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1		BEFORE THE
2		A PUBLIC SERVICE COMMISSION
3	In the Matter of:	
4		DOCKET NO. 150263-EI
5		MINATION OF NEED FOR DUVAL-RAVEN
6	AND NASSAU COUNTIE COMPANY.	S, BY FLORIDA POWER & LIGHT
7		/
8		
9	PROCEEDINGS:	HEARING
10	COMMISSIONERS	
11	PARTICIPATING:	CHAIRMAN JULIE I. BROWN COMMISSIONER LISA POLAK EDGAR
12		COMMISSIONER ART GRAHAM COMMISSIONER RONALD A. BRISÉ
13		COMMISSIONER JIMMY PATRONIS
14	DATE:	Wednesday, February 24, 2016
	TIME:	Commenced at 9:30 a.m.
15		Concluded at 9:37 a.m.
16	PLACE:	Betty Easley Conference Center Room 148
17		4075 Esplanade Way Tallahassee, Florida
18	REPORTED BY:	DEBRA KRICK
19	-	Court Reporter (850) 894-0828
20		
21		
22		PREMIER REPORTING
23		114 W. 5TH AVENUE TALLAHASSEE, FLORIDA
24		(850) 894-0828
25		

APPEARANCES: WILLIAM P. COX, ESQUIRE, 700 Universe Boulevard, Juno Beach, Florida 33408-0420, on behalf of Florida Power & Light Company. LEE ENG TAN and CHARLES MURPHY, ESQUIRES, FPSC General Counsel's Office, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, appearing on behalf of the Florida Public Service Commission Staff. MARY ANNE HELTON, DEPUTY GENERAL COUNSEL, Florida Public Service Commission, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850.

1	PROCEEDINGS
2	CHAIRMAN BROWN: Good morning, everybody. I
3	hope you are doing well, survived the thunderstorm
4	that it appears to not even be here.
5	Today is February 24th, and the time is 9:30,
6	and this is a hearing for petition for
7	determination of need for Duval-Raven 230 kV
8	transmission line by Florida Power & Light.
9	Staff, can you please read the notice? This
10	meeting is called to order.
11	MS. TAN: By notice published January 7th,
12	2016, this time and place is set for a hearing
13	conference in Docket No. 15263-EI. The purpose of
14	the hearing conference is set out in the notice.
15	CHAIRMAN BROWN: Thank you.
16	We will take appearances, starting with
17	Florida Power & Light.
18	MR. COX: Good morning, Chairman Brown,
19	Commissioners. William Cox appearing on behalf of
20	Florida Power & Light Company, with a business
21	address of 700 Universe Boulevard, Juno Beach,
22	Florida, 33408.
23	CHAIRMAN BROWN: Thank you.
24	Staff.
25	MS. TAN: Lee Eng Tan and Charlie Murphy on

1	behalf of Commission staff.
2	MS. HELTON: And Mary Anne Helton. I am here
3	as your advisor.
4	CHAIRMAN BROWN: Thank you.
5	Staff, are there any preliminary matters?
б	MS. TAN: Chairman, we note that the witness
7	has been excused, and FPL has waived its opening
8	statement.
9	CHAIRMAN BROWN: Okay. Let's address the
10	prefiled testimony at this point.
11	MS. TAN: Chairman, we ask that the prefiled
12	testimony of Francisco Prieto be inserted into the
13	record as though read. Cross-examination has been
14	waived.
15	CHAIRMAN BROWN: Thank you.
16	We will insert Francisco Prieto's testimony
17	into the record as though read.
18	(Whereupon, prefiled testimony was inserted.)
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1		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2		FLORIDA POWER & LIGHT COMPANY
3		PETITION FOR DETERMINATION OF NEED FOR
4		DUVAL-RAVEN 230 KV TRANSMISSION LINE IN
5		BAKER, COLUMBIA, DUVAL, AND NASSAU COUNTIES
6		DIRECT TESTIMONY OF FRANCISCO PRIETO
7		DOCKET NO. 150263-EI
8		JANUARY 11, 2016
9	Q.	Please state your name and business address
10	A.	My name is Francisco Prieto. My business address is 4200 W. Flagler Street,
11		Miami, Florida 33134.
12	Q.	By whom are you employed and what position do you hold?
13	A.	I am employed by Florida Power & Light Company ("FPL" or the
14		"Company") as Senior Manager, System Planning.
15	Q.	Please describe your duties and responsibilities in that position.
16	A.	My responsibilities include the direct supervision of engineers in the
17		development and evaluation of transmission expansion plans utilizing load
18		flow analysis. I have held this position and performed these responsibilities
19		since April of 2012.
20	Q.	Please describe your educational background and professional
21		experience.
22	A.	I graduated from the Florida International University with a Bachelor of
23		Science degree in Electrical Engineering in May of 1990. From 2007 through

