IN THE MATTER OF THE AMENDED JOINT)
APPLICATION OF THE CORONA WIND COMPANIES)
FOR LOCATION APPROVAL OF THE EXPANSION OF)
THE CORONA WIND PROJECTS RECONFIGURATION)
OF THE PROPOSED CORONA GEN-TIE SYSTEM,)
EXTENSION OF THE CORONA GEN-TIE SYSTEM AND)
REQUEST FOR RIGHT OF WAY DETERMINATION IN)
LINCOLN, TORRANCE, AND GUADALUPE COUNTIES)
PURSUANT TO THE PUBLIC UTILITY ACT, NMSA) Case No. 20-00008-UT
1978, § 62-9-3)
)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,)
)
Joint Applicants.)
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AMENDED JOINT APPLICATION FOR LOCATION SITE APPROVAL OF THE EXPANSION OF THE CORONA WIND PROJECTS, RECONFIGURATION OF THE PROPOSED CORONA GEN-TIE SYSTEM, EXTENSION OF THE CORONA GEN-TIE SYSTEM AND REQUEST FOR RIGHT OF WAY DETERMINATION

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AMENDED JOINT APPLICATION FOR LOCATION SITE APPROVAL OF THE EXPANSION OF THE CORONA WIND PROJECTS, RECONFIGURATION OF THE PROPOSED CORONA GEN-TIE SYSTEM, EXTENSION OF THE CORONA GEN-TIE SYSTEM AND REQUEST FOR RIGHT OF WAY DETERMINATION

Ancho Wind LLC, Cowboy Mesa LLC, Duran Mesa LLC, Red Cloud Wind LLC, Tecolote Wind LLC, Gallinas Mountain Wind LLC, and Viento Loco LLC, (collectively, the "Corona Wind Companies" or the "Joint Applicants") respectfully move the New Mexico Public Regulation Commission ("Commission") to reopen the above-captioned proceeding to consider this amended Joint Application and supporting testimony and exhibits for approval to: a) expand the area for the wind turbines for the previously approved Corona Wind Projects ("Corona Wind Update"); b) modify the proposed route for the previously approved 345- kilovolt ("kV") Corona Gen-Tie System ("Reconfigured Corona Gen-Tie System"); c) extend by approximately 35 miles the transmission system and associated transmission facilities of the Corona Gen-Tie System ("Extended Corona Gen-Tie System"); and, d) provide the necessary approval for the 180-foot

right-of-way ("ROW") for the Reconfigured Corona Gen-Tie System and Extended Corona Gen-Tie System (collectively referred to as the "Updated Corona Gen-Tie System"). The Updated Corona Gen-Tie System will be located within a 1-mile-wide corridor more specifically described in this Joint Application pursuant to NMSA 1978, §§62-9-3, 62-9-3.2, and Commission Rule 17.9.592 NMAC.

I. BACKGROUND.

A. THE JOINT APPLICANTS.

- 1. The Corona Wind Companies are limited liability companies, organized under the laws of the State of Delaware and are indirectly held subsidiaries of Pattern Energy Group 2 LP (together with Pattern Energy Group LP, referred to as "Pattern Development"). Pattern Development has developed and constructed other wind projects of significant size and scope in Imperial County, California; Shasta County, California; Benton County, Indiana; White Pine County, Nevada; Carson County, Texas; Comanche County, Texas; Kennedy County, Texas; and Curry County, New Mexico. Pattern Development has also developed and constructed additional wind projects in Puerto Rico, Chile, and Canada.
- 2. Pattern Development is affiliated with Pattern Energy Group Inc. ("PEGI") (collectively, "Pattern Group"). PEGI currently owns and operates over 3,000 MW and operates over 4,500 MW of wind energy spread out across 18 wind projects. The Pattern Group has offices in San Francisco, California; San Diego, California; Houston, Texas; Toronto, Canada; Mexico City, Mexico; and Tokyo, Japan.
- 3. The Corona Wind Companies and the Pattern Group entities are not public utilities under New Mexico law, NMSA 1978, §62-3-3(G), and none are regulated by the Commission.

B. THE CORONA WIND PROJECTS.

- 4. The Corona Wind Projects will consist of up to 2,300 MW of wind power facilities and will be located within approximately 347,000 acres of private and state land within Lincoln, Torrance, and Guadalupe Counties in New Mexico.
- 5. To produce the desired energy, it is anticipated that there will be up to 950 wind turbines with a nameplate capacity ranging from 2.3 MW to 3.0 MW. Each of the turbines will be connected by 34.5-kV collection lines to new substations ("Generation Project Substations") to be located within each project area. A final determination of the number of turbines to be used and the siting of the turbines, collection lines and Generation Project Substations will be made over time, and such information will be made available to the Commission.
- 6. The location of the Corona Wind Projects was approved by the Commission in its Final Order issued on October 3, 2018 in NMPRC Case No. 18-00065-UT. Since that time additional areas for placement of wind turbines have been identified and the Corona Wind Companies now seek approval for the addition of approximately 11,700 acres of property to the wind generation of the approved Corona Wind Projects. The Corona Wind Update will include areas not previously identified and evaluated in NMPRC Case No. 18-00065-UT. An updated environmental analysis has been performed and is sponsored by and submitted as an exhibit to the Testimony of Adam Cernea Clark in this filing. This comprehensive environmental analysis is applied to the entire area of the Corona Wind Update even though this level of analysis is only required for areas that will be traversed by transmission lines.

C. THE UPDATED CORONA GEN-TIE SYSTEM.

7. The Corona Gen-Tie System that was approved in NMPRC Case No. 18-00065-UT consists of an approximately 80-mile 345-kV transmission system and associated transmission facilities, including a 180-foot ROW located within a one mile-wide corridor, referred to as the Corona Gen-Tie System Corridor.

- 8. The Joint Applicants stated an intent in NMPRC Case No. 18-00065-UT that the Corona Gen-Tie System will connect the Corona Wind Projects to one of the proposed SunZia Transmission LLC's two 500-kV transmission lines ("SunZia Project"). The first phase of the SunZia Project when completed will be utilized by the Corona Wind Projects. The Sun Zia Project has not obtained location approval from this Commission and may be delayed while additional studies are performed, including addressing issues of national security interest.
- 9. Since the Final Order granting a location permit for the Corona Gen-Tie System was issued, the Joint Applicants have determined that some variation in the proposed route identified in that proceeding is necessary. Some reconfiguration of the initial proposed Corona Gen-Tie System was previously mentioned in NMPRC Case No. 18-00065-UT as a possibility after further site evaluations were performed. Since that proposed route for the Reconfigured Corona Gen-Tie System extends in some areas outside of the original one-mile wide study corridor within the Corona Wind Project Area, the Joint Applicants are seeking a modification of the location permit previously granted by the Commission to approve those portions of Reconfigured Corona Gen-Tie System located outside of the previously approved Corona Gen-Tie System Corridor. The environmental analysis submitted with this Joint Application includes a comprehensive analysis of the Reconfigured Corona Gen-Tie System route with a particular focus on those segments of the Reconfigured Corona Gen-Tie System that are located within a one-mile corridor that is outside of the previously approved Corona Gen-Tie System Corridor (the "Reconfigured Corona Gen-Tie System Corridor") and thereby subject to additional location approval by the Commission.

D. THE EXTENDED CORONA GEN-TIE SYSTEM

- 10. As a result of the delays in the Sun Zia Project proceeding, and the advancement of the Western Spirit Transmission Project ("Western Spirit"), the Joint Applicants determined that the construction of the Extended Corona Gen-Tie System will enable a subset of the Corona Wind Projects to interconnect to Western Spirit while still preserving an interconnection route to SunZia via the Reconfigured Corona Gen-Tie System. The Extended Corona Gen-Tie System will be an approximately 35-mile extension of transmission and associated infrastructure of the Corona Gen-Tie System to the Western Spirit Switchyard, as more specifically described in Exhibit 1 to this Application and the supporting testimony which is filed herewith.
- 11. The purpose of the Extended Corona Gen-Tie System is to allow for an additional point of interconnection to Western Spirit under development by the Renewable Energy Transmission Authority ("RETA"). RETA is the owner of the transmission line project and Western Spirit Transmission LLC ("WST") is the lessee. WST is an entity formed by Pattern Development to develop, secure land easements, design, construct and bring to commercial operation the RETA Project on behalf of and in partnership with RETA. The Commission approved the acquisition of the Western Spirit by PNM in its Final Order in NMPRC Case No. 19-00129-UT, dated October 2, 2019. The portion of the Corona Wind Projects that ultimately interconnect with Western Spirit will be responsible for payment to PNM of their pro rata share of PNM's applicable transmission tariffs. These wind projects will also be solely responsible for the costs of construction of the Extended Corona Gen-Tie System. The Extended Corona Gen-Tie System will enable some of the Corona Wind Companies the option to transmit electricity to consumers independent of the status of the SunZia Project. It is anticipated that those Corona Wind

Companies not interconnecting with the Western Spirit Transmission line will be able to connect to SunZia at a later date.

II. LOCATION CONTROL REQUIREMENTS AND RIGHT-OF-WAY.

- A. LOCATION STATUTORY REQUIREMENTS, NMSA 1978, §62-9-3.
- 12. The purpose of NMSA 1978, §62-9-3 ("Siting Statute"), is to provide for the supervision and control by the Commission of the location within this state of new plants, facilities and transmission lines for the generation and transmission of electricity for sale to the public. NMSA 1978, §62-9-3(A).
- 13. The Siting Statute further provides that no application shall be approved pursuant to this section if such application violates an existing state, county or municipal land use statute or administrative regulation unless the Commission finds that the regulation is unreasonably restrictive, and compliance is not in the interest of the public convenience and necessity. NMSA 1978, §62-9-3(G). The Joint Applicants have determined that applicable state, county, and municipal land use statutes and administrative regulations are not violated and will allow for the installation of the Updated Corona Gen-Tie System.
- 14. Under the Siting Statute, the Commission may approve an application without a formal hearing if no protests are filed within sixty (60) days of the date the notice is given. NMSA 1978, §62-9-3(K). An application is deemed to be approved if the Commission fails to issue an order within six (6) months after filing. NMSA 1978, §62-9-3(L).
- 15. The Corona Wind Companies respectfully request the Commission proceed to an expedited decision without a hearing if no valid protests are filed within sixty (60) days of the date of publication notice. A proposed form of notice is attached as Exhibit 2 to this Joint Application and incorporated herein.

1. GENERATION PLANT.

- 16. The Siting Statute provides the Commission with specific and limited jurisdiction over the siting of power plants within the State of New Mexico with a "capacity of three hundred thousand kilowatts [300 MW] or more for the generation of electricity for the sale to the public within or without [the state of New Mexico.]" NMSA 1978, §62-9-3(B).
- 17. The Commission is required to approve an application for the location of the generating plant unless it finds that the operations of the facilities for which approval is sought will not comply with all applicable existing air and water pollution control standards and regulations. NMSA 1978, §62-9-3(E). However, the Commission is precluded by the Siting Statute from requiring "compliance with performance standards other than those established by the agency of this state having jurisdiction over a particular pollution source." *Id.* The New Mexico agency that has jurisdiction over air and water pollution is the New Mexico Environment Department ("NMED").
- 18. The Joint Applicants have evaluated the air and water pollution control standards in connection with the proposed Corona Wind Update and have determined that the Corona Wind Projects will comply with these standards. Furthermore, in NMPRC Case No. 18-00065-UT, the Joint Applicants elected to extend the protection measures addressing sensitive resources under the standard of review for location control of transmission facilities to the generation area of the Corona Wind Projects. This same commitment is here made with respect to the additional land that would be included in the Corona Wind Update. For more detailed information please refer to the Direct Testimony of Adam Cernea Clark and the environmental report performed by Burns & McDonnell Engineering Company Inc., regarding the Corona Wind Update, the Reconfigured

Corona Gen-Tie System and the Extended Corona Gen-Tie System which is an exhibit to the Direct Testimony of Adam Cernea Clark ("Corona Environmental Report").

2. Transmission Lines.

- 19. The Siting Statute gives the Commission jurisdiction over "transmission lines in connection with ... a [generating] plant, on a location within [New Mexico]" NMSA 1978, §62-9-3(B). For purposes of this statute, transmission line "means any electric transmission line and associated facilities designed for or capable of operations at a nominal voltage of two hundred thirty kilovolts or more..." *Id*.
- 20. The Commission is required to approve an application for the location of transmission lines unless it finds the location will unduly impair important environmental values. NMSA 1978, §62-9-3(F). Past Commission decisions have held that environmental values will not be unduly impaired if the requirements under Commission Rule 17.9.592.10 NMAC are met. In the Matter of Sw. Pub. Serv. Company's Application Requesting: (1) Issuance of A Certificate of Pub. Convenience & Necessity Authorizing Constr. & Operation of A 345-Kv Transmission Line & Associated Facilities in Eddy & Lea Ctys., New Mexico; (2) Approval of the Location of the 345-Kv Transmission Line; (3) Determination of Right of Way Width; & (4) Authorization to Accrue an Allowance for Funds Used During Constr. for the Transmission Line & Associated Facilities Sw. Pub. Serv. Company, Case No. 16-00126-UT, 2016 WL 6678978, at 6 (Nov. 9, 2016); In the Matter of Sw. Pub. Serv. Co.'s Application for: (1) Issuance of A Certificate of Pub. Convenience & Necessity Authorizing Constr. & Operation of Two 230 Kv Transmission Lines & Associated Substation Facilities in Curry & Roosevelt Ctys., New Mexico; (2) Approval of the Location of the 230 Kv Transmission Lines & Associated Facilities; & (3) Authorizing Accrual of an Allowance for Funds Used During Constr. For the Transmission and Associated Facilities Sw.

Pub. Serv. Co.'s Applicant, Case No. 12-00027-UT, 2012 WL 10937016, at 1 (June 20, 2012). See Section II(C) for more details on Commission Rule 17.9.592.10 NMAC.

- 21. The Commission also has the discretion to consider certain additional factors under NMSA 1978, §62-9-3(M) to determine if a proposed transmission line unduly impairs important environmental values. These additional factors are:
 - (1) existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed location;
 - (2) fish, wildlife, and plant life;
 - (3) noise emission levels and interference with communication signals;
 - (4) the proposed availability of the location to the public for recreational purposes, consistent with safety considerations and regulations;
 - (5) existing scenic areas, historic, cultural or religious sites and structures or archaeological sites at or in the vicinity of the proposed location; and,
 - (6) additional factors that require consideration under applicable federal and state laws pertaining to the location.
- 22. The Joint Applicants have evaluated these factors in connection with the proposed portions of the Reconfigured Corona Gen-Tie System outside of the previously approved one-mile Corona Gen-Tie System Corridor, the Extended Corona Gen-Tie System and the Updated Corona Gen-Tie System overall, and have determined that the statutory and regulatory requirements for siting a transmission line or associated facilities are or will be satisfied. Analysis and conclusions of the studies performed are discussed in detail in the Direct Testimony of Adam Cernea Clark and in the Corona Environmental Report.

- B. ROW WIDTH STATUTORY REQUIREMENTS, NMSA 1978, §62-9-3.2.
- 23. NMSA 1978, §62-9-3.2 ("ROW Statute") provides that "unless otherwise agreed to by the parties, no person shall begin the construction of any transmission line requiring a width for right of way of greater than one hundred feet without first obtaining from the commission a determination of the necessary right-of-way width to construct and maintain the transmission line." NMSA 1978, §62-9-3.2(A). With exception of the Extended Corona Gen-Tie System and those portions of the Reconfigured Corona Gen-Tie System located outside of the original one-mile study corridor, the Commission has previously approved the right-of-way width of 180 feet for the Corona Gen-Tie System transmission facilities. The Joint Applicants do not believe that the Commission needs to revisit this issue with respect to areas of the Updated Corona Gen-Tie System not covered by the Commission's Order in NMPRC Case No. 18-00065-UTas the ROW width for the entire Updated Corona Gen-Tie System needs to remain constant. Nevertheless, Joint Applicants have included a request for ROW approval with this Joint Application to assure that the Joint Application is deemed complete to the extent that the Commission determines that an additional ROW width approval is necessary for the updates to the Corona Gen-Tie System identified here as the Extended Corona Gen-Tie System and the Reconfigured Corona Gen-Tie System.
- 24. Under the ROW Statute, "the applicant shall cause notice of the time and place of hearing on the application for the [ROW] determination to any owner of property proposed to be taken." NMSA 1978, §62-9-3.2(D). Notice shall be given by first class mail at least twenty (20) days before the time set for hearing, and the applicant shall file proof of notice on or before the hearing. *Id*.

25. The statute further provides the Commission shall act upon the application, after public hearing, within six (6) months of the date the application was filed, and failure to do so is deemed to be approval of the application. NMSA 1978, §§62-9-3.2(E) and (F).

1. REGULATORY REQUIREMENTS, COMMISSION RULE 17.9.592 NMAC.

26. The Commission's Location of Large Capacity Plants and Transmission Lines Rule 17.9.592 NMAC ("Location Rule") states the requirements for an application for location approval of a large capacity generation plant and a transmission line, pursuant to the Siting Statute, NMSA 1978, §62-9-3. The Joint Application, including the supporting testimonies and exhibits, provide all the required information for Commission review.

2. GENERATION PLANT.

- 27. Location Rule 17.9.592.9 NMAC for generating facilities ("Generation Location Rule") lists the requirements for a generating plant for or capable of operation at a capacity of 300 MW or greater:
 - A. a description of the large capacity plant, including, but not limited to:
 - (1) a legal description of the property upon which the large capacity plant will be located;
 - (2) the size of the large capacity plant;
 - (3) fuel specifications including, but not limited to, the type of fuel to be used; and,
 - (4) a map showing the location of the large capacity plant;
 - B. identification of all applicable land use statutes and administrative regulations and proof of compliance or a statement of noncompliance with each;

- C. identification of all applicable air and water pollution control standards and regulations and proof of compliance or a statement of noncompliance with each;
- D. all written air and water quality authorizations necessary to begin construction of the large capacity plant;
- E. all written air and water quality authorizations necessary to begin operation of the large capacity plant; if any such authorization cannot be obtained until after construction of the large capacity plant, proof of application for such authorization;
- F. the expected date that the large capacity plant will be online;
- G. proof that the application has been served on all local authorities in each county and township where the large capacity plant will be located, the New Mexico attorney general, the New Mexico environment department, and the New Mexico state engineer;
- H. any other information, including photographs, which the applicant wishes to submit in support of the application.

