. Godrey submitted in Kentucky Power's pending rate case, Case No. 2009-00459.

RESPONSE

Yes, the testimony is identical.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 6 of the Godfrey Testimony. Provide the locations of the Trent Mesa Wind Project and Desert Sky Wind Farm which are owned by American Electric Power ("AEP").

RESPONSE

Both wind farms are located in West Texas. The Trent Mesa Wind Project is located near Abilene and Sweetwater, TX. The Desert Sky Wind Farm is located in Iraan, TX (near San Angelo and San Antonio).

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 8, Table 1, in the Godfrey Testimony.

a. Provide the location of the NextEra wind generation facilities under which an AEP affiliate of Kentucky Power is purchasing energy under an exiting contract.

b. Identify any projects in Table 1 under which the developer is an affiliate of NextEra or FPL Wind.

RESPONSE

a) The location of the NextEra wind generation facilities under which an AEP affiliate is purchasing energy under an existing contract are: Weatherford Wind Energy Center in Weatherford, Oklahoma; Elk City Wind Farm, in Elk City, Oklahoma; and Southwest Mesa Wind Project in McCamey, Texas.

b) Other than the projects identified in the response to Part (a), there are no other projects listed in Table 1 of Witness Godfrey's testimony under which the developer is an affiliate of NextEra or FPL Wind.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 9, lines 16-19, of the Godfrey Testimony. Provide cites to any authoritative source which supports the statement that the area of the wind project from which Kentucky Power would purchase power under the proposed agreement "[i]s generally acknowledged as having the best wind resources within the thirteen (13) states plus the District of Columbia which comprise the PJM grid."

RESPONSE

Please refer to the table below, developed from www.awea.org, Ranking of Existing Wind Energy Capacity by PJM States, which shows Illinois with a ranking of number one. In addition, the American Wind Energy Association (AWEA) provides additional details regarding wind energy projects in each state. (http://www.awea.org/projects/)

Ranking of Existing Wind Energy Capacity by PJM States
Source: AWEA Wind Energy Projects (as of 12/31/2009)

State	Power Capacity Existing Projects (MW)	Rank in PJM (by existing capacity, MW)
Illinois	1547	1
Indiana	1034	2
Pennsylvania	748	3
West Virginia	330	4
Michigan	143	5
Tennessee	29	6
New Jersey	8	7
Ohio	7	8
Delaware	0	*
Kentucky	0	*
Maryland	0	*
North Carolina	0	*
Virginia	0	*

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to pages 10-11 of the Godfrey Testimony. Provide evidence which supports the statement that a capacity factor of 25 to 45 percent is common for wind generators.

RESPONSE

The American Wind Energy Association (AWEA), provides a discussion of common capacity factors for wind generators, which states, "A wind plant ... capacity factor of 25% to 40% is common, although they may achieve higher capacity factors during windy weeks or months." This information may be accessed at: http://www.awea.org/faq/wwt_basics.html. In addition, New Jersey Clean Energy states: "The capacity factor of wind energy systems ranges from 25 percent to 45 percent in a discussion of common capacity factors for wind generators, at: http://www.njcleanenergy.com/renewable-energy/technologies/wind/faqs.

WITNESS: Jay F Godfrey

Kentucky Power Company

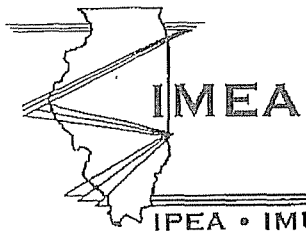
REQUEST

Refer to pages 11-12 of the Godfrey Testimony. The wind facilities from which Kentucky Power will purchase power under the proposed wind power contract will have a capacity of 217.5 MW in its first phase. Aside from the 100 MW assigned to Kentucky Power, what are FPL Wind's plans for the remainder of the facility's capacity?