1 April 2012, I served as Senior Manager of System Operations. I was 2 responsible for supervising FPL Transmission System Operation personnel to ensure the safe, reliable operation of the FPL Bulk Power System in 3 compliance with the North American Reliability Corporation ("NERC") 4 5 Reliability Standards. My primary duties and responsibilities included the operation and coordination of the FPL Generation, Transmission, and 6 7 Substation system in order to provide reliable service to FPL's customers in an efficient manner. I also ensure on-going personnel training needs are met 8 9 on all processes and procedures necessary to maintain situational awareness 10 during normal and emergency conditions. 11 **Q**. Are you sponsoring an exhibit in this case? Yes. I am sponsoring Exhibits FP-1 through FP-3, which are attached to my 12 A.

13 direct testimony.

14Exhibit FP-1Map of Transmission and Generation15Exhibit FP-2Duval-Raven Expected Construction Schedule16Exhibit FP-3List of Contingencies

17 Q. What is the purpose of your testimony?

A. The purpose of my testimony is to sponsor and support FPL's request for a
determination of need for the Duval-Raven Transmission Project ("DRP").
Specifically, my testimony presents the following information in support of
the DRP:

• General overview of the FPL transmission system;

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- A general description of the DRP including the design and operating
 voltage of the proposed transmission line, the starting and ending
 points of the line, the approximate cost of the DRP, and the projected
 in service date;
- The specific conditions, contingencies, and factors which demonstrate
 the need for the DRP, including a discussion of FPL's transmission
 planning process and the reliability benefits of the DRP;
 - The major alternatives to the DRP that were evaluated and rejected by FPL in favor of the DRP; and
- The adverse consequences to FPL's electric system and customers if
 the DRP is delayed or denied.

12 Q. Please summarize your testimony.

13 The DRP 230 kV transmission line is the best and most cost-effective A. 14 alternative available to meet an FPL transmission need in December 2018, 15 taking into account the demand for electricity, the need to meet NERC 16 Reliability Standards for electric system reliability and integrity, and the need for abundant, low-cost electrical energy to assure the economic well-being of 17 18 the residents of this state. FPL has examined all reasonable alternatives for 19 this need and determined that the DRP will provide its customers with 20 sufficient reliability at the lowest cost while maintaining operational 21 flexibility for FPL's system. Without this addition to the FPL transmission 22 system in December 2018, the economic well-being of Floridians would be at risk due to needed electric service to meet projected new load in the affected 23

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- region and heightened exposure to potential system reliability and integrity issues.
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OVERVIEW OF FPL'S TRANSMISSION SYSTEM

4 Q. Please describe FPL's transmission system.

A. FPL is part of the nation's Eastern Interconnection transmission network. It
has multiple points of interconnection with other utilities that enable power to
be exchanged among utilities. The FPL transmission system is comprised of
approximately 6,888 circuit miles of transmission lines. Integration of the
generation, transmission, and distribution system is achieved through FPL's
596 substations.

The FPL transmission system is designed to integrate all of FPL's generation resources to serve FPL's retail customers and to meet FPL's firm long-term transmission service obligations in a reliable and cost effective manner. It is planned and designed consistent with Reliability Standards and criteria established by the NERC, at the direction of the Federal Energy Regulatory Commission ("FERC"), and adopted by the Florida Reliability Coordinating Council ("FRCC").