3. TRANSMISSION LINES

- 28. Under Commission Rule 17.9.592.10 NMAC for approval of the location of transmission lines ("Transmission Location Rule"), an applicant must file an application supported by written testimony and exhibits that contain the following information for transmission lines for which location approval is required:
 - A. a description of the transmission line including, but not limited to:
 - (1) the location of the transmission line;
 - (2) identification of the ownership of the land (such as private, bureau of

land management, U.S. forest service, state trust, etc.) the transmission line will cross and the number of feet the transmission line will cross over each owner's land;

- (3) the total length of each transmission line in feet:
- (4) a description of interconnection facilities;
- (5) a map showing the location of the transmission line; and
- (6) a schematic diagram showing the transmission line and the interconnection of the transmission line to the transmission grid;
- B. identification of all applicable land use statutes and administrative regulations and proof of compliance or statement of noncompliance with each;
- C. if required under NEPA, an environmental assessment prepared in connection with the transmission line;
- D. if required under NEPA, an environmental impact statement and record of decision or a finding of no significant impact, prepared in connection with the transmission line;
- E. if preparation of a federal environmental assessment or environmental impact statement is not required under NEPA in connection with the transmission line, then a report, comparable to an environmental impact statement, in the format prescribed in 40 C.F.R. Section 1502.10;
- F. all written federal, state, and local environmental authorizations necessary to begin construction of the transmission line;
- G. all written federal, state, and local environmental authorizations necessary to begin operation of the transmission line; if any such authorization cannot be

- obtained until after construction of the transmission line, proof of application for such authorization;
- H. testimony demonstrating that the transmission line will not unduly impair important environmental values; important environmental values include, but are not limited to, preservation of air and water quality, land uses, soils, flora and fauna, and water, mineral, socioeconomic, cultural, historic, religious, visual, geologic and geographic resources;
- I. the expected date that the transmission line will be online;
- J. proof that the application has been served on all local authorities in each county and township where the transmission line will be located, the New Mexico attorney general, the New Mexico environment department, and the New Mexico state engineer;
- K. any other information, including photographs, which the applicant wishes to submit in support of the application.

III. ALL THE REQUIREMENTS FOR THE REQUESTED APPROVAL ARE SATISFIED.

29. The Updated Corona Wind Farm Project and Updated Corona Gen-Tie System will satisfy all the requirements of NMSA 1978, §62-9-3 and Commission Rule 17.9.592 NMAC for location approval of a generation facility and a transmission line because: (1) the Corona Wind Companies will cause the Corona Wind Update and the Updated Corona Gen-Tie System to comply with all applicable requirements under the Siting Statute and Location Rule; (2) existing state, county, and municipal land use statutory and administrative regulations allow for the installation of these projects; and, (3) the approximately 180-foot ROW width is necessary for the Updated Corona Gen-Tie System. The Corona Wind Companies will cause the Corona Wind

Update and the Updated Corona Gen-Tie System to implement all the conditions, including the voluntary Protective Measures, that were agreed to in the Final Order in NMPRC Case No. 18-00065-UT.

THE CORONA WIND UPDATE.

- 30. As renewable energy generation facilities, the Corona Wind Update will result in environmental benefits and will not negatively impact air or water quality during the operating life of the generating facilities. The Corona Wind Update will produce zero-emission electricity using state-of-the-art wind turbine technology and may even displace electricity generated from non-renewable sources causing a reduction in greenhouse gas emission and regulated air pollutants. The Corona Wind Update will also have a *de minimis* effect on water quality during the construction of the projects and will conserve water that would otherwise be used in cooling thermal power plants during the operation of the projects.
- 31. Pursuant to NMSA 1978, §62-9-3, the Corona Wind Companies will cause the Corona Wind Update to comply with all applicable (1) water pollution control standards and regulations of the NMED; and (2) air pollution control standards and regulations of the NMED. The Direct Testimony of Adam Cernea Clark explains the applicable requirements and summarizes how the Corona Wind Update intend to comply with these standards.
- 32. The types of construction activity permits needed to construct the Corona Wind Projects are typically applied for and issued shortly before the start of construction and are anticipated to consist of air quality permits from NMED for concrete batch plants and mobile rock crushing. No other air or water pollution permits are required from NMED.
- 33. All air and water quality permits associated with environmental impacts due to construction activities will be acquired by the balance of plant ("BOP") contractor from the NMED prior to the initiation of construction of such project. Issuance of these permits by NMED and

compliance with their terms by the Corona Wind Companies will satisfy applicable state water and air pollution control standards and regulations. This is consistent with provisions which the Commission has already approved for the Corona Wind Projects Area in the Final Order in NMPRC Case No. 18-00065-UT.

WATER POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE NMED.

- 34. The Corona Wind Companies will not need any water quality permits from NMED to comply with all water quality performance standards and regulations of NMED. However, they will obtain a National Pollution Discharge Elimination System ("NPDES") permit from the United States Environmental Protection Agency ("EPA").
- 35. The purpose of the New Mexico Water Quality Control Act ("New Mexico Water Act") is to prevent the impairment of New Mexico's groundwater quality. NMSA 1978, §§74-6-1 *et seq.* Because turbines do not require water to produce electricity, the Corona Wind Update will not impair groundwater quality. Also, the Corona Wind Companies do not propose a new diversion of surface water or groundwater resources at the site. Nor do the Corona Wind Companies intend to transfer any surface or ground water rights for project use. Since the Corona Wind Companies do not intend to adversely affect surface or groundwater at the site, they will not require a permit under the New Mexico Water Act.
- 36. The Corona Wind Companies will acquire the NPDES permit from the EPA under the Federal Water Pollution Control Act Amendments of 1972, as amended, more commonly referred to as the "Clean Water Act". 33 U.S.C. §1342. This permit will ensure that storm water discharge from construction activities that disturb one or more acres are managed through best management practices. However, the Corona Wind Update are also expected to qualify for a storm water Construction General Permit ("CGP").

37. The Corona Wind Companies will obtain coverage under a NPDES CGP from the EPA pursuant to 33 U.S.C. §1342. This construction phase permit requires the management of storm water discharge from the site during construction, including implementation of standard erosion control measures and best management practices. Further, project facilities will be sited to avoid and/or minimize fill in Waters of the U.S. so that any fill, if necessary, would be within the thresholds allowed under the 2017 Nationwide Permit Program under Section 404 of the Clean Water Act administered by the U.S. Army Corps of Engineers. 33 U.S.C. §1344. The Corona Wind Update facilities will be sited to minimize placement in the floodplain.

AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE NMED.

- 38. With respect to applicable air pollution standards, construction activities will be required to comply with General Construction Permits ("GCP"). The Corona Wind Companies will require air quality general construction permitting from NMED to comply with all air quality performance standards and regulations of NMED.
- 39. The New Mexico Air Quality Control Act applies to the Corona Wind Projects. NMSA 1978, §§74-2-1 *et seq*. The Corona Wind Companies will require the BOP to obtain a GCP before the start of construction, for concrete batch plants and a general construction permit for aggregate facilities (permits GCP-5 and GCP-2, respectively) from the Air Quality Bureau of NMED. The Joint Applicants will provide copies of these permits to the Commission upon request before construction activities associated with these permits begins.
- 40. The application for the general construction permit will demonstrate that the construction of the Corona Wind Update complies with applicable air pollution control standards and regulations. Once the Corona Wind Update are in operation, there will be no adverse impact

to air quality. Instead, the Corona Wind Projects will benefit the air quality by displacing sources of electricity in the Southwest which adversely impact air quality.

THE GENERATION LOCATION RULE.

- 41. The Joint Application and supporting testimony and exhibits provide the information required by the Generation Location Rule and the necessary information needed for the Commission's evaluation of this Joint Application to construct the Corona Wind Update.
- 42. The Joint Applicants will require the Corona Wind Update to comply with local land use statutes and administrative regulations.
- 43. The Corona Wind Companies will obtain New Mexico State Land Office ("SLO") approval for use of any state trust land, in compliance with Commission Rule 17.9.592.9(B) NMAC.
- 44. The necessary authorizations to begin construction and operation of the wind facilities are typically obtained immediately prior to start of construction and will be obtained prior to construction.
- 45. The Corona Wind Companies intend to put the wind facilities into operation by the end of 2020.
- 46. The Joint Application and supporting testimony and exhibits have been served on all local authorities in Lincoln, Torrance and Guadalupe Counties in New Mexico, the New Mexico attorney general, the New Mexico environment department, and the New Mexico state engineer. A copy of the Joint Application and testimony is available at the public library in the Town of Carrizozo, New Mexico, which is the county seat of Lincoln County; in Estancia, New Mexico which is the county seat of Torrance County; and in Santa Rosa, New Mexico which is the county seat of Guadalupe County. This Joint Application and supporting testimony and exhibits are also available on the Joint Applicants' website, http://www.coronawindprojects.com,

all in compliance with Commission Rule 17.9.592.9(G) NMAC, and Commission Rule 17.9.592.13 NMAC.

THE TRANSMISSION LOCATION RULE

- 47. The location of the Reconfigured Corona Gen-Tie System and Extended Corona Gen-Tie System and the Updated Corona Gen-Tie System more generally will not unduly impair any important environmental values. A more detailed discussion of environmental aspects of the Updated Corona Gen-Tie System is provided in the Direct Testimony of Adam Cernea Clark and the Corona Environmental Report.
- 48. The Reconfigured Corona Gen-Tie System, Extended Corona Gen-Tie System and the Updated Corona Gen-Tie System more generally will comport with existing plans of the state and local government. NMSA 1978, §62-9-3(M)(1). The Updated Corona Gen-Tie System is being constructed in connection with the Corona Wind Update in Lincoln, Torrance and Guadalupe Counties in the State of New Mexico.
- 49. The proposed Reconfigured Corona Gen-Tie System and Extended Corona Gen-Tie System and the Updated Corona Gen-Tie System more generally will also comport with and enhance existing land uses (farming and ranching) near and adjacent to the site and the line will have limited impacts on natural resources. NMSA 1978, §62-9-3(M)(2). This conclusion is supported by extensive studies and fieldwork of the Corona Wind Update and surrounding area and the area surrounding and inclusive of the Updated Corona Gen-Tie System. These impacts are limited to impacts on the lesser prairie chicken, which is not protected as a threatened or endangered species under the New Mexico Wildlife Conservation Act, MNSA 1978, §§17-2-37 et seq., or under the Endangered Species Act, 7 U.S.C. §§1531 et seq.

- 50. The Reconfigured Corona Gen-Tie System and Extended Corona Gen-Tie System and the Updated Corona Gen-Tie System more generally will not produce significant noise emission levels or interfere with communication signals. NMSA 1978, §62-9-3(M)(3). A more detailed discussion is provided in the Direct Testimony of Adam Cernea Clark.
- 51. The Reconfigured Corona Gen-Tie System and Extended Corona Gen-Tie System and the Updated Corona Gen-Tie System more generally is mostly located on private land which is not open to the public. The Updated Corona Gen-Tie System will not impact public access to the small portion of the line passing through state trust land, except to the extent restricted by the State Land Office. NMSA 1978, §62-9-3(M)(4). A more detailed discussion is provided in the Direct Testimony of Adam Cernea Clark.
- 52. The Corona Wind Companies have conducted extensive, voluntary cultural and archaeological studies and protection measures and determined that the Reconfigured Corona Gen-Tie System and Extended Corona Gen-Tie System and the Updated Corona Gen-Tie System more generally will not unduly impair "existing scenic areas, historic, cultural or religious sites and structures or archaeological sites at or in the vicinity of the proposed location" of the Updated Corona Gen-Tie System. NMSA 1978, §62-9-3(M)(5). A more detailed discussion is provided in the prepared Direct Testimony of Adam Cernea Clark and the Corona Environmental Report.
- 53. The Joint Application, including supporting testimony and exhibits, provides the information required by the Transmission Location Rule and the necessary information needed for the Commission's evaluation of this Joint Application.
- 54. The Corona Wind Companies will cause the Updated Corona Gen-Tie System to comply with local land use statutes and administrative regulations.

- 55. The Corona Wind Companies will obtain SLO approval for use of any state trust land, in compliance with Commission Rule 17.9.592.10(B) NMAC.
- 56. The necessary authorizations to begin construction and operation of the Updated Corona Gen-Tie System are typically obtained and will be obtained by the Corona Wind Companies immediately prior to the start of construction.
- 57. The Corona Wind Companies intend to put the Updated Corona Gen-Tie System into operation as early as 2021 and the Updated Corona Gen-Tie System will not unduly impair important environmental values in compliance with Commission Rule 17.9.592.10(I) and (H) NMAC. See the Direct Testimony of Adam Cernea Clark for further analysis and explanation on the environmental concerns.
- 58. The Joint Application and supporting materials have been served on all local authorities in Lincoln and Torrance Counties in New Mexico, the New Mexico Attorney General, the New Mexico Environment Department, and the New Mexico State Engineer. A copy of the Joint Application and testimony is available at the public library in the Town of Carrizozo, New Mexico, which is the county seat of Lincoln County and in Estancia, New Mexico, which is the county seat of Torrance County. This Joint Application and supporting testimony and exhibits are also available on the Joint Applicants' website, http://www.coronawindprojects.com, all in compliance with Commission Rule 17.9.592.10(J) NMAC, and Commission Rule 17.9.592.13 NMAC.
- 59. The existing state, county, and municipal land use statutory and administrative regulations allow for the installation of the Updated Corona Gen-Tie System. These projects are also supported by local landowners, business leaders, and officials.

- 60. There are no zoning regulations in Guadalupe County. Lincoln County does have a wind energy ordinance, and the Corona Wind Projects have received approval from Lincoln County under this ordinance. Torrance County does have a zoning ordinance that regulates the zoning of wind projects. The Corona Wind Projects have received special zoning approval. The Corona Wind Companies will comply with all zoning requirements of Lincoln and Torrance Counties.
- 61. The great majority of the Updated Corona Gen-Tie System will be located on privately-owned land. As discussed in the Direct Testimony of Crystal Coffman, landowners, local businesses and political figures support the Updated Corona Gen-Tie System and its location approval.
- 62. The Corona Wind Companies will cause the Updated Corona Gen-Tie System to comply with the conditions for use of state trust lands. The Corona Wind Companies have submitted applications for lease agreements for 39,388 acres of state trust lands. State trust land use is further discussed in the Direct Testimony of Crystal Coffman.

THE 180-FOOT ROW WIDTH IS NECESSARY FOR THE UPDATED CORONA GENTIE SYSTEM

63. The 180-foot ROW width is necessary for the Updated Corona Gen-Tie System to connect the Corona Wind Update to the electric transmission grid in a safe and reliable manner. The 180-foot ROW width which has previously been approved for the Corona Gen-Tie System after integrating the modifications characterized by the Extended Corona Gen-Tie System and those portions of the Reconfigured Corona Gen-Tie System located outside of the previously approved Corona Gen-Tie System Corridor (i.e. within the Reconfigured Corona Gen-Tie System Corridor) to provide sufficient space for variation in design while addressing electrical safety code requirements and construction and operation considerations according to prudent and standard

industry practice. It would be unwarranted and unjustifiable to have different ROW widths for different segments of the overall transmission system. Further detail about the ROW width is provided in the direct testimony of Greg Parent. Accordingly, the Corona Wind Companies do not believe that a new Commission approval, as opposed to a finding of sufficiency of the previous approval, is needed under the ROW Statute in the situation presented here and request such a determination.

- 64. The Updated Corona Gen-Tie System will be located primarily on private land for which the Corona Wind Companies have obtained or will obtain land rights. All underlying landowners will agree to the ROW and no land will be "taken" as the location, construction and operation of the Updated Corona Gen-Tie System will be dependent upon landowner agreements. Accordingly, the Corona Wind Companies do not believe that Commission approval is needed under the ROW Statute in the situation as presented here and request such determination.
- 65. To the extent that the Commission finds the requested ROW width approval is necessary, the Corona Companies request such approval pursuant to NMSA 1978, §62-9-3.2.

IV. THE CORONA WIND UPDATE AND UPDATED CORONA GEN-TIE SYSTEM HAVE THE SUPPORT OF LOCAL LANDOWNERS, COMMUNITIES, BUSINESSES, AND POLITICAL FIGURES.

- 66. The Corona Wind Update and Updated Corona Gen-Tie System have received letters of support from landowners, local community officials, and leading figures of the New Mexico business community.
- 67. The Corona Wind Companies have also engaged in outreach to economic development organizations, potential construction partners, and vendors that may participate in the construction of the Corona Wind Update and Updated Corona Gen-Tie System. There is strong interest in the opportunity these projects afford.

V. NOTICE AND PROCEDURAL MATTERS.

68. Attached to this Joint Application is a proposed form of Notice of Application that the Corona Wind Companies propose, upon order of the Commission, to publish in a newspaper of general circulation in Lincoln and Torrance Counties.

VI. TESTIMONIES.

69. In support of its Joint Application, the Corona Wind Companies accompany their Joint Application with the following testimonies:

Witness	Subjects
Crystal Coffman	Project overview
Greg Parent	Right-of-Way Issues
Adam Cernea Clark	Pattern's environmental values, regulatory compliance, and environmental report

VII. CONCLUSION.

The Corona Wind Companies have demonstrated that the Corona Wind Update, the Extended Corona Gen-Tie System, and the Reconfigured Corona Gen-Tie System meet or exceed all applicable requirements of NMSA 1978, §§62-9-3, 62-9-3.2 and Commission Rule 17.9.592 NMAC. Specifically, (1) the location of the Corona Wind Update and Updated Corona Gen-Tie System will comply with applicable statutes and environmental regulations under NMSA 1978, §62-9-3 and Commission Rule 17.9.592 NMAC; (2) the existing state, county, and municipal land use statutory and administrative regulations allow for the installation of the Updated Corona Gen-Tie System, NMSA 1978, §62-9-3(G); and, (3) the approximately 180-foot ROW width is necessary for the Extended Corona Gen-Tie System.