RESPONSE

AEPSC cannot speak for FPL Group or NextEra Wind regarding plans for the remainder of the Lee-DeKalb wind facility. However, please see the attached pages for a January 5, 2010 Press Release regarding a long-term wind energy agreement between Illinois Municipal Electric Agency (IMEA) and NextEra Energy Resources, LLC, a subsidiary of FPL Group for a 70 MW share from the same Lee-DeKalb wind energy facility. In addition, FPL Group and NextEra periodically provide press releases on their web site, at the following web address: http://www.fplgroup.com/pressroom.shtml.

WITNESS: Jay F Godfrey



IPEA • IMUA

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FOR IMMEDIATE RELEASE **January 5, 2010**

IMEA, NextEra Sign Long-Term Wind Energy Agreement

(For further information contact: Phillip "Doc" Mueller, (217) 789-4632)

Springfield, IL - The Illinois Municipal Electric Agency (IMEA) and NextEra Energy Resources, LLC, a subsidiary of FPL Group (Florida Power & Light), have signed a long-term contract under which the Springfield-based joint-action agency will purchase 70 megawatts of wind-generated electricity from NextEra's new Lee-DeKalb wind farm.

Located near the intersection of Interstates 88 and 39 in Lee and DeKalb counties, the 217-megawatt wind farm began commercial operation in December and IMEA began taking output January 1.

"This contract is the result of months of negotiations between IMEA and NextEra, and fulfills a vital part of IMEA's long-term strategic plan by securing a portion of IMEA's energy needs through a renewable resource that is neither coal nor natural gas dependent," said Ronald D. Earl, IMEA President & CEO. "IMEA is pleased to partner with NextEra in furthering our commitment to developing a green energy portfolio, an opportunity which enables us to take advantage of a clean, renewable and cost-effective energy resource available right here in Illinois."

Earl said the value of the contract – which continues through 2030 – is expected to exceed $300 million over the 20-year period.

The wind farm's location within the PJM regional transmission organization (RTO) service area is "an operational plus," he continued, "because of the high wind availability at the site and because of PJM's current favorable treatment of wind capacity."

(More)

"It also represents a significant investment by IMEA in an Illinois project, one which benefits our members while at the same time, allows us to do our part in helping protect the environment," he continued. "In short, this purchase agreement represents a major step forward toward IMEA's long-term strategic goal of making renewable resources, energy-efficiency and conservation measures a part of our overall power-supply portfolio."

NextERA is one of the nation's largest operators of wind generation and is acknowledged as a leader in the industry. As of mid-2009, it had 65 facilities in 16 states and more than 6,300 megawatts of installed capacity.

Founded in 1984, the IMEA is a not-for-profit unit of local government comprised of 33 member municipalities and one rural electric cooperative which own and operate their own electric distribution systems.

Kentucky Power Company

REQUEST

Refer to page 19 of the GodfreyTestimony, which indicates that, starting on January 1, 2012, the price under the proposed wind contract will escalate annually by 2.25 percent. This is identical to the escalation percentage in a wind power contract presently pending before the Commission another case. Explain whether 2.25 is a standard escalation rate for such contracts or if the fact that the escalation rates in these contracts are identical is merely coincidence.

RESPONSE

The 2.25 percent escalation factor was used in each of AEPSC's wind purchase Request for Proposals (RFPs) during the recent periods 2007 through 2009. Having a small escalation avoids the need for having higher earlier period prices and reflects the reasonable expectation that energy prices will escalate. Although the 2.25 percent is not a defined standard escalation rate in the industry, others may have adopted the same approach as AEPSC. However, Kentucky Power Company lacks information on the reason the unidentified applicant in a pending Commission case utilized a 2.25% escalation rate.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 20 of the Godfrey Testimony, which indicates that the 20-year term of the proposed wind contract "[i]s also the expected life of the technology." If the specific technology utilized in the pertinent FPL Wind facilities has been commercially available for less than 20 years describe how its expected life was determined to be that length of time.

RESPONSE

The turbines used in FPL/NextEra's Lee-Dekalb project utilize GE 1.5 MW turbines which have a design life of 20 years, as noted in their product brochure which may be accessed at: http://www.gepower.com/prod_serv/products/wind_turbines/en/downloads/GEA14954C15-MW-Broch.pdf.