18 Q. Please provide a brief description of the existing load and electric 19 characteristics.

A. FPL's existing load characteristics consist primarily of residential and
commercial load with limited industrial load. FPL's summer peak demand in
2015 was 22,959 MW and the winter peak demand in 2015 was 19,718 MW,
serving approximately 4.8 million customers. An overview of FPL's existing

1		electrical transmission network indicating the general location of generating
2		plants, substations, and transmission lines is shown in Exhibit FP-1.
3		DESCRIPTION OF THE DRP
4	Q.	Please describe the proposed DRP transmission line for which FPL is
5		seeking a determination of need in this docket.
6	A.	The proposed line will connect from FPL's existing Duval Substation in
7		Duval County to FPL's planned new Raven Substation in Columbia County
8		(by December 2018) and to several substations in the area via upgraded
9		existing 115 kV transmission lines in Columbia County to address the
10		anticipated transmission system limitations.
11		As shown in Exhibit FP-3, FPL's studies indicate transmission limitations on
12		the existing 115 kV transmission network west of Baldwin Substation and
13		west of Bradford Substation. The new Duval-Raven 230 kV transmission line
14		will efficiently and effectively integrate and serve existing FPL and Clay
15		Electric Cooperative, Inc. distribution substations and any future substations
16		needed to serve the growing load in this area. In addition, the DRP would
17		mitigate potential overloads and low voltage conditions under contingency
18		events.
19	Q.	What is FPL's timetable for licensing, design, and construction of DRP?
20	A.	For an indicative schedule of licensing, designs, and construction, please see
21		Exhibit FP-2.
22	Q.	What is FPL's estimated capital cost of the DRP?
23	A.	The estimated capital cost of the DRP is \$71 million in 2018 dollars.

FPL PLANNING PROCESS

2 Q. How does FPL determine the need for new transmission lines?

3 FPL's transmission system planning is governed by a series of NERC A. Reliability Standards mandated by FERC and enforced by the FRCC. The 4 5 DRP is intended to meet NERC Reliability Standard TPL-001-4 (Transmission System Planning Performance Requirement). The applicable 6 7 NERC Reliability Standard is included as Attachment 5 to the Petition. Under TPL-001-4, FPL is required, on annual basis, to complete a planning 8 9 assessment of its portion of the Bulk Electric System ("BES") that addresses 10 near-term and long-term planning horizons for steady state, short circuit, and 11 stability conditions. TPL-001-4 specifies transmission system operating 12 scenarios that should be evaluated, and the levels of system performance that 13 should be attained. FPL's transmission planning process is designed to ensure 14 compliance with the NERC and FRCC Planning Standards and involves three 15 major steps: (1) the preparation of system models, (2) the assessment of the 16 transmission system, and (3) the development and evaluation of alternatives.

17 Q. What studies did FPL perform to determine the need for the DRP?

A. Transmission assessment studies conducted by FPL in 2014 and 2015 have
identified regional transmission system limitations in Baker, Bradford,
Columbia, and Union Counties. These studies indicate that by December
20 2018, the existing 115 kV transmission network between Baldwin, Bradford,
and Columbia Substations will not have sufficient capacity to provide reliable
service to existing and proposed substation loads.

NEED FOR THE PROJECT

2 Q. Please explain the need for the DRP.

3 A. The need for transmission system upgrades is based on potential overload 4 conditions associated with single contingency events, which occur when a 5 single element such as a generator, transmission circuit, or transformer is disconnected from the system. If FPL does not add new transmission 6 7 capability in the Project Service Area by December 2018, FPL forecasts potential overloads ranging from 9 to 14 percent of the thermal line ratings 8 9 and low voltage conditions under 3 separate single contingency events.

10 Q. Please explain the benefits of the DRP.

11 The proposed DRP would assure the economic well-being of the residents of A. 12 the state by providing low-cost electric service to projected new load in the 13 region and improving the region's electric system reliability by minimizing 14 the region's exposure to single contingency events. The proposed DRP will 15 also reduce on-peak transmission losses by approximately 6.3 MW. While the 16 final cost of the DRP is subject to the final route and length of the line and 17 other conditions that could be imposed through the Transmission Line Siting 18 Act process, I believe the DRP is the most cost-effective alternative to meet 19 our customer's needs.