71. The Corona Wind Update and the Updated Corona Gen-Tie System will comply

with all the conditions and Protective Measures set forth in the Final Order in NMPRC Case No.

18-00065-UT.

72. The Corona Wind Companies have complied with all the applicable requirements

of NMSA 1978, §§62-9-3, 62-9-3.2 and Commission Rule 17.9.592 NMAC, and respectfully

request the Commission issue a Final Order as expeditiously as possible approving the Corona

Wind Companies' Joint Application for the location of the Corona Wind Update, Updated Corona

Gen-Tie System in Lincoln, Torrance and Guadalupe Counties and the associated 180-foot ROW

and provide such other relief as the Commission deems necessary and appropriate.

WHEREFORE, for the foregoing reasons the Corona Wind Companies request that the

Commission grant this Joint Application to the extent required by law and for such other relief as

may be deemed necessary and appropriate.

Respectfully submitted,

VIRTUE & NAJJAR, P.C.

By:

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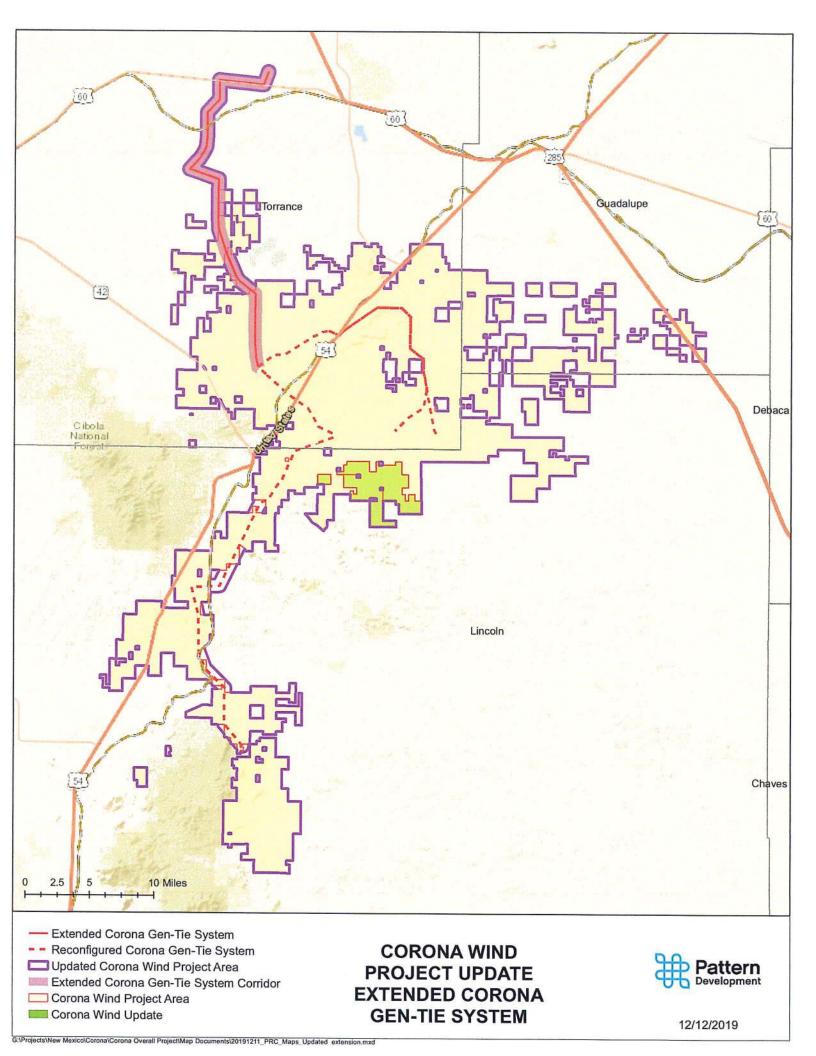
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IN THE MATTER OF THE AMENDED JOINT)
APPLICATION OF THE CORONA WIND COMPANIES)
FOR LOCATION APPROVAL OF THE EXPANSION OF)
THE CORONA WIND PROJECTS RECONFIGURATION)
OF THE PROPOSED CORONA GEN-TIE SYSTEM,)
EXTENSION OF THE CORONA GEN-TIE SYSTEM AND	j
REQUEST FOR RIGHT OF WAY DETERMINATION IN)
LINCOLN, TORRANCE, AND GUADALUPE COUNTIES	j .
PURSUANT TO THE PUBLIC UTILITY ACT, NMSA) Case No. 20-00008-UT
1978, § 62-9-3	j ,
)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,)
)
Joint Applicants.)
	(

AMENDED JOINT APPLICATION

EXHIBIT 1



IN THE MATTER OF THE AMENDED JOINT)
APPLICATION OF THE CORONA WIND COMPANIES	j
FOR LOCATION APPROVAL OF THE EXPANSION OF)
THE CORONA WIND PROJECTS RECONFIGURATION)
OF THE PROPOSED CORONA GEN-TIE SYSTEM,	j
EXTENSION OF THE CORONA GEN-TIE SYSTEM AND	j
REQUEST FOR RIGHT OF WAY DETERMINATION IN)
LINCOLN, TORRANCE, AND GUADALUPE COUNTIES	
PURSUANT TO THE PUBLIC UTILITY ACT, NMSA) Case No. 20-00008-UT
1978, § 62-9-3)
)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,	
)
Joint Applicants.	
)

AMENDED JOINT APPLICATION

EXHIBIT 2

IN THE MATTER OF THE AMENDED JOINT)
APPLICATION OF THE CORONA WIND COMPANIES)
FOR LOCATION APPROVAL OF THE EXPANSION OF)
THE CORONA WIND PROJECTS RECONFIGURATION)
OF THE PROPOSED CORONA GEN-TIE SYSTEM,)
EXTENSION OF THE CORONA GEN-TIE SYSTEM AND)
REQUEST FOR RIGHT OF WAY DETERMINATION IN)
LINCOLN, TORRANCE, AND GUADALUPE COUNTIES)
PURSUANT TO THE PUBLIC UTILITY ACT, NMSA) Case No. 20-00008-UT
1978, § 62-9-3)
)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,)
)
Joint Applicants.)
••)

NOTICE

NOTICE is hereby given by the New Mexico Public Regulation Commission ("Commission" or "NMPRC") of the following:

1. Pursuant to NMSA 1978, §§62-9-3, 62-9-3.2 and Commission Rule 17.9.592 NMAC, on December ____, 2019, Ancho Wind LLC, Cowboy Mesa LLC, Duran Mesa LLC, Red Cloud Wind LLC, Tecolote Wind LLC, Viento Loco LLC. and, Gallinas Mountain Wind LLC (collectively the "Corona Wind Companies" or the "Joint Applicants") filed a Motion to Reopen NMPRC Case No. 18-00065-UT with the New Mexico Public Regulation Commission ("Commission") and a Joint Application and supporting direct testimony and exhibits ("Joint Application") requesting the Commission enter a Final Order that grants a new location approval for a modification to the wind projects and associated transmission line and facilities previously approved in NMPRC Case No. 18-00065-UT. Specifically, NMPRC Case No. 18-00065-UT

granted approval to locate up to 2,200 megawatts ("MW") of wind generation from the Joint Applicants' wind energy facilities (collectively the "Corona Wind Projects") in Lincoln, Torrance and Guadalupe Counties in New Mexico. In that proceeding the Commission also approved a location permit for the transmission line and associated facilities to interconnect the Corona Wind Projects with the proposed SunZia transmission line ("Corona Gen-Tie System").

- 2. The Joint Applicants are now seeking approval to expand the area of the Corona Wind Projects ("Corona Wind Update"), reconfigure parts of the previously approved location for the Corona Gen-Tie System ("Reconfigured Corona Gen-Tie System") and extend the Corona Gen-Tie System to also enable interconnection with the proposed Western Spirit Transmission Line ("Extended Corona Gen-Tie System"). The Joint Applicants also request approval, to the extent required by law, to utilize a 180-foot right-of-way ("ROW") for the Reconfigured Corona Gen-Tie System and the Extended Corona Gen-Tie System to be located within a one-mile-wide corridor within the same three counties. This ROW approval would be consistent with the approval granted in NMPRC Case No. 18-00065-UT.
- 3. The Corona Wind Update will consist of up to 2,300 MW of wind power facilities located in Lincoln, Torrance and Guadalupe Counties in New Mexico and will encompass approximately 347,000 acres of private and state land within the three counties ("Updated Corona Wind Project Area").
- 4. The Reconfigured Corona Gen Tie System and the Extended Corona Gen-Tie System (collectively referred to as the "Updated Corona Gen-Tie System") will connect the electricity generated by the Corona Wind Projects to one of the proposed SunZia Transmission LLC's two 500-kV transmission lines and related facilities located in Lincoln, Socorro, Sierra,

Luna, Grant, Torrance, and Hidalgo Counties in New Mexico ("SunZia Project") and to the Western Spirit Transmission Line.

- 5. The Corona Wind Update and the Updated Corona Gen Tie System will be owned by the Joint Applicants.
- 6. The Joint Applicants request for a ROW width determination of 180-foot within a one-mile-wide corridor in the areas of the Updated Corona Gen-Tie System that were not previously approved in NMPRC Case No. 18-00065-UT pursuant to NMSA 1978, §62-9-3.2 is also necessary to provide sufficient space for variation in design while addressing electrical safety code requirements and construction and operation considerations for the Updated Corona Gen Tie System to connect the Corona Wind Projects to the SunZia Project and the Western Spirit Transmission Line in a safe and reliable manner.
- 7. The Commission has assigned Case No. 18-00065-UT to this Joint Application, and all correspondence, pleadings, comments, and other communications shall refer to that case number.
 - 8. The procedural schedule established in this case is as follows:
 - A. The Joint Applicants shall, at their sole expense, publish notice in a newspaper of general circulation in Lincoln, Torrance and Guadalupe Counties on or before;
 - B. The Commission's Utility Division Staff ("Staff") shall file a response to the Joint Application by advising the Commission on Staff's position as to the merits of the Joint Application and the need for a public hearing on the location application;

- C. Any interested person may intervene in this case by filing a motion for leave to intervene pursuant to Commission Rule 1.2.2.23(A) NMAC and 1.2.2.23(B) NMAC on or before June 25, 2018;
- D. Staff shall, and Interveners may, file direct testimony by;
- E. Any rebuttal testimony shall be filed on or before, and;
- F. A public hearing will be held on, starting at 9:00 a.m. at the Commission's offices in the P.E.R.A. Building, 1120 Paseo de Peralta, Santa Fe, New Mexico, 87504, to hear and receive evidence, arguments, and any other appropriate matters pertaining to the case.
- 9. In accordance with NMSA 1978, §62-9-3(K), the Commission may approve the Joint Applicants' request for location approval without formal hearing if no protest is filed within sixty (60) days after notice has been given that the Joint Application has been filed.
- 10. The Joint Application may be examined by an interested person at the Commission's website (http://www.nmprc.state.nm.us/), the Joint Applicants website (http://www.coronawindprojects.com) or at the offices of the Joint Applicants and the Commission at the following addresses:

The Corona Wind Companies Pier 1, Bay 3 San Francisco, CA 94111 New Mexico Public Regulation Commission P.E.R.A. Building 1120 Paseo de Peralta Santa Fe, NM 87504

11. Pursuant to Commission Rule 17.9.592.13 NMAC, the Joint Application may also be examined by any interested person at:

Town of Carrizozo Public Library, c/o Head Librarian 406 Central Avenue (Hwy 54) Carrizozo, NM 88301 Town of Estancia, Public Library c/o Angela Creamer - Head Librarian 601 South Tenth Street PO Box 166 Estancia, NM 87016

Moise Memorial Library c/o Mary Martinez - Library Director 208 S. 5th St. Santa Rosa, NM 88435

- 12. Any interested person may appear at the time and place of hearing and make a written or oral comment, pursuant to Commission Rule 1.2.2.23(F) NMAC without becoming an intervenor. Such comments will not be considered as evidence in this case.
- 13. The procedural dates and requirements provided herein are as provided in the Procedural Order issued in this case and are subject to further order of the Commission or Hearing Examiner. Any interested person should contact the Commission for confirmation of the hearing date, time and place since hearings are occasionally rescheduled.
- 14. Anyone filing pleadings, documents or testimony shall serve copies thereof on all parties of record and Staff and the Hearing Examiner by (1) first class mail or hand-delivery and (2) by email as provided by the Procedural Order. Copies served on the Hearing Examiner shall include an electronic version of the filing in word format. All filings shall be e-mailed on the date they are filed with the Commission. Any person whose testimony has been pre-filed will attend the hearing and submit to examination under oath.
- 15. The Commission's Rules of Procedure, 1.2.2 NMAC, shall apply to this case except as modified by order of the Commission or Hearing Examiner. A copy of the rules may be obtained from the offices of the Commission or at www.nmprc.state.nm.us/nmcc/.

- 16. All documents mailed to the Commission and its personnel shall be mailed to New Mexico Public Regulation Commission, P.E.R.A. Building, P.O. Box 1269, Santa Fe, New Mexico 87504-1269. The following physical address of the Commission shall be used only for special or hand-deliveries: 1120 Paseo de Peralta, Santa Fe, New Mexico 87504.
- 17. ANY PERSON WITH A DISABILITY REQUIRING SPECIAL ASSISTANCE IN ORDER TO PARTICIPATE IN THIS CASE SHOULD CONTACT THE COMMISSION AT LEAST 24 HOURS PRIOR TO THE COMMENCEMENT OF THE HEARING.

ISSUED at Santa Fe, New Mexico, this _____ day of ______, 2019.

NEW MEXICO PUBLIC REGULATION COMMISSION

JT

DIRECT TESTIMONY OF

CRYSTAL COFFMAN

ON BEHALF OF CORONA WIND COMPANIES

IN THE MATTER OF THE AMENDED JOINT)
APPLICATION OF THE CORONA WIND COMPANIES)
FOR LOCATION APPROVAL OF THE EXPANSION OF)
THE CORONA WIND PROJECTS RECONFIGURATION)
OF THE PROPOSED CORONA GEN-TIE SYSTEM,)
EXTENSION OF THE CORONA GEN-TIE SYSTEM AND)
REQUEST FOR RIGHT OF WAY DETERMINATION IN)
LINCOLN, TORRANCE, AND GUADALUPE COUNTIES)
PURSUANT TO THE PUBLIC UTILITY ACT, NMSA	Case No. 20-00008-UT
1978, § 62-9-3)
)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,)
)
Joint Applicants.)
)

DIRECT TESTIMONY OF

CRYSTAL COFFMAN

ON BEHALF OF THE CORONA WIND COMPANIES

INTRODUCTION

1

- 2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
- 3 A. My name is Crystal Coffman. My business address is 1201 Louisiana St. Suite 3200
- 4 Houston, Texas.
- 5 Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?
- 6 A. I am employed by Pattern Energy Group LP (together, with Pattern Energy Group 2 LP,
- 7 "Pattern Development") as a Business Development Director.
- 8 Q. PLEASE DESCRIBE YOUR EDUCATION BACKGROUND AND EXPERIENCE.
- 9 A. I have a Bachelor of Science degree in both Architecture and Civil Engineering from Texas
- Tech University and a Master of Business Administration degree from Rice University. I
- have worked in the renewables industry for Pattern Development or its predecessor,
- Babcock & Brown, for over 12 years and have experience in both Project Finance and
- Development. I played a direct role in the financing and development of over 1,700
- megawatts ("MW") of wind farms in operation to date.
- 15 Q. PLEASE DESCRIBE THE DUTIES AND RESPONSIBILITIES FOR YOUR
- 16 **CURRENT POSITION.**
- 17 A. As a Director in Business Development my duties include the following:
- Coordinating activities and communicating project objectives among the Permitting,
- Land, Power Marketing, Transmission, Meteorology, Engineering and Construction,
- Legal, Finance and Accounting teams.
- Ensuring timely decisions are made in collaboration with other stakeholders of the
- 22 development.
- Regularly reviewing the risks, schedule and budget progress of a project.

- Actively negotiating with permitting agencies, landowners, local and state
 governmental agencies with assistance and guidance of my colleagues to facilitate the
 development of renewable energy projects.
- Delivering high-quality, low-risk, construction-ready projects.

5 Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

- A. I am testifying on behalf of the joint applicants, Ancho Wind LLC, Cowboy Mesa LLC,
 Duran Mesa LLC, Red Cloud Wind LLC, Tecolote Wind LLC, Gallinas Mountain Wind
- 8 LLC, and Viento Loco LLC, (collectively, the "Corona Wind Companies" or the "Joint
- 9 Applicants") in support of this Joint Application for location control approval before the
- New Mexico Public Regulation Commission ("Commission") pursuant to NMSA 1978,
- 11 §§62-9-3, 62-9-3 and Commission Rule 17.9.592 NMAC ("Joint Application").

12 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

13 A. I am submitting testimony in support of this Joint Application for location approval of a
14 modification to the area of the Corona Wind Projects ("Corona Wind Update"), a variation
15 of the route of the Corona Gen-Tie System that was approved by the Commission in
16 NMPRC Case No. 18-00065-UT ("Reconfigured Corona Gen-Tie System"), and an
17 extension of the Corona Gen-Tie System ("Extended Corona Gen-Tie System"). For
18 purposes of clarity, I refer to the Reconfigured Corona Gen-Tie System and the Extended
19 Corona Gen-Tie System collectively as the "Updated Corona Gen-Tie System."

20 Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. First, I will provide an overview of Pattern Development and the Joint Applicants. Then, I will review the originally proposed 2,200 MW of wind generation of the Joint Applicants' wind energy facilities ("Corona Wind Projects") and their relationship with the 345-

kilovolt ("kV") transmission system and associated transmission facilities, including a 180foot right-of-way ("ROW"). The Corona Wind Projects, the associated Corona Gen-Tie
System and the request for a right-of-way width of 180-feet were all initially approved in
NMPRC Case No. 18-00065-UT (Case 18-00065"). I discuss the reason for this filing to
make changes in the previously approved location of the Corona Wind Projects and the
Gen-Tie System. In my testimony I discuss the reason for the approximate 35-mile
extension to the Updated Corona Gen-Tie System for which the Joint Applicants are now
seeking a location permit from the Commission in this proceeding. I also discuss the
additions to the area of the Corona Wind Update and the Reconfigured Corona Gen-Tie
System. Finally, I will summarize Pattern Development's public outreach, and our
coordination with local, state, and federal agencies.