In addition, we understand that GE has also received a design certification for a 20-year life for its 1.5 MW turbine from Germanischer Lloyd, an international wind turbine certification institution. (see also http://www.gl-group.com/en/11856.php)

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 2 of Exhibit JFG-1 to the Godfrey Testimony, specifically, the section "Purchaser"s Right to Curtail Renewable Energy." Explain whether the proposed wind contract's terms cause it to be what is typically referred to as a "take-or-pay" contract.

RESPONSE

Kentucky Power Company would not characterize the proposed wind agreement as a "take-or-pay" contract. Although there is no "typical" definition of a "take-or-pay" contract, the purchaser under such a contract would usually hold the risk that if it could not "take" delivery of the commodity due to a lack of demand (load) it would have to "pay" for what it did not use regardless. The seller in that case would be free to re-sell the commodity, even though the purchaser had already paid for it, and thereby potentially obtain a windfall by being paid for the same commodity twice. However, under the proposed wind contract, Kentucky Power pays only for what the wind farm produces. If demand is weak, it can always "take" the power and sell it into the PJM market and obtain value for it. This is significant, because it makes Kentucky Power's right to Economic Curtailment, as explained in Exhibit JFG-1, an economic option for Kentucky Power to help it manage costs, not increase them. Finally, although Kentucky Power will pay certain amounts to the wind farm owner during Economic Curtailment periods for the energy that Kentucky Power chooses to curtail, the wind farm is contractually prohibited from producing that energy for its own benefit, and as a result cannot achieve a windfall as in other "take-or-pay" contexts.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 5 of Exhibit JFG-1 to the Godfrey Testimony and page 1 of Exhibit JFG-3. Provide the calculations, plus a narrative description of said calculations, that show how the period-based prices of the proposed wind contract shown in Exhibit JFG-1 are converted to the weighted average price shown in Exhibit JFG-3.

RESPONSE

In a given year, a certain percentage of the generation from the Lee-Dekalb wind project is expected to occur during the Premium Peak pricing period (January, February, July, August and December weekdays from hours ending 0800 to 2300), the Peak pricing period (March, April, May, June, September, October and November weekdays from hours ending 0800 to 2300) and the off-Peak pricing period (weekday hours ending 2400 to 0700 and all hours during weekends and NERC holidays). The production weighting for each pricing period is multiplied by the respective contract rate for that period to equate to the average production-weighted price. Please see Confidential Attachment 1 for the percentage of generation per pricing period, contract rate per pricing period and weighted average price. Confidential protection of the attachment has been requested in the form of a Motion for Confidential Treatment.

WITNESS: Jay F Godfrey

Weighted Average Price of Proposed Wind Contract

Premium Peak	[redacted]	[redacted]	[redacted]
Peak	[redacted]	[redacted]	[redacted]
Off Peak	[redacted]	[redacted]	[redacted]
			[redacted]

Kentucky Power Company

REQUEST

Refer to page 23 of Exhibit JFG-2 to the Godfrey Testimony, which deals with the general design of the FPL wind generation facility. Provide the height of the facility and the length of the turbine blades.

RESPONSE

According to data provided by FPL, the hub height of the tower (the height from the ground to the centerline of the turbine rotor) is 100 meters (328 feet). The length of the turbine blades is approximately 41 meters (135 feet), while the diameter (swept area) is 82.5 meters (270.7 feet).

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to Section 4.7.A of Exhibit JFG-2 to the Godfrey Testimony. Given that the capacity available to Kentucky Power under the proposed wind contract is 100 MW, explain why the amount of capacity that must be tested and commissioned at the generation facility established as a commercial operation milestone is substantially greater than 100 MW.

RESPONSE

The delivered energy to AEP, on behalf of Kentucky Power, is a proportional share of the total metered output of the Lee/DeKalb wind facility. Our rationale regarding commissioning is that the project is fully operational and delivering energy into the PJM grid. Please refer to the response provided in the Commission Staff 1st Set, Item No. 10, Attachment 1 regarding the total output of the wind farm. We also are informed by FPL that the wind energy facility is currently delivering energy into the PJM grid.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to Section 7.2.C of Exhibit JFG-2 to the Godfrey Testimony. Given that the term of the proposed wind contract is 20 years, explain why the aggregate amount that FPL Wind can be required to pay Kentucky Power for not meeting its availability requirement is only equal to 10 times the aggregate amount it can be required to pay in any calendar year.