20 Q. Please describe the contingencies that require the addition of the DRP.

A. Based on the Florida Power And Light Company's 2015 Ten Year Power
Plant Site Plan load forecast, there are approximately 118 potential System
Operating Limits ("SOL") violations under multiple double contingencies (N-

1 1-1) in the Baldwin-Columbia-Bradford 115 kV area in December 2018 [see
 2 Exhibit FP-3]. If the DRP is completed by December 2018, the number of
 3 potential SOL violations will be eliminated.

4 Q. What is the proposed in-service date for the DRP?

- 5 A. The projected in-service date is December 2018.
- 6 Q. Would construction of the DRP provide for further load growth as well as
 7 resolve these contingencies?
- 8 Yes. An analysis of transmission alternatives resulted in FPL's selection of the A. 9 the DRP as the most cost-effective and efficient means to: (a) increase the 10 capacity of the existing 230 kV transmission network between FPL's Duval, Baldwin, and Bradford Substations and relieve the loading on the existing 115 11 12 kV system in a reliable manner consistent with NERC Reliability Standards; 13 (b) serve the projected customer load increase in the area West of the existing 14 Bradford and Baldwin Substations and east of the planned Raven Substation; 15 and (c) provide another electrical feed from the Duval Substation in Duval 16 County to the Lake City area in Columbia County.

17 Q. Are there other reliability and strategic benefits associated with the DRP?

A. The DRP will increase reliability by providing a new 230 kV injection from
the existing Duval Substation to the proposed Raven Substation and looping
the existing Columbia-Macedonia and Bradford-Columbia 115 kV
transmission lines into the proposed Raven Substation. Further, the DRP
serves a strategic purpose by supplying potential future industrial,
commercial, and residential load south and east of Lake City and west of the

1		existing 230 kV transmission network from the northern portion of Duval to
2		the southern portion of Bradford County while maximizing system reliability
3		and minimizing cost to customers.
4		DISCUSSION OF ALTERNATIVES
5	Q.	Did FPL consider alternatives to the DRP?
6	A.	Yes.
7	Q.	What factors were employed to evaluate the alternatives?
8	A.	The factors used to evaluate the performance of the alternatives included
9		reliability, cost, construction feasibility, operational flexibility, right of way
10		("ROW") diversity, and future transmission system expandability.
11	Q.	Please describe the transmission alternatives that were considered and
12		explain the reasons why they were rejected.
13	A.	FPL evaluated three alternatives to the proposed DRP. Alternative I consists
14		of ampacity upgrades of several line sections, some of these sections requiring
15		reconductoring, in the 115 kV network between Baldwin, Bradford, and
16		Columbia Substations. Installation of capacitor banks for voltage support
17		would also be required. This alternative was deemed not to be practicable
18		because its implementation does not provide a long term solution in the outer
19		years of the planning horizon because it only reinforces the 115 kV network
20		and, long term, does not alleviate the need for future transmission
21		reinforcement in the area.
22		Alternative II consists of building a new 230 kV transmission line
23		approximately 20 miles from the Columbia Substation on a new ROW to loop

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in and out of the existing Duke Energy Florida, Inc. ("DEF") Suwannee River 1 2 Plant-Ft. White North 230 kV transmission line into the existing Columbia 3 Substation. This alternative was not considered a practicable option because of the need to potentially acquire approximately 20 miles of new ROW, a 4 5 portion of which is located in residential areas in unincorporated Columbia 6 County and Lake City, coupled with limited space at the FPL Columbia 7 Substation property, also located in a residential area. An expansion of this substation would be required, and the existing substation property is not large 8 9 enough to accommodate this expansion. Therefore, additional property would 10 have to be purchased for the expansion.

Alternative III consists of building a new 230 kV transmission line from the existing DEF Ft. White Substation to the existing Columbia Substation. This alternative was not considered a practicable and timely option because of the need to acquire new ROW, some portion of which is in residential areas in unincorporated Columbia County and Lake City.

16 Q. Please describe why generation alternatives were not considered viable.

A. Generation alternatives were not considered viable given the absence of a
preferred generation site in the area of the DRP. Preferred sites represent those
locations where FPL has conducted significant reviews, and has either taken
action, or is currently committed to take action, to site new generation
capacity. FPL will continue to evaluate whether there are any sites in the area
of the DRP that have potential as a site for future generation. However, no
final plans have been made in this regard.