Q. WHAT SUBJECTS WILL OTHER WITNESSES ADDRESS?

- 13 A. The Joint Application will have the supporting testimony of the following witnesses:
 - Adam Cernea Clark of Pattern Development will provide more detailed testimony about the environmental values which are incorporated into the planning, design, construction, and operation of our projects. He will also describe the Corona Wind Update and the Updated Corona Gen-Tie System and the Joint Applicants' commitment to comply with federal, state, and local law. Finally, he provides detailed testimony regarding the environmental report for the Extended Corona Gen-Tie System prepared by Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell"), hereafter referred to as the "Environmental Report." His testimony will address the environmental, biological, cultural, and archeological studies performed at the location of the Updated Corona Gen-Tie System.

1		• Greg Parent of Ulteig Engineers, Inc. will describe the technical design of the Updated
2		Gen-Tie System including design conditions, ROW determination, structure spans and
3		footprints, and transmission structure design.
4	Q.	HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY
5		AUTHORITIES?
6	A.	Yes, I provided testimony before the Commission in NMPRC Case No. 18-00065-UT.
7	П.	OVERVIEW OF PATTERN DEVELOPMENT, PATTERN ENERGY GROUP,
8		INC., AND THE JOINT APPLICANTS
9	Q.	PLEASE PROVIDE SOME BACKGROUND OF PATTERN DEVELOPMENT.
10	A.	Pattern Development is a leading developer of renewable energy and transmission assets
11		throughout the world. With a global footprint spanning all over the United States, Canada,
12		Mexico, Chile and Japan, the highly experienced Pattern Development team has brought
13		more than 5,000 MW of renewable power projects to market. Pattern Development's
14		headquarters are in San Francisco, California.
15		Pattern Development's affiliate, Pattern Energy Group Inc., ("PEGI"), is an independent
16		power company listed on the NASDAQ Global Select Market and Toronto Stock Exchange
17		that owns and operates wind power facilities.
18		PEGI has a portfolio of renewable energy facilities in the United States, Puerto Rico,
19		Canada, and Chile that use proven, best-in-class technology. PEGI's headquarters are co-
20		located with Pattern Development in San Francisco, California.
21		Pattern Development may be thought of as the company that brings projects to the point of

operation while PEGI may be thought of as the company that operates projects once they

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are built.

1 Q. PLEASE DESCRIBE THE RECENT ANNOUNCEMENT REGARDING THE 2 FUTURE OWNERSHIP OF PATTERN ENERGY GROUP INC. AND ITS 3 AFFILIATES. 4 A. On November 4, 2019, Pattern Energy Group Inc. (Pattern Energy) and Canada Pension 5 Plan Investment Board (CPPIB) announced that they entered into a definitive agreement, 6 pursuant to which CPPIB will acquire Pattern Energy. Concurrently, CPPIB and 7 Riverstone entered into an agreement pursuant to which CPPIB and Riverstone will 8 combine Pattern Energy and Pattern Energy Group Holdings 2 LP (Pattern Development) 9 under common ownership. This brings together the operating renewable energy assets of 10 Pattern Energy with the world class development projects and capabilities of Pattern 11 Development under one company. 12 Canada Pension Plan Investment Board is a professional investment management 13 organization that invests funds of the Canadian Pension Plan in the best interests of 20 14 million contributors and beneficiaries. At June 30, 2019, the Canadian Pension Plan Fund 15 totaled C\$400.6 billion. Riverstone is an energy and-power focused private investment 16 firm, which has committed approximately \$40 billion to more than 180 investments around 17 the globe. 18 The transaction is expected to close in the second quarter of 2020. Following the closing 19

The transaction is expected to close in the second quarter of 2020. Following the closing of the transaction, the new Pattern company will be led by the same management team and maintain the same mission and focus of developing, constructing and operating renewable energy projects. Pattern's core focus on renewable energy in New Mexico will only be strengthened under this new structure.

Q. PLEASE PROVIDE AN OVERVIEW OF THE JOINT APPLICANTS.

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- A. The Corona Wind Companies are limited liability companies, organized under the laws of the State of Delaware, registered in the State of New Mexico, and are wholly owned subsidiaries of Pattern Development. Each of the Corona Wind Companies will obtain the land rights and permits needed for the development and construction of the Corona Wind Projects and the Corona Gen-Tie System.
- 6 Q. WILL PATTERN DEVELOPMENT IMPLEMENT COMPANY
 7 ENVIRONMENTAL POLICIES OR PRACTICES REGARDING THE CORONA
 8 WIND PROJECTS AND THE CORONA GEN-TIE SYSTEM?

A.

Yes. As discussed more in the testimony of Adam Cernea Clark, Pattern Development actively participates in wind industry efforts to understand, study, and minimize the environmental impacts of wind energy and to advance the development of technology and best practices. Pattern Development also routinely implements voluntary best management practices and mitigation strategies that further its environmental values. As evidence of our commitment to implementing environmental best practices with all of our projects, when Pattern Development acquired the Mesa Canyons Wind Project in 2018, a wind farm in Lincoln County, New Mexico, which was previously approved by the Commission in its Final Order issued February 28,2018 in NMPRC Case No. 17-00221-UT, we voluntarily elected to implement the same conditions and Protective Measures that we proposed and which were accepted by the Commission for the Corona Wind Projects in Case 18-00065. These additional Protective Measures were not a requirement of the Commission's Final Order in NMPRC Case 17-00221-UT.

O. WHO WILL CONSTRUCT THE EXTENDED CORONA GEN-TIE SYSTEM?

- A. Construction will be managed by Pattern Development's in-house construction group,
 which has successfully completed over 5,000 MW of wind projects including the
 Broadview wind farms in Curry County, New Mexico. Construction of the Corona Wind
 Extended Corona Gen-Tie System will be performed under one or more balance of plant
 agreements by one or more qualified third-party contractors. This is likely to be the same
 group of third-party contractors used for the Updated Corona Wind Farm Project and
- 7 Updated Corona Gen-Tie System.

8 Q. WHAT COMMISSION APPROVALS ARE THE JOINT APPLICANTS 9 REQUESTING?

- 10 A. The Corona Wind Companies request that the Commission approve the location of the
 11 Updated Corona Wind Farm Project, the Extended Corona Gen-Tie System in Torrance
 12 and Guadalupe Counties in New Mexico and the Reconfigured Corona Gen-Tie System
 13 pursuant to NMSA 1978, §§62-9-3, 62-9-3.2 and Commission Rule 17.9.592 NMAC.
 14 Joint Applicants are also requesting approval by the Commission of the 180-foot right-of15 way for the entire Updated Corona Gen-Tie System.
- Q. ARE THE CORONA WIND COMPANIES REQUESTING THE COMMISSION
 ISSUE A PUBLIC CERTIFICATE OF CONVENIENCE AND NECESSITY?
- A. No. Neither the Joint Applicants, Pattern Development, nor PEGI entities are or will be public utilities if the proposed location permits are granted and the Corona Wind Projects and Extended Corona Gen-Tie System constructed.
- 21 III. THE CORONA WIND UPDATE
- 22 Q. PLEASE DESCRIBE THE CORONA WIND UPDATE.

1 A. The Corona Wind Update will consist of approximately 2,300 MW of wind power 2 facilities. The Corona Wind Projects will still be located in Lincoln, Torrance and 3 Guadalupe Counties in New Mexico and will encompass approximately 347,000 acres of 4 private and state land within the three counties ("Updated Corona Wind Project Area"). 5 The intention remains to interconnect the Corona Wind Update to one of SunZia 6 Transmission LLC's two 500-kV transmission lines ("SunZia Project") via the Updated 7 Corona Gen-Tie System. However, we also intend to interconnect the Corona Wind Update 8 to the Western Spirit Transmission line. This is the reason for the Extended Corona Gen-9 Tie System. 10 To produce the desired energy, it is anticipated that there will be up to 950 wind turbines 11 with a nameplate capacity ranging from 2.3 MW to 3.0 MW. Each of the turbines in the 12 Corona Wind Update will be connected by 34.5-kV collection lines to new substations 13 ("Generation Project Substations") to be located within the Updated Corona Wind Project 14 Area. I have provided a map as Exhibit CC-1 to my testimony showing the location of the 15 Corona Wind Update and identifying areas that have been added to the generation facilities 16 since our filing in NMPRC Case No. 18-00065-UT.

17 Q. IS THE PROPOSED LOCATION WELL-SUITED FOR WIND ENERGY 18 GENERATION?

19

20

21

22

23

A.

Yes. In this regard there is no change to the suitability of the site from the initial information filed in NMPRC Case No. 18-00065-UT. Exhibit CC-2 shows the average wind speed across New Mexico at 80 meters above ground level (the approximate height of an average wind turbine). The Corona Wind Update are at the intersection of Lincoln, Torrance, and Guadalupe Counties where some of the highest wind speeds are shown. Pattern

- 1 Development expects to pair industry leading wind turbine equipment with the strong wind
- 2 resource in the Updated Corona Wind Project Area to maximize energy generation at the
- 3 Corona Wind Update.

Project.

14

22

4 Q. HOW WAS THE UPDATED CORONA WIND PROJECT AREA CHOSEN FOR

5 THE CORONA WIND PROJECTS?

- 6 A. As discussed previously, the Corona Wind Update is in an area with a wind resource 7 superior to much of the rest of the State of New Mexico. After starting development for its 8 Broadview and Grady projects in Curry County, New Mexico, Pattern Development began 9 looking for more opportunities to leverage its experience elsewhere in the state. Once 10 Pattern Development recognized the favorable resource at the location for the Corona Wind 11 Update, it also recognized that this site has relatively low numbers of sensitive species and 12 natural resources, support from private landowners for wind development, large areas of 13 buildable terrain, and close proximity to the eastern terminus of the proposed SunZia
- 15 Q. WHAT IS THE TIMEFRAME FOR CONSTRUCTION OF THE CORONA WIND
 16 PROJECTS?
- 17 A. Construction of a portion of the Corona Wind Update is expected to begin once all the
 18 necessary permits to begin construction are in hand. The Corona Wind Update are
 19 expected to be in service by the end of 2021 and the remaining wind power associated with
 20 the Corona Wind Update and Mesa Canyons Projects are expected to be in service between
 21 2022 and 2024.

Q. WHAT IS THE REASON FOR THE CHANGE IN THE IN-SERVICE DATE?

- 1 A. The delay of the in-service date is a result of ongoing development work and economic
- 2 optimization by the project. Pattern Development remains committed to the successful
- buildout of all of its assets in central New Mexico.
- 4 Q. HAS THE TIMEFRAME FOR CONSTRUCTION OF THE CORONA WIND
- 5 UPDATE BEEN DELAYED BECAUSE OF THE CHANGES DESCRIBED IN THIS
- 6 FILING?
- 7 A. No. The changes in this filing are the product of ongoing diligence and development by
- 8 Pattern Development. Transmission route changes and project land additions are common
- 9 in any wind farm development process.
- 10 Q. WILL THE CORONA WIND UPDATE HAVE AN INCREASED NAMEPLATE
- 11 THAN WAS PREVIOUSLY ESTIMATED IN NMPRC CASE NO. 18-00065-UT?
- 12 A. The addition of private lands to the Corona Wind Update will offer increased flexibility
- for siting wind turbines and potentially for additional MW. This has not been finalized
- 14 yet.
- 15 Q. WILL THERE BE ADDITIONAL TURBINES THAN ESTIMATED IN NMPRC
- 16 CASE NO. 18-00065-UT?
- 17 A. Although the overall nameplate of the farm may increase, the number of turbines is still
- expected to be approximately 950. This is possible because the nameplate of each turbine
- is expected to be closer to 3.0 MW, which is the upper limit in the 2.3 3.0 MW range
- stated in my previous testimony in NMPRC Case No. 18-00065-UT.
- 21 IV. THE UPDATED CORONA GEN-TIE SYSTEM
- 22 Q. PLEASE DESCRIBE THE UPDATED CORONA GEN-TIE SYSTEM.
- 23 A. The Updated Corona Gen-Tie System is a 345-kV transmission system and associated
- transmission facilities, including a 180-foot ROW located within a one-mile-wide corridor.
- The Updated Corona Gen-Tie System will be located within the Updated Corona Wind

Project Area. Approximately 94 miles of the 345-kV transmission lines will connect each of the Corona Wind Projects' substation to either the Western Spirit Switchyard or SunZia East. The electricity generated by the Corona Wind Projects that will be transmitted through the SunZia Project will be sold to out-of-state purchasers located in Arizona, California, and/or Utah under Power Purchase Agreements. The electricity generated by the Corona Wind Update that will be transmitted through the Western Spirit Switchyard will be sold to either out-of-state purchasers or local customers in New Mexico. Attached to the testimony of Adam Cernea Clark as Exhibit ACC-3 are detailed maps showing the proposed route for the Updated Corona Gen-Tie System. These maps reflect the areas of the previously approved Corona Gen-Tie System which have been reconfigured and also the area with the extension of the Corona Gen-Tie System.

Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM BE LOCATED ON PRIVATE LANDS OR STATE LANDS OR SOME COMBINATION?

- A. As mentioned above, the Updated Corona Gen-Tie System will be located on private and state land within the Updated Corona Wind Project Area. The estimated breakout between private and state lands is provided on my Exhibit CC-3 which is attached to this testimony.
- 17 Q. HAVE THE CORONA WIND COMPANIES SECURED LAND RIGHTS FOR THE
 18 EXTENDED GEN-TIE SYSTEM FROM THE PRIVATE LANDOWNERS AND
 19 THE STATE OF NEW MEXICO?
- All land for the Extended Corona Gen-Tie System either has or will be secured prior to any construction commencing for the Extended Gen-Tie System.
- Q. WHAT LAND USE STATUTES AND ADMINISTRATIVE REGULATIONS
 APPLY TO THE UPDATED CORONA GEN-TIE SYSTEM?

- A. The Updated Corona Gen-Tie System is subject to the zoning ordinances of Lincoln
 County and Torrance County for a Wind Energy Conversion System approval and a Wind
 Energy Special Use District, respectively. The Corona Wind Projects will comply with
 both county ordinances.
- Q. PLEASE DESCRIBE THE EXTENDED CORONA GEN-TIE SYSTEM IN MORE

 DETAIL, SPECIFYING THE PURPOSE AND THE CAPACITY TO MOVE WIND

 POWER?
- A. The Extended Corona Gen-Tie System is an approximately 35-mile, 345-kilovolt ("kV") transmission system and associated transmission facilities, including a 180-foot right-of-way ("ROW") that will enable a portion the Corona Wind Update to connect to the Western Sprit Transmission Line. By connecting to the Updated Corona Gen-Tie System, the Extended Corona Gen-Tie System will be able to transmit a significant amount of Wind Power to locations in New Mexico and to other western markets.
- Q. PLEASE EXPLAIN IN DETAIL THE RELATIONSHIP OF THE EXTENDED
 CORONA GEN-TIE SYSTEM TO THE RECENTLY APPROVED CLINES
 CORNERS WIND FARM AND ASSOCIATED GEN-TIE SYSTEM.
- 17 A. The Clines Corners Wind Farm and its associated Gen-Tie system are electrically separate
 18 and distinct from the Updated Corona Gen-Tie system. Any generator and associated
 19 facilities that connect to the Western Spirit Transmission Project will be required to comply
 20 with PNM design requirements. In addition, it is typical for multiple connections to a
 21 utility system to interconnect in such a way that other generators or systems will not impact
 22 each other or the grid in the event of an outage. A sample interconnection scheme showing
 23 the potential interconnection of the Corona Extended Gen-Tie and the Clines Corners Gen-

Tie to the Western Spirit Transmission Project is shown in Exhibit CC-4 In this schematic, the Clines Corners Gen-Tie and the Corona Extended Gen-Tie are electrically separate

3 connections into the Western Spirt Switchyard.

A.

4 Q. PLEASE PROVIDE MORE DETAIL WITH RESPECT TO THE SECONFIGURED CORONA GEN-TIE SYSTEM.

As discussed previously, the Reconfigured Corona Gen-Tie System is a variation of the Corona Gen-Tie System route that was approved by the Commission in NMPRC Case No. 18-00065-UT. Since the original approval, the Corona Gen-Tie System design has been further optimized to minimize environmental impacts, to optimize transmission routes based on private land leases, and to accommodate an additional interconnection option via Western Spirit. These optimizations result in a net increase of 9,088 feet of proposed Gen-Tie line and associated ROW. This increase is comprised of the removal of 14,016 feet and the addition of 23,104 feet of proposed Gen-Tie line. While some of the Gen-Tie additions are within the already studied one-mile corridor, other modifications fall outside of the corridor and require Commission review. Exhibit CC-5 shows these increases in table format. The testimony of Adam Cernea Clark will further detail the Reconfigured Corona Gen-Tie System layout and associated environmental impacts.