RESPONSE

Kentucky Power is not required to pay for any energy not received due to unavailability of the wind resource. The payment for not meeting the availability requirements represents commercially reasonable terms to be provided as compensation by FPL Wind consistent with other arms-length agreements entered into by other AEP operating companies.

WITNESS: Jay F Godfrey

Kentucky Power Company

REQUEST

Refer to page 9 of the Direct Testimony of Scott C. Weaver ("Weaver Testimony"), specifically, the discussion of co-firing biomass in the Rockport units and in Kentucky Power's Big Sandy Unit 2. Although the indicative planning is characterized as very preliminary, describe why the target date for the Rockport units is not until 2013 and, for Big Sandy Unit 2, not until 2015.

RESPONSE

The Company is only beginning to incorporate the co-firing of biomass into its generation facilities and is therefore taking a conservative approach in utilizing this technology. The deployment of this technology will depend on the success of the initial efforts as well as the availability of biomass feedstock for delivery at other Company locations. The dates selected are merely placeholders for planning purposes and may be accelerated or deferred as more data becomes available.

WITNESS: Scott C Weaver

Kentucky Power Company

REQUEST

Refer to the text at the beginning of page13 of the Weaver Testimony, which refers to "Company witness Mosher". Explain whether this refers to testimony by Tim Mosher in Case No. 2009-00459 and if this means that the Weaver Testimony in this case is identical to the testimony of Scott Weaver filed in 2009-00459.

RESPONSE

Yes, the testimony is identical.

WITNESS: Scott C Weaver

Kentucky Power Company

REQUEST

Refer to Footnote 9 on pages 21 and 22 of the Weaver Testimony, which refers to an estimated 39.3 percent annual capacity factor for the FPL Wind project from which Kentucky Power would purchase power under the proposed wind contract. Describe how this estimate was derived and how it compares to the capacity factors of other wind facilities owned and/or operated by NextEra, FPL Wind or wind developers affiliated with either of those developers which are located in the northern Illinois area.

RESPONSE

According to FPL, the estimated capacity factor was calculated as follows: NextEra Energy Resources has been collecting wind data from the Lee Dekalb project area for over 7 years from NRG 50-meter meteorological towers with anemometers mounted at 10, 30, and 50 meters; vanes mounted at 50 meters; and a temperature sensor recording wind data with a 10 minute averaging interval.

Data is quality assured by removing bad data due to sensor failures and icing using standard protocols and statistical analysis proprietary to NextEra. Wind shears are determined between the 30 and 50 meter sensors and are used to adjust the wind speeds to 80 meter hub height. Temperature and elevation are used to determine air density for each 10 minute-averaged period.

Wind speeds are correlated to the nearest 10 year reference tower data provided by the respective Mesonets (Airports, Weather Stations, etc). Wind speeds during the measurement period are scaled to the long-term norm to create an average wind year time series. Average year hub-height wind speed is applied to a density specific power curve for the wind turbine to determine gross energy output for each 10 minute period.

NextEra then adjusts the gross energy output to a net capacity factor based on its operational experience with its wind farm in the area. Adjustments are made for availability (specific to the turbine being used), array losses (as modeled with WindPro and WindFarmer software), collection system and transformation electrical losses (provided by NextEra electrical design team), icing (as measured in the meteorological data), terrain variations (simulated with WASp software), power curve degradation including high-speed hysteresis (from NextEra operational experience).

There are no other wind facilities owned and/or operated by NextEra, FPL Wind or wind developers affiliated with either of those developers which are located in the northern Illinois area for comparison. Please refer to the response to Commission Staff 1st Set, Item No. 9 for information regarding common capacity factors for wind generators in the U.S.

WITNESS: Jay F Godfrey