Please describe why distribution alternatives were not considered viable.	
Most of the distribution system in Columbia, Union, and Baker Counties is	
dependent on the existing 115 kV transmission network between Baldwin,	
Bradford, and Columbia Substations, and by December 2018, the distribution	
system will not have sufficient capacity to provide reliable service to existing	
and proposed substations, hence a new transmission line is required.	
ADVERSE CONSEQUENCES OF DELAY OR DENIAL OF THE DRP	
Would there be adverse consequences to FPL's customers in the DRP	

- Service Area if the DRP is not timely approved?
- 10 Yes. If FPL does not add new transmission capability in the DRP Service A. 11 Area by December 2018, potential overloads are forecasted ranging from 9 to 12 14 percent of the thermal line ratings and low voltage conditions under three 13 separate single contingency events, thus causing a violation of the NERC 14 Reliability Standards.
- 15 **Q**. What would be the impact if certification of the DRP was denied?
- 16 As discussed above, the economic well-being of the residents of the state A. 17 would be at risk due to the lack of needed electric service to meet projected 18 new load in the region, and exposure to potential system reliability and 19 integrity issues would be heightened.
- 20 **Q**. Should the Commission approve the need for the DRP?
- 21 Yes. For all the reasons described above, the Commission should determine A. 22 that there is a need for the Duval-Raven 230 kV transmission line to preserve

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- 1 electric system reliability and integrity in the area and to maintain low-cost
- 2 electrical energy for the economic well-being of the residents of Florida.

3 Q. Does this conclude your testimony?

4 A. Yes.

1 CHAIRMAN BROWN: Exhibits. 2 MS. TAN: Staff has a stipulated comprehensive 3 exhibit list, which includes the prefiled exhibits 4 attached to the witness' testimony in this case, 5 along with staff's composite exhibits, which 6 reflect the discovery responses. The list has been 7 provided to the party, the Commissioners and the 8 court reporter. This list is marked as the first 9 hearing exhibit, and the other exhibits should be 10 marked as set forth in the chart. 11 At this time, we request that the 12 comprehensive exhibit list marked as Exhibit No. 1 13 be entered into the record. 14 CHAIRMAN BROWN: Okay. We will inter Exhibit 15 1 into the record. 16 (Whereupon, Exhibit No. 1 was received into 17 evidence.) 18 MS. TAN: And staff would like to move 19 Exhibits 2 through 9, which include FPL's and 20 staff's exhibits, into the record as set forth in 21 the comprehensive exhibit list. 22 Okay. Seeing no objections, CHAIRMAN BROWN: 23 we will enter Exhibit 2 through 9 into the record 24 as though read -- pardon me, into the exhibit list. 25 Thank you.

19 1 (Whereupon Exhibit Nos. 2 - 9 were received into evidence.) 2 3 MS. TAN: And at this time, we suggest that, 4 since the parties are proposing stipulated 5 positions on all issues, no post-hearing filings 6 would be necessary, and the Commission, if it 7 desires, could make a bench decision in this case. 8 The likelihood of a bench decision is 9 mentioned in Section 13 of the prehearing order. 10 We can move to staff's recommendation on the 11 proposed stipulations if you would like. 12 CHAIRMAN BROWN: Yes, please. 13 As you are aware, there are MS. TAN: Okay. 14 five issues before you. They are all stipulated. 15 And as you can see, staff recommends that the 16 proposed stipulations on page five through eight of 17 the prehearing order, issues one through five, be 18 approved by the Commission. 19 Okay. Commissioners, do you CHAIRMAN BROWN:

20 have any questions for staff or for the party?
21 Commissioner Edgar.

22 COMMISSIONER EDGAR: Thank you, Madam Chair. 23 I would like to ask the petitioner very 24 briefly to summarize the request and the stipulated 25 positions.

CHAIRMAN BROWN: Excellent.