I note that the precise final route, including the length in miles and linear feet for the Updated Corona Gen-Tie System, is dependent upon the successful execution of a lease agreement currently under negotiation with a private landowner that is reflected in the Corona Wind Update. If the lease agreement is executed, the length of the Updated Corona Gen-Tie System in miles and linear feet is reflected under Option A on Exhibit CC-6. If this lease agreement is not successfully executed the length will be modified to that

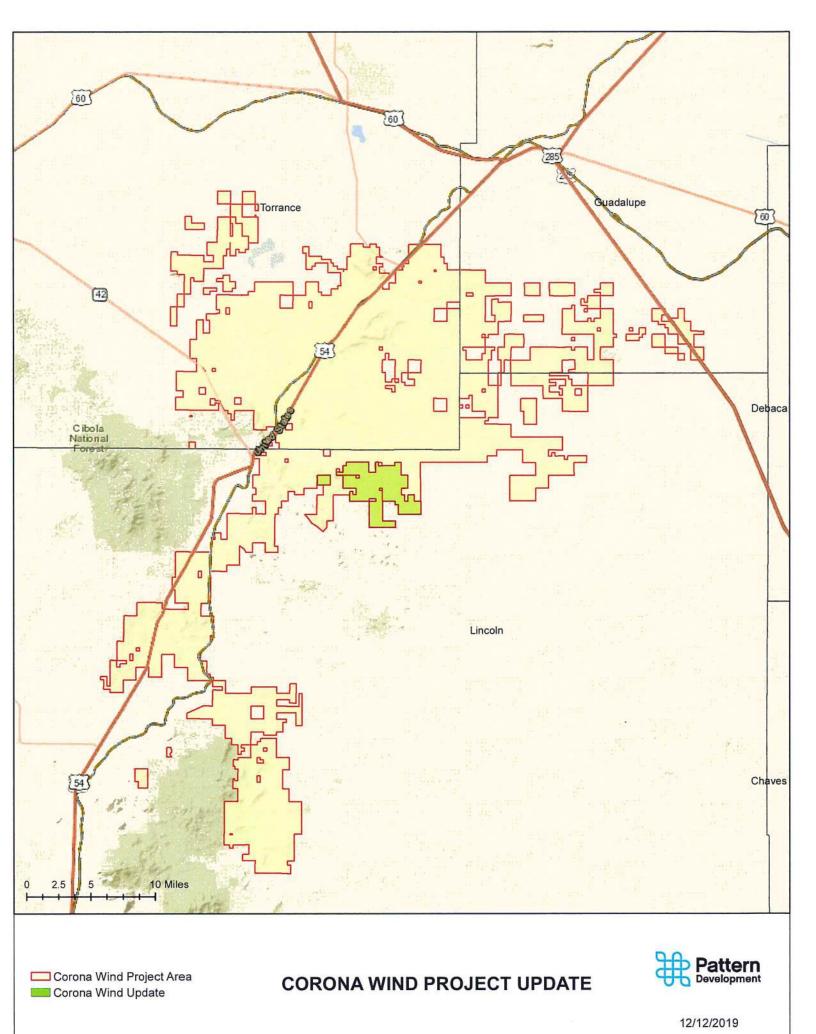
- reflected under Option B on Exhibit CC-6. In both instances the final route for the Updated
- 2 Corona Gen-Tie System will be within the one-mile corridor that is the subject of the
- 3 environmental analysis submitted in this Joint Application.
- 4 Q. WHAT IS THE TIMEFRAME FOR CONSTRUCTION OF THE UPDATED
- 5 CORONA GEN-TIE SYSTEM?
- 6 A. At least a portion of the Updated Corona Gen-Tie System is expected to be in service by
- 7 the end of 2021 with the entirety to be in-service by the end of 2024.
- 8 Q. HOW WILL THE ADDITION OF THE EXTENDED CORONA GEN-TIE
- 9 SYSTEM FACILITATE THE DEVELOPMENT OF THE CORONA WIND
- 10 **UPDATE?**
- 11 A. The addition of the Extended Corona Gen-Tie System provides an additional
- interconnection opportunity for the Corona Wind Update. Given the large wind resource
- in the Corona area, Pattern Development feels it will be able to inject wind energy into
- both the Western Spirit Transmission line and the SunZia Transmission line from the
- 15 Corona Wind Update.
- 16 V. PUBLIC OUTREACH AND SUPPORT AND GOVERNMENT COORDINATION
- 17 Q. WERE LOCAL COMMUNITIES AND PUBLIC OFFICIALS INFORMED ABOUT
- 18 THE EXTENDED CORONA GEN-TIE SYSTEM?
- 19 A. Yes, Pattern Development representatives and representatives of the Corona Wind
- 20 Companies have held several informational meetings with landowners discussing the
- 21 Corona Wind Update timelines. In addition, the private landowners along the Extended
- 22 Corona Gen-Tie system have executed ROW Agreements for its construction.
- Additionally, Pattern Development will submit ROW applications with the New Mexico

1		State Land Office for the portions of the Extended Corona Gen-Tie system on State Land
2		in January of 2020. No portion of the Extended Corona Gen-Tie System is located on
3		Federal lands. Finally, Pattern Development has been in communications with Torrance
4		County officials regarding any permits or permit updates needed for the Extended Corona
5		Gen-Tie.
6	Q.	HAVE THE CORONA WIND COMPANIES INFORMED THE PUBLIC ABOUT
7		THE UPDATED CORONA GEN-TIE SYSTEM?
8	A.	Yes. In addition to several public meetings, Pattern Development representatives have met
9		individually with many local landowners about the Updated Corona Gen-Tie System.
10	Q.	DO THE CORONA WIND COMPANIES HAVE THE SUPPORT OF THE WIND
11		PROJECTS SITES' LANDOWNERS AND THE STATE OF NEW MEXICO?
12	A.	Yes, over 299,000 acres of private land have been leased from private landowners and over
13		31,000 acres are in the process of being leased from the State of New Mexico. These leases
14		have been negotiated and signed by the landowners or the State of New Mexico at their
15		discretion.
16	Q.	ARE YOU FAMILIAR WITH THE CONDITIONS PLACED UPON THE JOINT
7		APPLICANTS AS PART OF THE COMMISSION'S FINAL ORDER IN NMPRC
8		CASE NO. 18-00065-UT?
9	A.	Yes. I was intimately involved in that proceeding and agreed to those conditions at that
20		time.
21	Q.	ARE YOU AUTHORIZED TO AGREE TO THE SAME CONDITIONS AS PART
22		OF THIS JOINT APPLICATION AS WERE IMPOSED UPON JOINT
23		APPLICANTS IN CASE NO. 18-00065-UT?

1	A.	Yes, I am. I do agree to the numerous conditions and environmental protections that were
2		included as conditions of the Final Order in NMPRC Case No. 18-00065-UT.
3	VI.	ECONOMIC IMPACT OF THE CORONA WIND UPDATE
4	Q.	WILL THERE BE ANY CHANGE IN THE ECONOMIC IMPACTS
5		ANTICIPATED FROM THE CORONA WIND PROJECTS AS A RESULT OF
6		THE CHANGES WHICH ARE THE SUBJECT OF THIS PROCEEDING?
7	A.	The Corona Wind Update and the Updated Corona Gen-Tie System will not reduce the
8		beneficial impacts identified in the results of the Corona Economic Report. In fact,
9		additional acreage leased by the project represents an increase in both direct and indirect
10		benefits by the Corona Wind Update. Out of conservatism, Pattern Development has
11		elected to not update the report for this update.
12		
13	Q.	DOES THIS CONCLUDE YOUR TESTIMONY?
14	A.	Yes.
15		

IN THE MATTER OF THE AMENDED JOINT)
APPLICATION OF THE CORONA WIND COMPANIES)
FOR LOCATION APPROVAL OF THE EXPANSION OF)
THE CORONA WIND PROJECTS RECONFIGURATION	j
OF THE PROPOSED CORONA GEN-TIE SYSTEM,)
EXTENSION OF THE CORONA GEN-TIE SYSTEM AND	j
REQUEST FOR RIGHT OF WAY DETERMINATION IN)
LINCOLN, TORRANCE, AND GUADALUPE COUNTIES)
PURSUANT TO THE PUBLIC UTILITY ACT, NMSA) Case No. 20-00008-UT
1978, § 62-9-3)
)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,)
Joint Applicants.)
	1

Ехнівіт СС-1

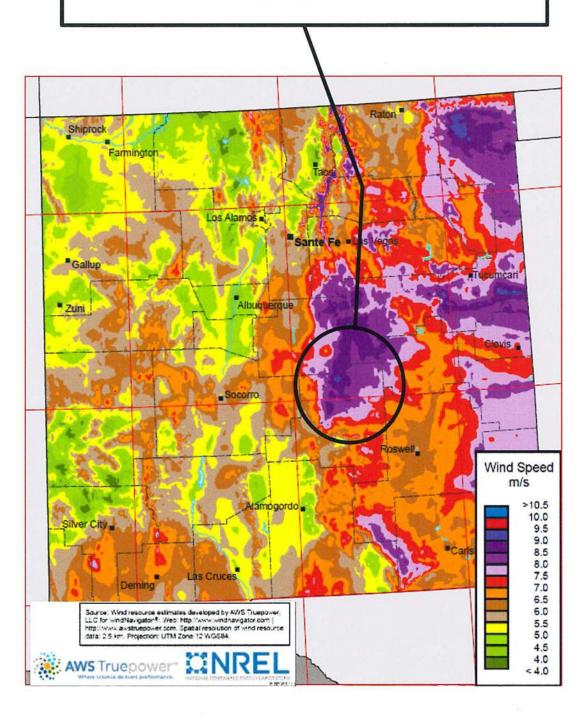


IN THE MATTER OF THE AMENDED JOINT)
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1978, § 62-9-3)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE	1
WIND LLC, AND VIENTO LOCO, LLC,	(
Joint Applicants.)
)

EXHIBIT CC-2

New Mexico - Annual Average Wind Speed at 80 m

The Corona Wind Projects are located in an area with some of the highest wind resource in the state.



IN THE MATTER OF THE AMENDED JOINT)
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1978, § 62-9-3	
	j
ANCHO WIND LLC, COWBOY MESA LLC, DURAN	j
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,)
)
Joint Applicants.)
)

Ехнівіт СС-3

Previously Approved Corona Wind Project Area

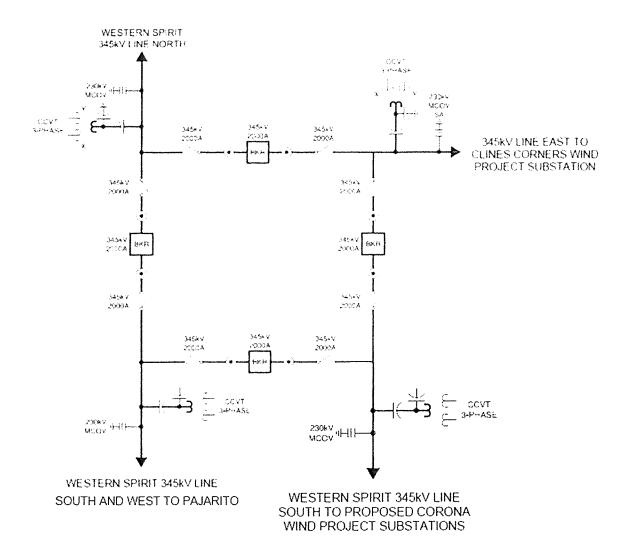
Status	Private - Previously Approved	State - Previously Approved	Total
Under option / applied	292,139	21,200	313,339
Negotiating / to apply	15.784	13,880	29,664
Total	307,923	35,080	343,003

Updated Corona Wind Project Area

Status	Private Updated	State Updated	Total
Under option / applied	299,131	33,006	332,137
Negotiating / to apply	3,560	0	3,560
Corona Wind Update	11.700	0	11,700
Total	314,391	33,006	347,397

IN THE MATTER OF THE AMENDED JOINT	
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1978, § 62-9-3)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE	Ś
WIND LLC, AND VIENTO LOCO, LLC,	į́
Joint Applicants.)

Ехнівіт СС-4



IN THE MATTER OF THE AMENDED JOINT)
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THE CORONA WIND PROJECTS RECONFIGURATION)
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1978, § 62-9-3)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE	í
WIND LLC, AND VIENTO LOCO, LLC,	()
Joint Applicants.)
	18 TO

EXHIBIT CC-5

	1	Reconfigured Corona Gen-Tie			Extended Contin	Updated Corona Gen-Tie System
Corona Gen-Tie System	Previously approved GenTie	Miles/Acres removed	Miles/Acres remaining	Miles/Acres added	Extended dentile	
Miles of Transmission Acres of Corridor	80	21.9	58	3	33.5	94.2
	51,200	14.016	37,184	1,664	21,440	60,288
Corridor Width ROW Width	1 mile corridor	1 mile corridor	1 mile corridor	1 mile corridor	1 mile corridor	1 mile corridor
	180 feet	180 feet	180 feet	180 feet	180 feet	180 feet

IN THE MATTER OF THE AMENDED JOINT)	
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1978, § 62-9-3)	
)	
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)	
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)	
WIND LLC, AND VIENTO LOCO, LLC,)	*
)	
Joint Applicants.)	
	1	

Ехнівіт СС-6

Updated Corona GenTie System

	Option A		
Landowner	Length in Miles	Length in Linear feet	
Private	82.3	434,280	
State Land	11.9	62,832	
Sum	94.2	497,112	

	Option B		
Landowner	Length in Miles	Length in Linear feet	
Private	81.6	430,848	
State Land	11.9	62,832	
Sum	93.5	493,680	

IN THE MATTER OF THE AMENDED JOINT)
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1978, § 62-9-3)
ANCHO WIND LLC COMPONING LLC DUD IN)
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, AND VIENTO LOCO, LLC,)
Joint Applicants.)
)

AFFIDAVIT OF CRYSTAL COFFMAN

IN THE MATTER OF THE CORONA WIND COMPANIES' JOINT APPLICATION FOR THE LOCATION OF THE CORONA WIND PROJECTS AND THE CORONA GEN-TIE SYSTEM IN LINCOLN, TORRANCE AND GUADALUPE COUNTIES PURSUANT TO THE PUBLIC UTILITY ACT, NMSA 1978, §62-9-3 ANCHO WIND LLC, COWBOY MESA LLC, DURAN MESA LLC, RED CLOUD WIND LLC, TECOLOTE WIND LLC, VIENTO LOCO LLC,))) Case No. 18-00065-UT)))))
JOINT APPLICANTS.	
AFFIDAVIT OF CRYSTAL CO	FFMAN
STATE OF TEXAS)) ss. COUNTY OF HARRIS)	
I have read the foregoing Direct Testimony, and it is tr	ue and accurate based on my own
knowledge and belief.	Jal Coffer an
SUBSCRIBED and sworn to before me this 19 day of Dece	mber 2019.

 $\frac{10/01/2023}{\text{My Commission Expires}}$

SYDNEY BERROTERAN
Notary Public, State of Texas
Comm. Expires 10-01-2023
Notary ID 130390673

IN THE MATTER OF THE AMENDED JOINT	
APPLICATION OF THE CORONA WIND COMPANIES	
FOR LOCATION APPROVAL OF THE EXPANSION OF	
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ANCHO WIND LLC, COWBOY MESA LLC, DURAN	
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WIND LLC, AND VIENTO LOCO, LLC,	
j	
Joint Applicants.	Ni I

DIRECT TESTIMONY OF

ADAM CERNEA CLARK

ON BEHALF OF CORONA WIND COMPANIES

IN THE MATTER OF THE AMENDED JOINT)	
APPLICATION OF THE CORONA WIND COMPANIES)	
FOR LOCATION APPROVAL OF THE EXPANSION OF)	
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)	
ANCHO WIND LLC, COWBOY MESA LLC, DURAN)	
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)	
WIND LLC, AND VIENTO LOCO, LLC,)	
)	
Joint Applicants.)	
	_)	

DIRECT TESTIMONY OF

ADAM CERNEA CLARK

ON BEHALF OF THE CORONA WIND COMPANIES

I. <u>INTRODUCTION AND QUALIFICATIONS</u>

- 2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
- 3 A. My name is Adam Cernea Clark. My business address is 1088 Sansome St., San Francisco,
- 4 CA 94111.

1

5 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

- 6 A. I am employed by Pattern Energy Group LP (together with Pattern Energy Group 2 LP, "Pattern Development"). I hold the position of Manager of Environmental and Natural 7 8 Resources. I am the project lead on environmental and permitting issues for the 9 approximately 2,300 megawatt ("MW") of wind generation projects ("Corona Wind 10 Projects") and the development and permitting of the 345-kilovolt ("kV") transmission 11 system and associated transmission facilities, including a 180-foot right-of-way ("ROW") 12 located within a one-mile-wide corridor (collectively, "Corona Gen-Tie System" or "Gen-Tie System"). The Corona Gen-Tie System and Corona Wind Projects are the subject 13 14 matter of this application for location control approval before the New Mexico Public Regulation Commission ("Commission") pursuant to NMSA 1978, §§62-9-3, 62-9-3.2 and 15 16 Commission Rule 17.9.592 NMAC ("Joint Application").
- 17 Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND WORK BACKGROUND.
- I am a 2005 graduate of Kenyon College with a B.A. in English and an Integrated Program in Humane Studies concentration. I am also a 2014 graduate of both Northeastern University School of Law and Vermont Law School, where I earned a Juris Doctor and Masters Degree in Environmental Law and Policy, respectively. In 2015, I was admitted as an attorney to the New York State Bar. I have been working in the wind industry since 2015, when I joined Pattern Development as an associate of environmental and natural

resources. My previous work experience includes fellowships at an international development organization and a local legal aid services, as well as corporate transactional work at a law firm in Europe.

In the course of my employment with Pattern Development, I am responsible for environmental, permitting, and non-permitting development issues related to the development of wind, solar, and transmission projects, as well as non-project-specific regulatory and policy matters. In my capacity as a representative of renewable projects such as the Corona Wind Projects, I am in charge of assessing and mitigating environmental impacts of Pattern Development's projects and securing all requisite permits prior to project construction and financing. In this capacity, I work closely with federal regulatory and environmental agencies, such as the National Park Service, the U.S. Army Corps of Engineers ("USACE"), and the U.S. Fish and Wildlife Service ("USFWS"), as well as state and local officials in communities where Pattern Development builds its projects.

I also engage with federal agencies, other renewable companies, and non-profit organizations as a representative of Pattern Development more generally to advance progress in environmental policy and research.

Q. ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

19 A. I am appearing on behalf of Ancho Wind LLC, Cowboy Mesa LLC, Duran Mesa LLC,
20 Red Cloud Wind LLC, Tecolote Wind LLC, Viento Loco LLC, Gallinas Mountain Wind
21 LLC (Collectively referred to as the "Joint Applicants") in support of this Application for
22 approval of changes to the Corona Wind Projects consisting of the following approvals: a)
23 location approval of an expansion of the wind generation lands of the Corona Wind

Projects to encompass property (the "Corona Wind Update") not previously included in the original filing in NMPRC Case No. 18-00065-UT; b) location approval of a modification to the previously approved route for the Corona Gen-Tie System route to locate part of the route outside of the one-mile corridor presented in NMPRC Case No. 18-00065-UT ("Reconfigured Corona Gen-Tie System"); c) location approval for an extension of approximately 35 miles of the Corona Gen-Tie System within a one-mile corridor ("Extended Corona Gen-Tie System"); and, d) approval of a 180-foot right-of-way ("ROW") for the Reconfigured Corona Gen-Tie System and the Extended Corona Gen-Tie System (hereafter collectively referred to as the "Updated Corona Gen-Tie System"). I believe that approval of the ROW may not be necessary since this approval was granted in Commission's Order in NMPRC Case No. 18-00065-UT and the changes described in the Updated Corona Gen-Tie System do not alter the need for a 180 foot right of way, but am supporting this request in any event.

14 Q. ARE YOU SPONSORING ANY EXHIBITS WITH YOUR TESTIMONY?

Yes. I am sponsoring several exhibits in my testimony. However, the primary exhibit is
Exhibit ACC-1, which is the Updated Corona Environmental Report ("Environmental
Report") prepared by Burns & McDonnell for this Application. It was prepared under my
direct supervision. I was the primary contact for the Burns & McDonnell team and have
reviewed and am familiar with all of the work performed and the conclusions reached. The
remaining exhibits are discussed later in my testimony in more detail.

Q. PLEASE PROVIDE A SUMMARY OF YOUR TESTIMONY.

22 A. I am submitting testimony explaining that the Corona Wind Projects have been modified 23 by adding an area, the Corona Wind Update, that was not previously included in the description in NMPRC Case No. 18-00065-UT. I describe the area where additional wind turbines might be located and explain that this area and the location of these generation facilities therein is in compliance with all applicable laws and regulations in New Mexico, as well as the environmental protections agreed upon by the Joint Applicants and Commission Staff in NMPRC Case No. 18-00065-UT..

I further describe the need to modify the route of the Corona Gen-Tie System, the Reconfigured Corona Gen-Tie System, from that which was approved in NMPRC Case No. 18-00065-UT. I describe the Reconfigured Corona Gen-Tie System primarily within the Reconfigured Corona Gen-Tie System Corridor, where it is located outside of the previously approved Corona Gen-Tie System Corridor that we discussed in NMPRC Case No. 18-00065-UT. I discuss how these new areas that were not previously studied in that prior proceeding will also comply with all of the Commission requirements for location permit approval for a transmission system. Next, I describe the additional approximately 35-mile extension of the Corona Gen-Tie System, the Extended Corona Gen-Tie System, and the fact that our environmental analysis confirms that this extension merits location permit approval as well. I also discuss how these new areas will implement the environmental protections agreed upon by the Joint Applicants and Commission staff in NMPRC Case No. 18-00065-UT.

19 II. POTENTIAL ENVIRONMENTAL IMPACTS

- 20 A. <u>ENVIRONMENTAL IMPACTS OF TRANSMISSION PROJECTS</u>
 21 <u>GENERALLY</u>
- Q. HOW WOULD YOU CHARACTERIZE THE ENVIRONMENTAL IMPACTS OF TRANSMISSION SYSTEMS GENERALLY?

In the United States there are over 200,000 miles of high-voltage transmission lines such as the proposed Corona Gen-Tie System, and over 5,000,000 miles of distribution lines. Electrical transmission lines have relatively few significant negative environmental impacts, largely because transmission projects have a small physical impact relative to other forms of development and do not require the ROW to be converted entirely to industrial use. The few environmental impacts consist primarily of habitat modification and impacts to birds. Transmission projects are typically able to microsite around sensitive site-specific resources, such as archaeological and historical resources or wetlands and streams.

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Q. PLEASE DESCRIBE IN BRIEF TERMS HOW TRANSMISSION LINES CAN IMPACT LOCAL HABITATS?

Because transmission lines are long, linear projects, they will inevitably bisect different habitats even if actual habitat modification is limited to portions of the transmission ROW. Habitat modification is primarily the result of vegetative clearing of a transmission ROW to ensure that appropriate structure clearances are maintained pursuant to the standardized requirements of the North American Electric Reliability Corporation ("NERC"). NERC establishes minimum clearance distances from vegetation to ensure the reliability of the North American bulk power system. The effects of habitat modification as a result of transmission lines are multiple, nuanced, and will vary widely across differing circumstances. Habitat modification can result in the permanent direct loss of preexisting habitat types across a ROW. This may occur, for example, where a transmission line crosses a heavily forested habitat in the Northeastern United States which requires clearing of vegetation for the operations and maintenance of the line in compliance with NERC.

Conversely, a transmission project in the desert Southwest is unlikely to require significant vegetative clearing within its ROW since habitat loss will largely consist of minimal areas for project structures, such as power poles. Transmission ROWs can also create valuable habitat for certain species utilizing edge habitat, such as pollinator insects and various passerine birds. Large-body predators may utilize cleared transmission ROWs for travel. Like most large linear projects, transmission line ROWs can be sited to minimize impacts to sensitive habitats, such as playa lakes. Also, because the permanent physical footprint of a transmission project consists of power pole structures and aerial cables, power poles can further be micro-sited to avoid impacts to specific sensitive resources. This is true also of electrical substations. While avoidance of environmental impacts comes at an economic cost, careful siting can significantly reduce the already modest impacts caused by transmission projects.

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Q. PLEASE DESCRIBE IN BRIEF TERMS HOW TRANSMISSION LINES CAN AFFECT AVIAN SPECIES?

Birds can be impacted by collision with or electrocution from powerlines. Electrocution risk can be managed in a variety of ways and it is an increasingly common practice to utilize the Avian Powerline Interaction Committee ("APLIC") electrocution guidelines to implement measures to reduce this risk. However, the 345-kV systems that will be used in connection with the Corona Wind Projects are large enough to remove the risk of electrocution.

Risk of collision exists for both distribution and transmission lines. The majority of birds colliding with transmission lines are small passerine species with high fecundity rates and short lifespans that are more resilient to mortality at the population level. Risk factors are

11	O.	HOW CAN TRANSMISSION LINES IMPACT CULTURAL RESOURCES?
10		appropriately.
9		designed to be visually conspicuous to birds. They can be very effective where used
8		risk factors detailed in the APLIC guidelines on transmission line conductors. They are
7		Bird diverters are installed in identified areas along a transmission project based on various
6		deterrents installed on transmission lines to make the lines stand out visually to flying birds.
5		lines, after a line has been sited, is the installation of bird diverters. Bird diverters are visual
4		I believe that the most effective measure for minimizing avian mortality at transmission
3		Avian Collisions with Power Lines.
2		resources, and parks. See Exhibit ACC-2 for the 2012 APLIC collision guideline, Reducing
1		detailed in the APLIC collision guidelines, including proximity to agricultural fields, water

Q. HOW CAN TRANSMISSION LINES IMPACT CULTURAL RESOURCES?

Transmission lines can impact cultural resources through construction and placement of structures in close proximity to sensitive cultural resources, such as archaeological or historical sites. Transmission lines can generally be constructed to avoid archaeological and historical sites altogether through careful siting of a transmission ROW and subsequently by implementing the micro-siting of power pole structures to span, or avoid altogether, any impacts to a given resource.

В. EXISTING ENVIRONMENT OF THE CORONA WIND UPDATE AND **UPDATED CORONA GEN-TIE SYSTEM**

1. CORONA WIND UPDATE

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1	Q.	PLEASE	DECRIBE	THE	CHANG	ES OC	CURRING	IN	THE C	ORONA	WI	ND
2		UPDATE	FROM TH	IAT W	VHICH V	WAS DE	SCRIBED	IN	NMPRO	CASE N	NO.	18-

- 3 00065-UT.
- 4 A. The changes which are reflected in the Corona Wind Update are shown in detail in Exhibit 5 ACC-3 to my testimony. These changes essentially include the addition of some additional 6 lands with very good wind resources to the generation area for the Corona Wind Projects. 7 While the addition of the lands reflected in the Corona Wind Update is not necessary for the
- successful development of the Corona Wind Projects, it does allow for the inclusion of additional 9 high quality wind generation land to the projects resulting in a greater optimization of the Corona
- 10 Wind Projects.

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2. UPDATED CORONA GEN-TIE SYSTEM

- 12 Q. PLEASE DESCRIBE THE RECONFIGURED CORONA GEN-TIE SYSTEM.
- 13 A. The Reconfigured Corona Gen-Tie System is shown on Exhibit ACC-3 which is attached to my 14 testimony. The maps I am sponsoring show the original Corona Gen-Tie System that the
- 15 Commission approved and the Reconfigured Corona Gen-Tie System with deviations from the
- original route. 16
- 17 Q. PLEASE EXPLAIN THE NEED FOR THE RECONFIGURATION OF THE
- 18 CORONA GEN-TIE SYSTEM OUTSIDE OF THE ONE-MILE CORRIDOR
- 19 DISCUSSED IN NMPRC CASE 18-00065-UT.
- 20 A. While not necessary for the successful development of the Corona Wind Projects and, most
- 21 specifically, the Corona Gen-Tie System, the reconfiguration of the Corona Gen-Tie System allows
- 22 for a more efficient and optimized transmission system for the Corona Wind Projects. Adjustments
- 23 in the proposed route for a transmission line are common in the industry and are a benefit to the

public as it enables the project developer to address unanticipated environmental conditions and to minimize impacts to those which were known.

3 Q. PLEASE DESCRIBE THE EXTENDED CORONA GEN-TIE SYSTEM

- A. The Extended Corona Gen-Tie System is a 180-foot ROW and an approximately 35 mile 345-kV transmission system and associated transmission facilities that will be located within a 1-mile-wide corridor. The proposed route for the Extended Corona Gen-Tie System is shown on Exhibit ACC-3.
- Q. IS THERE A REASON YOU DO NOT DESCRIBE THE LOCATION OF THE
 EXTENDED CORONA GEN-TIE SYSTEM WITH MORE SPECIFICITY WITHIN
 THE ONE-MILE CORRIDOR?
- 11 A. Yes. We have described and shown in maps our best approximation of the Extended 12 Corona Gen-Tie System route at this time. However, the location of the Extended Corona 13 Gen-Tie System is also dependent upon the final location of the Updated Corona Gen-Tie 14 System in terms of the location of a particular 180-foot ROW. The siting of wind projects 15 infrastructure is a data-driven process. While the Corona Gen-Tie System will ultimately 16 be restricted to a 180-foot ROW, the Corona Wind Projects are still under active 17 development. As part of the wind development process, we are constantly collecting data 18 that is integrated into the design of our projects. Generally speaking, the more flexibility a 19 project has to integrate site-specific data into project design, the better a project will tend 20 to be at the end of the day.
 - The exact location of the ROW may change within our one-mile study corridor either due to micro-siting of the alignment of the Extended Corona Gen-Tie System itself, or through adjustments in the location of project turbines. These factors are sufficient to drive changes

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in the location of project substations, which subsequently can result in changes to the overall alignment of the Corona Gen-Tie System and the Extended Corona Gen-Tie System. This one-mile corridor has been studied holistically in the Environmental Report to analyze the potential impacts of the Extended Corona Gen-Tie System anywhere within this corridor. Thereby, the one-mile corridor allows for micro-siting to occur later in the project development as final decisions are made after reviewing the data.

A.

Q. WHEN IS THE UPDATED CORONA GEN-TIE SYSTEM EXPECTED TO BE IN SERVICE?

- Assuming the Corona Wind Projects interconnect to Western Spirit at least a portion of the Corona Wind Update and Updated Corona Gen-Tie System is expected to be in service by the end of 2021 with the entirety to be in-service by the end of 2024.
- 12 Q. PLEASE EXPLAIN WHY THE UPDATED CORONA GEN-TIE SYSTEM
 13 REQUIRES A 180-FOOT ROW WIDTH.
 - The Joint Applicants propose to use a 180-foot ROW width to ensure compliance with safety codes; to provide adequate logistical space for construction, operations and maintenance of the transmission line; and, to provide sufficient flexibility for siting structures within the ROW. See the Direct Testimony of Greg Parent which addresses these factors for the Extended Corona Gen-Tie System and concludes that a 180-foot ROW width is necessary for the final design. Furthermore, it is my professional opinion that a sufficiently wide ROW, such as that requested in this Joint Application, can provide for greater micro-siting flexibility for resource avoidance if unanticipated resources are identified during final design and construction.

1	Q.	WHAT IS THE EXISTING ENVIRONMENT OF THE EXTENDED CORONA
2		GEN-TIE SYSTEM, INCLUDING THE PROPOSED CORRIDOR?

- A. As detailed in the Exhibit ACC-1, Environmental Report, the existing environment within
 the Extended Corona Gen-Tie System Corridor is quite similar to the existing
 environmental within the previously approved Corona Gen-Tie System Corridor and
 largely consists of open savannah as well as pinon juniper habitat subject to ranching
 activities.
- 9 CORONA GEN-TIE SYSTEM LOCATED OUTSIDE OF THE ORIGINAL
 10 CORONA GEN-TIE SYSTEM CORRIDOR CONSIDERED IN CASE NO. 1811 00065-UT?
- A. As detailed in the Environmental Report, the existing environment within the Reconfigured
 Corona Gen-Tie System Corridor is very similar to the existing environmental within the
 previously approved Corona Gen-Tie System Corridor and largely consists of open
 savannah as well as pinon juniper habitat subject to ranching activities.
- 16 III. <u>PATTERN DEVELOPMENT AND ITS APPROACH TO PROJECT</u>
 17 DEVELOPMENT AND ENVIRONMENTAL ISSUES.
- 18 A. PATTERN DEVELOPMENT'S ENVIRONMENTAL VALUES IN
 19 PROJECT DEVELOPMENT
- Q. PLEASE PROVIDE THE COMMISSION WITH SOME BACKGROUND ON
 PATTERN DEVELOPMENT IN TERMS OF THEIR ENVIRONMENTAL
 VALUES AND TRACK RECORD.

Pattern Development has taken a leadership role in tackling the modest environmental impacts of the wind industry. We actively participate and provide funding in wind industry efforts to understand, study, and minimize the environmental impacts of wind energy and to advance the development of impact minimization technology and industry best management practices ("BMPs"). Pattern Development personnel participated in the public-private collaboration that led to the development of the USFWS Land-Based Voluntary Wind Energy Guidelines ("WEGs"). See Exhibit ACC-4. We have funded research into novel technologies for understanding and minimizing the environmental impacts of our projects. We are a founding and sustaining member of the American Wind Wildlife Institute, a coalition of wind industry companies and non-governmental organizations working to advance conservation values, scientific research, and wind energy development. We also routinely implement voluntary BMPs and mitigation strategies that further our environmental values. Recently, Pattern Energy Group Inc., an affiliate of Pattern Development (collectively, "Pattern Group"), played a leadership role in the American Wind Energy Association's efforts to raise funding for scientific research for understanding the impacts of wind-wildlife interactions, as well as supporting the implementation of bat mitigation measures during the autumn bat migration that have proven to substantially decrease bat mortality at the cost of reduced renewable energy generation. These examples are emblematic of our commitment to our statement of environmental values ("Statement of Environmental Values").

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1	Q.	DOES PATTERN DEVELOPMENT HAVE A FORMAL POLICY RELATING
2		DIRECTLY TO THE PROTECTION OF THE ENVIRONMENT?
3	A.	Yes. Pattern Development developed and followed the Statement of Environmental Values
4		that outlines an iterative process for identifying, avoiding, minimizing, and addressing
5		potential environmental impacts of renewable energy development and operations. See
6		Exhibit ACC-5.
7	Q.	PLEASE DESCRIBE HOW THE STATEMENT OF ENVIRONMENTAL VALUES
8		AFFECTS THE WAY PATTERN DEVELOPMENT ADDRESSES THE
9		ENVIRONMENTAL BENEFITS AND IMPACTS OF RENEWABLE ENERGY
10		GENERATION AND TRANSMISSION DEVELOPMENT?
11	A.	The Statement of Environmental Values outlines the following principles that guide our
12		approach to environmental protection and renewable energy development:
13		• Identify and assess potential environmental impacts at all stages of the life cycle
14		of our projects, incorporate them in our decision making, and explore creative
15		mitigations to minimize any adverse impacts.
16		• Comply with all applicable environmental laws and regulations. Where there
17		are limited regulations, we apply our more stringent standards.
18		• Engage relevant stakeholders, including community representatives and
19		national resource agencies, during the planning process of our projects.
20		• Site and design projects in such a manner as to respect wildlife and their habitat.
21		• Construct and operate projects using best practices to prevent pollution and
22		conserve natural resources.

• Work to continually improve overall environmental performance and ensure we are stewards of the environment.

Pattern Group strives to fulfill these principles in the construction and operation of all our projects by implementing the Statement of Environmental Values as standard practice on how we address environmental impacts in the United States. This dynamic ensures that a long-term approach is implemented from the earliest stage of development for addressing potential environmental concerns arising in the course of project development, construction, and operation. *Building Wildlife-Friendly Wind*, an infographic, explains how Pattern implements this approach to develop and operate its projects in an environmentally responsible way. Exhibit ACC-6 illustrates this stepwise approach.

11 Q. ARE THERE OTHER IMPORTANT VOLUNTARY GUIDELINES THAT EFFECT

HOW PATTERN DEVELOPMENT ADDRESSES ENVIRONMENTAL

PROTECTION AND STEWARDSHIP IN PROJECT DEVELOPMENT?

14 A. Yes. Pattern Development also follows the WEGs at all its projects across the United
15 States and integrates into powerline siting decisions the APLIC guidelines for reducing
16 avian mortality from powerlines. Please see Exhibit ACC-4 for the WEGs and Exhibit
17 ACC-2 for the APLIC *Reducing Avian Collision with Power Lines* guideline.

Q. WHAT ARE THE WEGS?

A.

The WEGs follow a tiered approach identifying, understanding, and addressing potential impacts of wind energy projects to the surrounding environment. Tier One entails an initial landscape-level site characterization relying on satellite imagery and publicly available databases. Tier Two identifies species and habitats of potential concern and different habitat types within a prospective project area that could be impacted by project

development. The Tier Two phase often corresponds to the initiation of informal consultation with the USFWS about the proposed project. In Tier Three, biological field studies are initiated and reviewed with USFWS and site-specific data is used to understand potential risks of impacts to sensitive species. These first three tiers of the WEGs cover the development and construction of a project. The subsequent tiers involve post-construction studies to understand potential and actual impacts of a project to be incorporated into project operations.