2 MR. COX: Sure. Commissioner Edgar and Commissioners, Florida Power & Light Company has 3 4 filed a petition requesting the Commission 5 determination of need for a proposed transmission 6 line, the Duval-Raven 230 kV transmission line, 7 which would originate from our existing Duval 8 substation in Duval County, and stretch 9 38-and-a-half miles to the west and terminate in a 10 new Raven substation in Columbia County. It will 11 cross parts of Duval, Nassau, Baker and Columbia 12 counties as it runs west from the Duval substation.

As our filing has indicated, we continue to experience customer load growth in the north region of our territory, in particular, in the project service area, which is an area west of Baldwin and Bradford substations, and east of the planned Raven substation in Columbia County.

As a result, we have investigated and assessed the need for new facilities to meet that growth need, and to continue to provide electric particular service in a reliable manner consistent with applicable North American Electric Reliability Coordinating Council criteria.

25 Our studies have shown that, we did in 2014

and 2015, that there will be transmission system
limitations by December of 20 -- 2018 in the
project area if additional transmission facilities
are not put in this area.

5 We looked at various alternatives, including 6 both generation and distribution alternatives, in 7 addition to transmission alternatives, and our 8 analysis led to select Duval-Raven as the most 9 cost-effective and efficient means to meet the need 10 by enhancing our existing transmission networks in 11 that area.

Thank you.

13 COMMISSIONER EDGAR: Thank you very much.
14 I -- just to kind of lay the foundation for
15 our next steps here this morning, I would note that
16 issues one through four are the specific statutory

17 criteria that we are directed to examine. And 18 issue five, of course, is the keep the docket open 19 or closed depending on our decisions on issue one 20 through four.

I do believe that the need for this proposed transmission line with a starting point and end point has been proven, that it is necessary for reliability, and recognizing the protected load growth.

1 I also recognize that this proposal has 2 approximately 96 percent of the line within current 3 right-of-way helping with the cost-effectiveness, and that the other alternatives would be more 4 5 costly. 6 And with that, Madam Chair, after our 7 discussion, I will be ready to make a motion. 8 CHAIRMAN BROWN: Thank you, Commissioner 9 Edgar. 10 Any other comments or questions? 11 I think we are ripe for a motion at this time. 12 COMMISSIONER EDGAR: Thank you. Then I would 13 move that we approve the stipulated agreements on 14 issues one through four, and then approve to close 15 the docket for issue five. 16 CHAIRMAN BROWN: Is there a second? 17 COMMISSIONER GRAHAM: Second. 18 CHAIRMAN BROWN: Any discussion? 19 All those in favor, say aye. 20 (Chorus of ayes.) 21 CHAIRMAN BROWN: All right. The motion 22 passes. Thank you. 23 And thank you to staff, and to the parties and 24 the prehearing officer for your work on this, for 25 really streamlining it for us today.

1 Staff, are there any other matters to be 2 addressed? 3 MS. TAN: Madam Chairman, there are no further matters at this time. Since the Commission has 4 made a bench decision, post-hearing filings are not 5 6 necessary. The final order will be issued no later 7 than March 15th, 2016. 8 CHAIRMAN BROWN: Thank you. 9 Commissioners, any final comments before we 10 adjourn? 11 MR. COX: Thank you. 12 CHAIRMAN BROWN: Thank you. Thank you. This 13 hearing is a journaled. Thank you very much. 14 (Whereupon, the proceedings were concluded at 15 9:37 a.m.) 16 17 18 19 20 21 22 23 24 25

1	CERTIFICATE OF REPORTER
2	STATE OF FLORIDA)
3	COUNTY OF LEON)
4	I, DEBRA R. KRICK, Professional Court
5	Reporter, certify that the foregoing proceedings were
6	taken before me at the time and place therein
7	designated; that my shorthand notes were thereafter
8	translated under my supervision; and the foregoing pages
9	are a true and correct record of the aforesaid
10	proceedings.
11	I further certify that I am not a relative,
12	employee, attorney or counsel of any of the parties, nor
13	am I a relative or employee of any of the parties'
14	attorney or counsel connected with the action, nor am I
15	financially interested in the action.
16	DATED this 3rd day of March, 2016.
17	
18	Dur et
19	Debbri R Kaici
20	DEBRA R. KRICK
21	NOTARY PUBLIC COMMISSION #EE212307
22	EXPIRES JULY 13, 2016
23	
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