8 Q. HOW DO THE WEGS AFFECT THE WAY PATTERN DEVELOPMENT 9 APPROACHES ENVIRONMENTAL ISSUES IN PROJECT DEVELOPMENT?

- 10 A. The WEGs' step-wise approach forms the basis of how we address environmental issues
 11 in renewable energy development, construction, and operations. Our Statement of
 12 Environmental Values, also structured around an iterative process, provides a natural
 13 complement to the WEGs and allows us to apply our own internal standards in addition to
 14 the industry-wide standards delineated in the WEGs.
- 15 Q. WHY ARE THE WEGS IMPORTANT TO UNDERSTANDING THE
 16 ENVIRONMENTAL IMPACTS OF TRANSMISSION LINES SPECIFICALLY?
 - A. The WEGs are important to the Updated Corona Gen-Tie System insofar as our implementation of this environmental review process in our projects includes equally the siting, designing, and operating of project-specific transmission "gen-tie" lines and wind turbines. Pattern Development has also migrated the lessons and methods learned through successfully implementing the WEGs in wind project development directly into our approach to developing of renewable generation and transmission projects.

1 Q. PLEASE EXPLAIN IN MORE DETAIL THE APLIC GUIDELINES?

- 2 A. The APLIC guidelines on electrocution and collision are voluntary guidance documents
- 3 that are the result of industry, non-profits, and government agencies, such as USFWS,
- 4 working together to create standardized processes for analyzing and minimizing risk of
- 5 avian mortality as a result of collision with or electrocution by operating powerlines. These
- 6 guidelines provide a stepwise methodology to assessing and minimizing impacts to birds
- 7 from powerlines and are not associated with wind energy development per se.
- 8 Q. ARE THE APLIC COLLISION AND ELECTROCUTION GUIDELINES
- 9 RELEVANT TO THE CORONA GEN-TIE SYSTEM?
- 10 A. The APLIC electrocution guidelines are not material to the Extended Corona Gen-Tie
- System. This is because the Extended Corona Gen-Tie System consists entirely of 345-kV
- transmission lines which, because of the design and larger dimensions of 345-kV lines, do
- not pose a material risk of electrocution.
- 14 O. WHY DID THE CORONA WIND COMPANIES DECIDE TO IMPLEMENT THE
- 15 APLIC GUIDELINES?
- 16 A. The Corona Wind Companies have elected to implement the APLIC guidelines because
- these guidelines have long served as an effective tool developed with diverse stakeholder
- input for addressing potential impacts from powerlines to avian species.
- 19 Q. HOW DO THE APLIC GUIDELINES AFFECT POWERLINE SITING DECISIONS
- 20 **BY PATTERN DEVELOPMENT?**
- 21 A. The APLIC collision guidelines, Reducing Avian Collision with Power Lines, are more
- 22 significant in this instance and help direct our siting and risk assessment of project gen-

1	ties. These guidelines help identify areas where the risk of avian collision is more or less
2	likely.

Following the APLIC guidelines resulted in the development of an Avian Protection Plan ("APP") that has been produced to assess specifically the risks of avian mortality. An APP is a BMPs document following APLIC and USFWS guidelines to investigate and address powerline impacts to birds. For wind projects following the WEGs, a Bird and Bat Conservation Strategy is instead developed and structured around the tiered approach of the WEGs and additionally augmented by reference to the APLIC guidelines. However, for the benefit of the Commission, a separate APP was completed regarding the Corona Gen-Tie System ("Corona Wind APP"). The Corona Wind APP is being updated to reflect the changes to the Corona Gen-Tie System embodied in the Reconfigured Corona Gen-Tie System and a supplemental APP has been completed for the Extended Corona Gen-Tie System, which I will discuss in further detail in this testimony and is included here as Exhibit ACC-7.

- B. PATTERN DEVELOPMENT ENVIRONMENTAL VALUES IN
 DEVELOPMENT OF THE CORONA WIND UPDATE AND THE
 UPDATED CORONA GEN-TIE SYSTEM
- Q. PLEASE DESCRIBE HOW PATTERN DEVELOPMENT HAS DEVELOPED AND
 DESIGNED THE CORONA WIND UPDATE AND, SPECIFICALLY, THE UPDATED
 CORONA GEN-TIE SYSTEM WITH RESPECT TO POTENTIAL IMPACTS TO
 THE ENVIRONMENT?
- As discussed earlier, Pattern Development implemented its Statement of Environmental Values. When we began work on the Corona Wind Projects in 2016, we also began an

analysis of the project and engaged Western Ecosystem Technology, Inc. ("WEST") to complete initial site assessments. In December 2016, we completed limited construction work at 30 preliminary turbine locations for the purpose of qualifying the projects for the federal production tax credit ("PTC"). These site assessments included surveys for cultural resources, wetlands and streams, and threatened and endangered species. Tier 1 and Tier 2 studies, per the WEGs, were completed by WEST in early 2017. These studies allowed us to understand not only the existing environment and possible species of concern within the Corona Wind Project Area, but also the likelihood of their presence or absence. Avian use surveys commenced in January 2017 and follows USFWS survey recommendations. These surveys are ongoing, and we have acquired over 2,000 hours of avian use surveys at this point. Raptor stick nest helicopter surveys were completed in the Spring of 2017, 2018, and 2019 and bat acoustic monitoring was also conducted between March and October of 2017.

Additional surveys have been completed and we have consulted with both the USFWS and New Mexico Department of Game and Fish relating to our survey efforts and findings. Since approval of the Corona Wind Projects in NMPRC Case No. 18-00065-UT and, specifically, the Corona Gen-Tie System, the results of the additional survey work that has been completed are consistent with the findings I discussed in my previous testimony. We have also commenced an initial phase of cultural resource surveys that are being used to microsite turbine locations and will be used to microsite the Updated Corona Gen-Tie System as design is finalized.

Q. PLEASE DESCRIBE THE CORONA WIND APP?

- The Corona Wind APP is a project-specific third-party transmission line avian risk 2 A. 3 assessment. The Corona Wind APP has analyzed the risk posed to birds from collision with 4 the Corona Gen-Tie System. The Corona Wind APP utilized three levels of risk to analyze segments of the Corona Gen-Tie System. Category One represents line spans with high 5 habitat quality and/or high anticipated bird use. Category Two represents line spans with 6 moderate habitat quality or high habitat quality and moderate anticipated bird use. Category 7 Three represents line spans with disturbed areas, areas of high level of human influence, 8 with areas of moderate to high anticipated bird use or moderate habitat quality with 9 10 moderate anticipated bird use. The Corona Wind APP did not identify any line spans in Categories One and Two. 11 However, it identified six-line spans totaling less than 2.5 miles in Category Three and an 12 additional span of just over 0.5 miles that did not meet the criteria for Category Three but 13 14 had enough characteristics of Category Three that they were included in the Corona Wind APP after discussion with Pattern Development. The Supplemental Corona Wind APP did 15 not identify any Category One- or Two-line spans but did identify two Category Three 16 spans that totaled 1.3 miles and 0.4 miles. 17
- Q. HOW DOES PATTERN DEVELOPMENT PLAN TO IMPLEMENT THE
 CORONA WIND APP INTO THE DESIGN AND OPERATIONS OF THE
 UPDATED CORONA GEN-TIE SYSTEM?
- 21 A. Pattern Development has elected on a strictly voluntary basis to mark with bird diverters
 22 all Category Three-line spans as well as the Two-line spans identified as close to but not
 23 Category Three. This decision is based entirely on company practice and does not represent

a determination that the Corona Gen-Tie System poses a significant risk to migratory birds in the absence of a decision to mark these areas with bird diverters.

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With respect to the Extended Corona Gen-Tie System and the Supplemental Corona Wind APP, Pattern has elected to mark a span of at least 4 miles with bird diverters that includes both of the two Category Three line spans I discussed above. We will also update the entire Corona Wind APP subsequent to finalizing the precise design of the Updated Corona Gen-Tie System to fine tune the deployment of bird diverters and will meet or exceed any recommendations for marking in a similar fashion to how we have responded to the previous findings.

- **PLEASE** THE **GOVERNMENT CONSULTATION** ON 10 Ο. **SUMMARIZE ISSUES** HAVE **COMPLETED** IN 11 **ENVIRONMENTAL THAT** YOU FURTHERANCE OF THE UPDATED CORONA GEN-TIE SYSTEM. 12
- 13 A. We have consulted extensively with the relevant government entities to apprise them of the
 14 environmental impacts of the Extended Corona Gen-tie System to obtain their input on
 15 how best to minimize our modest impacts. Please refer to Exhibit ACC-8 for a table of
 16 federal and state agencies with whom Pattern Development has consulted to date.
 17 Consultation has been fruitful and positive and will be ongoing throughout the
 18 development of the Extended Corona Gen-Tie System and the Corona Wind Projects.
- 19 Q. DID ANY OF THE STATE AND FEDERAL AGENCIES WITH WHOM PATTERN
 20 DEVELOPMENT HAS CONSULTED RAISE CONCERNS OR PROVIDE
 21 RECOMMENDATIONS WITH RESPECT TO THE UPDATED CORONA GEN22 TIE SYSTEM?

A. No. The Corona Wind Projects are not expected to have environmental impacts, and the potential environmental impacts of the Extended Corona Gen-Tie System, as I will discuss subsequently, are expected to be *de minimus*. Additionally, it is my belief that the siting practices and BMPs of Pattern Development, adopted by the Corona Wind Companies, which were also discussed with agencies, provide further indication that the Extended Corona Gen-Tie System potential impacts are unlikely to raise concerns.

7 IV. REQUESTED COMMISSION APPROVALS

- 8 Q. WHAT COMMISSION APPROVALS ARE THE JOINT APPLICANTS
- 9 **REQUESTING?**
- 10 A. The Corona Wind Companies request that the Commission approve the location of the 11 Corona Wind Update and the location of the Updated Corona Gen-Tie System pursuant to 12 NMSA 1978, §62-9-3, ("Siting Statute") and Commission Rule 17.9.592 NMAC, ("Location Rule"). In addition, the Corona Wind Companies request that the Commission 13 determine that a 180-foot ROW width for the entire Updated Corona Gen-Tie System is 14 needed pursuant to NMSA 1978, §62-9-3.2. We already have approval for the 180-foot 15 ROW for the portions of the Corona Gen-Tie System reviewed in NMPRC Case No. 18-16 17 00065-UT.

18 A. <u>SITING STATUTE, NMSA 1978, §62-9-3</u>

- 19 Q. WHY DOES THE CORONA WIND UPDATE REQUIRE LOCATION
- 20 APPROVAL?
- 21 A. My understanding is that New Mexico's Siting Statute, specifically NMSA 1978, §62-9-
- 22 3(B) requires prior approval by the Commission for construction within New Mexico of
- 23 any generating plant designed for or capable of operation at a capacity of 300 MW or more

- and for transmission lines and associated facilities designed for or capable of operations at a nominal voltage of 230-kV or more to be constructed in connection with said plant.
- The Commission's location approval is required because the Corona Wind Projects
- 4 generation facilities are collectively designed for or capable of operating up to 2300 MW
- of wind generation. Although our wind turbines will be spread over a relatively large area,
- 6 the Joint Applicants are not attempting to characterize these as numerous smaller projects,
- 7 but have treated this as a single large, generating facility.
- 8 The Commission's approval is also required for the Updated Corona Gen-Tie System since
- 9 it will be designed for or capable of being operated at a nominal voltage of 345-kV and
- will be constructed in connection with, and to transmit electricity from, the Corona Wind
- Update to both the Western Spirits Transmission Line and the SunZia Project.
- 12 Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF THE NEED TO COMPLY
- 13 WITH STATE, COUNTY OR MUNICIPAL LAND USE.
- 14 A. I understand that NMSA 1978, §62-9-3(G) prohibits the Commission from approving a
- location control application that violates an existing state, county or municipal land use
- statutory or administrative regulation unless the Commission finds the regulation is
- 17 unreasonably restrictive.
 - 1. THE CORONA WIND PROJECTS
- 19 Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF THE STATUTORY
- 20 REQUIREMENTS FOR LOCATION APPROVAL FOR THE CORONA WIND
- 21 UPDATE.

A. My understanding is that NMSA 1978, §62-9-3(E) of the Siting Statute requires the

Commission to approve an application for location of a generating plant unless the

Commission finds that the operation of the facilities will not comply with all applicable air

and water pollution control standards existing and established by the New Mexico agency

having jurisdiction over a particular pollution source. I understand that the New Mexico

Environment Department has jurisdiction over air and water pollution.

Q. DOES THE CORONA WIND UPDATE COMPLY WITH THE REQUIREMENTS OF THE SITING STATUTE?

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Yes, the Joint Application and supporting testimony and exhibits demonstrate that the Corona Wind Projects comply with these requirements. As the Corona Wind Companies' other witnesses and I explain in our testimonies, the Corona Wind Update will comply with all applicable air and water pollution control standards. Moreover, the existing state, county, and municipal land use statutory and administrative regulations allow for the installation of the Corona Wind Update.

2. THE CORONA GEN-TIE SYSTEM

16 Q. WHY DOES THE UPDATED CORONA GEN-TIE SYSTEM REQUIRE 17 LOCATION APPROVAL?

My understanding is that New Mexico's Siting Statute, specifically NMSA 1978, §62-9-3(B) requires prior approval by the Commission for construction within New Mexico of any generating plant designed for or capable of operation at a capacity of 300 MW or more and for transmission lines and associated facilities designed for or capable of operations at a nominal voltage of 230-kV or more to be constructed in connection with said plant.

1		The Commission's approval is required for the Extended Corona Gen-Tie System since it
2		will be designed for or capable of being operated at a nominal voltage of 345-kV and will
3		be constructed in connection with, and to transmit electricity from, the Corona Wind
4		Projects. The Commission's approval of the locations of the Reconfigured Corona Gen-
5		Tie System outside of the original one-mile corridor presented in Case No. 18-00065 is
6		also necessary since these locations were not considered in that proceeding.
7	Q.	PLEASE EXPLAIN YOUR UNDERSTANDING OF THE STATUTORY
8		REQUIREMENTS FOR LOCATION APPROVAL FOR THE UPDATED CORONA
9		GEN-TIE SYSTEM.
10	A.	My understanding is that NMSA 1978, §62-9-3(F) of the Siting Statute requires the
11		Commission to approve an application for location of transmission lines unless it finds that
12		the location will unduly impair important environmental values. In making that
13		determination, NMSA 1978, §62-9-3(M) of the Siting Statute allows the Commission to
14		consider the following factors:
15		(1) existing plans of the state, local government, and private entities for other
16		developments at or in the vicinity of the proposed location;
17		(2) fish, wildlife, and plant life;
18		(3) noise emission levels and interference with communication signals;
19		(4) the proposed availability of the location to the public for recreational purposes,
20		consistent with safety considerations and regulations;
21		(5) existing scenic areas, historic, cultural or religious sites and structures or
22		archaeological sites at or in the vicinity of the proposed location; and,

1		(6) additional factors that require consideration under applicable federal and state
2		laws pertaining to the location.
3	Q.	DOES THE UPDATED CORONA GEN-TIE SYSTEM COMPLY WITH THE
4		REQUIREMENTS OF THE SITING STATUTE?
5	A.	Yes, the Joint Application and supporting testimony and exhibits demonstrate that the
6		Updated Corona Gen-Tie System complies with these requirements. As the Corona Wind
7		Companies' other witnesses and I explain in our testimonies, the existing state, county, and
8		municipal land use statutory and administrative regulations allow for the installation of the
9		Updated Corona Gen-Tie System and this system will not unduly impair important
10		environmental values.
11		B. LOCATION RULE, 17.9.592 NMAC
12		1. THE CORONA WIND UPDATE
13	Q.	WHAT IS YOUR UNDERSTANDING OF THE REQUIREMENTS OF THE
14		COMMISSION'S LOCATION RULE, 17.9.592 NMAC, REGARDING
15		APPLICATIONS FOR LOCATION OF GENERATION PLANTS?
16	A.	Under the Location Rule, 17.9.592.9 NMAC for generating facilities ("Generation
17		Location Rule") an applicant must file an application supported by written testimony and
18		exhibits that contain the following information for generating plants for which location
19		approval is required:
20		A. a description of the large capacity plant, including, but not limited to:
21		(1) a legal description of the property upon which the large capacity plant
22		will be located;

1		(2) the size of the large capacity plant;
2		(3) fuel specifications including, but not limited to, the type of fuel to be
3		used; and,
4		(4) a map showing the location of the large capacity plant;
5		B. identification of all applicable land use statutes and administrative regulations
6		and proof of compliance or a statement of noncompliance with each;
7		C. identification of all applicable air and water pollution control standards and
8		regulations and proof of compliance or a statement of noncompliance with each;
9		D. all written air and water quality authorizations necessary to begin construction
10		of the large capacity plant;
11		E. all written air and water quality authorizations necessary to begin operation of
12		the large capacity plant; if any such authorization cannot be obtained until after
13		construction of the large capacity plant, proof of application for such
14		authorization;
15		F. the expected date that the large capacity plant will be online;
16		G. proof that the application has been served on all local authorities in each county
17		and township where the large capacity plant will be located, the New Mexico
18		attorney general, the New Mexico environment department, and the New
19		Mexico state engineer;
20		H. any other information, including photographs, which the applicant wishes to
21		submit in support of the application.
22	Q.	DOES THE CORONA WIND UPDATE COMPLY WITH THE REQUIREMENTS
23		OF THE GENERATION LOCATION RULE?

1	A.	Yes, the Joint Application, the previous testimony filed in NMPRC Case No. 18-00065-
2		UT and the supporting testimony and exhibits we are submitting with this new Joint
3		Application demonstrate that the Corona Wind Update comply with the requirements under
4		the Generation Location Rule. In this regard our analysis reached the same conclusion as
5		was presented in Case No. 18-00065-UT.

2. THE UPDATED CORONA GEN-TIE SYSTEM

- Q. WHAT IS YOUR UNDERSTANDING OF THE REQUIREMENTS OF THE
 COMMISSION'S LOCATION RULE, 17.9.592 NMAC, REGARDING APPLICATIONS
 FOR LOCATION OF TRANSMISSION LINES?
- 10 **A.** Under the Location Rule, Rule 17.9.592.10 NMAC for transmission lines ("Transmission Location Rule") an applicant must file an application supported by written testimony and exhibits that contain the following information for transmission lines for which location approval is required:
- A. a description of the transmission line including, but not limited to:
- 15 (1) the location of the transmission line;

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- (2) identification of the ownership of the land (such as private, bureau of land management, U.S. forest service, state trust, etc.) the transmission line will cross and the number of feet the transmission line will cross over each owner's land;
 - (3) the total length of each transmission line in feet;
- 21 (4) a description of interconnection facilities;
 - (5) a map showing the location of the transmission line; and

1		(6) a schematic diagram showing the transmission line and the interconnection of
2		the transmission line to the transmission grid;
3	В.	identification of all applicable land use statutes and administrative regulations and
4		proof of compliance or statement of noncompliance with each;
5	C.	if required under NEPA, an environmental assessment prepared in connection with the
6		transmission line;
7	D.	if required under NEPA, an environmental impact statement and record of decision or
8		a finding of no significant impact, prepared in connection with the transmission line;
9	E.	if preparation of a federal environmental assessment or environmental impact statement
10		is not required under NEPA in connection with the transmission line, then a report,
11		comparable to an environmental impact statement, in the format prescribed in 40 C.F.R.
12		Section 1502.10;
13	F.	all written federal, state, and local environmental authorizations necessary to begin
14		construction of the transmission line;
15	G.	all written federal, state, and local environmental authorizations necessary to begin
16		operation of the transmission line; if any such authorization cannot be obtained until
17		after construction of the transmission line, proof of application for such authorization;
18	Н.	testimony demonstrating that the transmission line will not unduly impair important
19		environmental values; important environmental values include, but are not limited to,
20		preservation of air and water quality, land uses, soils, flora and fauna, and water,
21		mineral, socioeconomic, cultural, historic, religious, visual, geologic and geographic
22		resources;

I. the expected date that the transmission line will be online;

- J. proof that the application has been served on all local authorities in each county and township where the transmission line will be located, the New Mexico attorney general, the New Mexico environment department, and the New Mexico state engineer;
- 4 K. any other information, including photographs, which the applicant wishes to submit in support of the application.

6 Q. DOES THE UPDATED CORONA GEN-TIE SYSTEM COMPLY WITH THE 7 REQUIREMENTS OF THE TRANSMISSION LOCATION RULE?

8 A. Yes, the Joint Application and supporting testimony and exhibits demonstrate that the
9 Updated Corona Gen-Tie System complies with the requirements under the Transmission
10 Location Rule.

11 C. RIGHT-OF-WAY STATUTE, NMSA 1978, §62-9-3.2

12 Q. WHAT IS YOUR UNDERSTANDING OF THE REQUIREMENT FOR ROW

13 WIDTH APPROVAL?

14 A. My understanding is that NMSA 1978, §62-9-3.2 ("ROW Statute") provides that "unless otherwise agreed to by the parties, no person shall begin the construction of any transmission line requiring a width for right of way of greater than one hundred feet without first obtaining from the commission a determination of the necessary right-of-way width to construct and maintain the transmission line."

Q. DO YOU BELIEVE THAT THE UPDATED CORONA GEN-TIE SYSTEM SHOULD HAVE A 180-FOOT ROW?

21 A. Yes, based upon the results of the analysis from Greg Parent, who is submitting testimony on this 22 issue in this proceeding, I believe that a 180-foot ROW is necessary for the Updated Corona Gen-23 Tie System.

l	V.	COMPLIANCE WITH NEW MEXICO'S STATUTES AND REGULATIONS.
2		A THE CORONA WIND COMPANIES WILL REQUIRE THE
3		CORONA WIND UPDATE TO COMPLY WITH ALL APPLICABLE
4		AIR AND WATER POLLUTION CONTROL STANDARDS
5	Q.	PLEASE CHARACTERIZE THE CORONA WIND UPDATE'S EXPECTED
6		IMPACTS ON AIR QUALITY.
7	A.	The Corona Wind Companies will comply with all applicable air quality laws and
8		regulations. This is further discussed in the Corona Environmental Report.
9	Q.	PLEASE CHARACTERIZE THE UPDATED CORONA WIND PROJECT'S
10		EXPECTED IMPACTS ON WATER RESOURCES?
11	A.	The Corona Wind Companies will comply with all applicable water quality and water
12		resource laws and regulations and will not unduly impair water quality and water resources.
13		This is further discussed in the Corona Environmental Report.
14		B. THE CORONA WIND COMPANIES WILL ASSURE THAT THE
15		UPDATED CORONA GEN-TIE SYSTEM DOES NOT UNDULY IMPAIR
16		IMPORTANT ENVIRONMENTAL VALUES
17	Q.	HAVE THE CORONA WIND COMPANIES EVALUATED THE UPDATED
18		CORONA GEN-TIE SYSTEM'S POTENTIAL IMPACTS ON THE FACTORS THE
19		COMMISSION MAY CONSIDER IN DETERMINING WHETHER LOCATION
20		OF A TRANSMISSION LINE WILL UNDULY IMPAIR IMPORTANT
21		ENVIRONMENTAL VALUES?

A. Yes. The Corona Wind Companies have reviewed the factors provided in NMSA 1978, §62-9-3(M), Commission Rule 17.9.592.10 NMAC, and additional factors, including existing plans for development of the proposed location; fish, wildlife, and plant life; noise levels; interference with communication signals; availability for recreational purposes; scenic, historic, cultural or religious sites and structures or archeological sites; cemeteries and burials; schools; aviation; soils; minerals and mining; geologic and paleontological resources; roads; and geographic resources. The Corona Wind Companies considered these factors with respect to the Updated Corona Gen-Tie System. The Environmental Report provides further information on each of these resource areas. The protection measures included in the Environmental Report ("Protection Measures") provide detailed measures for resource impact avoidance and minimization that provide further evidence of the minimal impacts expected from the Updated Corona Gen-Tie System.

13 O. PLEASE SUMMARIZE YOUR FINDINGS WITH RESPECT TO AIR QUALITY.

- 14 A. The Corona Wind Update and the Updated Corona Gen-Tie System will not unduly impair 15 air quality and the Corona Wind Companies will comply with all applicable air quality 16 laws and regulations. This is further discussed in the Corona Environmental Report.
- 17 Q. PLEASE SUMMARIZE YOUR FINDINGS WITH RESPECT TO WATER
 18 QUALITY AND WATER RESOURCES.
- 19 A. The Corona Wind Companies will comply with all applicable water quality and water
 20 resource laws and regulations and will not unduly impair water quality and water resources.
 21 This is further discussed in the Environmental Report. The impacts to surface waters,
 22 whether waters of the US or not, will be avoided to the maximum extent practicable.

Q. PLEASE SUMMARIZE YOUR FINDINGS WITH RESPECT TO LAND USES.

- A. Existing land uses within the Updated Corona Gen-Tie System consist primarily of ranching activities on both private and state land. The Updated Corona Gen-Tie System is compatible with ranching activities. Revenue generated can be reasonably expected to be reinvested, to some extent, back into ranching activities, thus augmenting existing uses.
- Q. PLEASE SUMMARIZE YOUR EFFORTS TO AVOID AND MINIMIZE IMPACTS
 WITH RESPECT TO FLORA AND FAUNA AT THE UPDATED CORONA GEN TIE SYSTEM.
- A. Pattern Development has worked extensively to limit impacts to flora and fauna. Our overall efforts have been described in the Environmental Report. The Updated Corona Gen-Tie System will not unduly impair flora and fauna.
- 11 Q. PLEASE SUMMARIZE YOUR FINDINGS WITH RESPECT TO NOISE
 12 IMPACTS.
- 13 A. The Updated Corona Gen-Tie System is not expected to contribute in a meaningful way to
 14 the noise levels of the existing environment. As discussed in the Environmental Report,
 15 the Updated Corona Gen-Tie System will not unduly impair noise quality.
- 16 Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM INTERFERE WITH
 17 COMMUNICATION SIGNALS?
- A. The Updated Corona Gen-Tie System is not expected to interfere with communication signals. As discussed in the Environmental Report, the Updated Corona Gen-Tie System will not unduly impair communication signals.
- Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM IMPACT RECREATIONAL
 USES?

- 1 A. No. Most of the Updated Corona Gen-Tie System is located on private land with 2 participating landowners or public state land. Hunting is the primary recreational use in the
- area and the Updated Gen-Tie System is compatible with this activity. As discussed in the
- 4 Environmental Report, the Updated Corona Gen-Tie System will not unduly impair
- 5 recreational uses in the area.

6 Q. WHAT VISUAL IMPACT WILL THE UPDATED CORONA GEN-TIE SYSTEM

7 HAVE?

- 8 A. Visual impacts will consist of the additional transmission structures. As discussed in the
- 9 Environmental Report, the Updated Corona Gen-Tie System will not unduly impair visual
- uses in the area.

11 Q. WHAT IMPACT WILL THE UPDATED CORONA GEN-TIE SYSTEM HAVE ON

12 HISTORIC AND ARCHEOLOGICAL RESOURCES?

- 13 A. As previously described, Pattern Development takes extensive precautions to minimize any
- impacts to cultural resources such as historical and archaeological resources. This is the
- result of company BMPs. Any impacts on historic and archaeological resources will be
- minimized through siting decisions and will not unduly impair these resources.

17 Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM IMPACT CEMETERIES OR

18 BURIALS?

- 19 A. No. The Updated Corona Gen-Tie System will avoid cemeteries and burials and will not
- 20 unduly impair these resources.

21 Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM IMPACT ANY SCHOOLS?

- A. No. The Updated Corona Gen-Tie System will avoid schools. Thus, these resources will not be unduly impaired. Further, the Updated Corona Gen-Tie System is expected to be participating infrastructure in Industrial Revenue Bonds to be issued through local municipalities and counties resulting in payments-in-lieu of taxes that are likely to provide
- Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM IMPACT RELIGIOUS
 RESOURCES?

long-term revenue to schools in the area.

- 8 A. No. The Updated Corona Gen-Tie System will avoid religious resources and will not unduly impair these resources.
- 10 Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM ADVERSELY AFFECT

 11 GEOLOGIC OR PALEONTOLOGICAL RESOURCES?
- 12 A. As discussed in the Environmental Report, the Updated Corona Gen-Tie System will not 13 unduly impair geologic or paleontological resources.
- Q. WILL THE UPDATED CORONA GEN-TIE SYSTEM ADVERSELY AFFECT
 ROADS?
- A. As part of the development of the Updated Corona Gen-Tie System county road use agreements will be entered with individual counties to ensure that all roads used will be repaired to a state that meets or exceeds the conditions prior to construction.
- 19 Q. HAVE THE CORONA WIND COMPANIES IDENTIFIED PROTECTION
 20 MEASURES TO AVOID AND MANAGE IMPACTS OF THE RESOURCES YOU
 21 HAVE DISCUSSED?

- A. Yes. As discussed previously, Protection Measures will be implemented throughout the life of the Updated Corona Gen-Tie System. These Protection Measures are included in the Environmental Report and mirror those adopted by the Commission in NMPRC Case No. 18-00065-UT. Additionally, on a related note, I would add that now that Pattern has acquired the rights to the Mesa Canyons Project we will voluntarily apply these same Protection Measures to the areas covered by that project, though this is not a requirement of any Commission order.
- 8 Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.
- 9 A. The Updated Corona Gen-Tie System has been developed and will be constructed and operated with the implementation of a robust set of BMPs, scientific studies, and Protection 11 Measures. Further, in light of the robust practices set out above, the Updated Corona Gen-Tie System will stand out as a model of responsible development and most certainly will 13 not unduly impair important environmental values.
- 14 C. <u>LAND USE, LAND OWNERSHIP, AND COMPLIANCE WITH LAND USE</u>
 15 <u>STATUTES AND ADMINISTRATIVE REGULATIONS</u>
- Q. PLEASE DESCRIBE THE EXISTING LAND OWNERSHIP AND LAND USE ON
 THE UPDATED CORONA WIND PROJECT AREA.
- 18 A. The lands used in the Updated Corona Wind Project Area are privately held or owned by
 19 the State of New Mexico. Ranching is the predominant use of these lands. However, there
 20 is also some farming.
- Q. WILL THESE USES CONTINUE FOLLOWING CONSTRUCTION OF THE
 UPDATED CORONA GEN-TIE SYSTEM?

- Yes. Ranching and farming activities will continue since the land needed for both projects take up very little footprint. Also, the real estate leases with both the private landowners and the State of New Mexico do not restrict the owners from continuing ranching or
- 5 Q. IN SUMMARY, WILL THE UPDATED CORONA GEN-TIE SYSTEM VIOLATE
- 6 ANY EXISTING STATE, COUNTY, OR MUNICIPAL LAND USE STATUTORY
- 7 OR ADMINISTRATIVE REGULATION?

farming activities.

- 8 A. No. The Corona Wind Companies will require contractors to comply with all state, county,
 9 or municipal land use statutory or administrative regulations.
- 10 D. COMPLIANCE WITH THE LOCATION RULE
- 11 1. THE CORONA WIND UPDATE
- 12 Q. DOES THE JOINT APPLICATION COMPLY WITH THE COMMISSION'S
- 13 GENERATION LOCATION RULE?
- 14 A. Yes, as follows:

- 15 A. We have provided a description of the proposed generating plants, their size, and
- the fact that they are wind generating facilities. A legal description of the property and a
- map showing the location of the Corona Wind Projects Area is provided in Exhibits ACC-
- 9 and Exhibit ACC-3, respectively.
- B. My testimony explains Pattern Development's compliance with all applicable land
- 20 use statutes and administrative regulations.
- 21 C. My testimony identifies all applicable air and water pollution control standards and
- regulations that apply to the Corona Wind Projects.

1	D. My testimony identifies all written air and water quality authorizations necessary
2	to begin operation of the Corona Wind Projects, which are all construction phase permits
3	typically issued shortly before construction. The Corona Wind Companies will provide
4	notification of receipt of these permits as they are obtained.

- E. I have further stated that there are no air or water quality authorizations necessary for operation of the Corona Wind Projects.
- I have also testified that at least a portion of the Corona Wind Update and the 7 F. Updated Corona Gen-Tie System is expected to be in service by the end of 2021 with the 8 9 entirety to be in-service by the end of 2024.
 - Finally, the attached Certificate of Service demonstrates the Joint Application has G. been served on all local authorities in Lincoln, Torrance and Guadalupe Counties in New Mexico, the New Mexico Attorney General, the New Mexico Environment Department, and the New Mexico Office of the State Engineer
 - The Joint Application provides additional information to inform the Commission's H. decision-making on the Corona Wind Companies' request for location approval of the Corona Wind Update.

2. THE UPDATED CORONA GEN-TIE SYSTEM

- DOES THE JOINT APPLICATION COMPLY WITH THE COMMISSION'S 18 O. 19 TRANSMISSION LOCATION RULE?
- 20 A. Yes, as follows:

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21 A. We have provided a description of the Updated Corona Gen-Tie System, including its 22 location, private and state land ownership, estimated number of feet the Extended Gen-Tie System will cross over private and state land, a total length of the line, a description of 23

- interconnection facilities, a location map, and representational schematic diagrams of the interconnection of the line.
- B. My testimony identifies all applicable land use statutes and administrative regulations and provides that the Corona Wind Companies comply with each.
- C. Because the Updated Corona Gen-Tie System does not require compliance with NEPA, an
 environmental assessment was not prepared.
- D. The Environmental Report was prepared for the Corona Wind Companies in the format prescribed by 40 C.F.R. §1502.10.
- E. As explained in my testimony, there are no zoning regulations in Guadalupe County.

 Lastly, and an amendment to the previously approved SUD will be obtained from Torrance

 County.
- F. As explained in the Environmental Report and as summarized in my testimony, the
 Updated Corona Gen-Tie System will not unduly impair important environmental values,
 including resources associated with air and water quality, flora and fauna, water, land uses,
 visual and scenic, cultural, historic, and archaeological, religious, geological and
 paleontological, soils, mineral, socioeconomic, roads, noise, and communication.
- G. My testimony states that assuming the Corona Wind Projects interconnect to Western Spirit at least a portion of the Corona Wind Update and Updated Corona Gen-Tie System is expected to be in service by the end of 2021 with the entirety to be in-service by the end of 2024.
- H. The attached Certificate of Service demonstrates the Joint Application has been served on all local authorities in Lincoln, Torrance and Guadalupe Counties in New Mexico, the New

- 1 Mexico Attorney General, the New Mexico Environment Department, and the New
- 2 Mexico Office of the State Engineer.
- 3 I. The Joint Application provides additional information to facilitate the Commission's
- 4 decision-making on the Corona Wind Companies' request for location approval of the
- 5 Updated Corona Gen-Tie System.

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D. COMPLIANCE WITH THE ROW STATUTE

7 Q. DO THE CORONA WIND PROJECTS COMPLY WITH THE ROW STATUTE IN

8 THE EVENT THE COMMISSION'S DETERMINATION IS REQUIRED?

- 9 A. Yes. The ROW Statute, requires that, unless all parties agree otherwise, the Commission
- determines whether a proposed ROW width in excess of 100 feet is necessary. As I noted
- previously, the Corona Wind Companies will locate the Corona Gen-Tie System on private
- land subject to agreements with landowners or on state lands subject to leases with the
- State of New Mexico. Further, this Joint Application and other witnesses' testimonies
- demonstrate that the proposed 180-foot ROW width is necessary for the safe construction,
- operation, and maintenance of the Corona Gen-Tie System.

16 VI. CONCLUSION

17 Q. PLEASE SUMMARIZE YOUR CONCLUSION.

- 18 A. The Joint Applicants provided a comprehensive environmental impact analysis for the
- initial proposed Corona Wind Project and Corona Gen-Tie System. The Commission
- approved that filing. Subsequently, a decision was made to modify the proposed route for
- the Corona Gen-Tie System and to extend the Corona Gen-Tie System. Additionally, the
- 22 Joint Applicants are expanding the potential area for locating wind turbines beyond that
- 23 which was previously approved in the last proceeding. We have performed a

- comprehensive environmental analysis of the new areas being added to the Corona Wind
- 2 Projects and the Corona Gen-Tie System and demonstrated that these additions will still be
- 3 compliant with all statutes, regulations and orders of the Commission.