

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**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)**

Case No. 18-_____

**ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, VIENTO LOCO LLC,)**

JOINT APPLICANTS.)

DIRECT TESTIMONY AND EXHIBITS

OF

JOHN C. TYSSELING, PH.D.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF CORONA WIND
COMPANIES' JOINT APPLICATION FOR THE
LOCATION OF THE CORONA WIND
PROJECTS AND THE CORONA GEN-TIE
SYSTEM PURSUANT TO THE PUBLIC
UTILITY ACT, NMSA 1978 §62-9-3**

Case No. 18-00065UT

**ANCHO WIND LLC, COWBOY MESA LLC,
DURAN MESA LLC, RED CLOUD WIND LLC,
TECOLOTE WIND LLC, VIENTO LOCO LLC,

JOINT APPLICANTS**

DIRECT TESTIMONY AND EXHIBITS

OF

JOHN C. TYSELING, PH.D.

On Behalf of

The Corona Wind Companies



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1 **Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

2 **A.** My name is John C. Tysseling, Ph.D. I am a Consulting Director with Moss Adams, LLP
3 ("Moss Adams"). My business address is Two Park Center, 6565 Americas Parkway NE,
4 Suite 600, Albuquerque, New Mexico, 87110.

5 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL**
6 **EXPERIENCE.**

7 **A.** My training and experience as an applied economist provides the professional
8 qualifications to offer the analyses and opinions expressed herein. I am trained in
9 regional economic analysis methods, and have conducted numerous wide-ranging
10 economic and fiscal impact analyses throughout my more than three decades of
11 professional experience. I have testified extensively on utility policy matters — relating
12 to wholesale and retail rates, rate design, resource planning, energy facility siting and
13 public benefit assessments — in both state and federal jurisdictions. A substantial focus
14 of my professional career has been analyses of energy market issues, including numerous
15 professional engagements where I have been qualified as an expert witness by state and
16 federal courts and regulatory authorities related to economic transactions common to
17 energy utility services. See Exhibit JCT-1 for a complete list testimony and statement of
18 professional qualifications.

19 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS DOCKET?**

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1 A. I am testifying on behalf of Ancho Wind LLC, Cowboy Mesa LLC, Duran Mesa LLC,
2 Red Cloud Wind LLC, Tecolote Wind LLC, and Viento Loco LLC (collectively the
3 “Joint Applicants” or “Corona Wind Companies”).¹

4 Q. **HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

5 A. Yes. See CWC Exhibit JCT-1 for a complete list.

6 Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

7 A. I will present testimony that discusses the economic and fiscal impacts that can be
8 anticipated from the development of the projects proposed in this Application by Ancho
9 Wind LLC, Cowboy Mesa LLC, Duran Mesa LLC, Tecolote Wind LLC, and Viento
10 Loco LLC (collectively “Corona Wind Projects” or “Projects”) which have been
11 analyzed by Moss Adams in our report on the *Economic and Fiscal Impacts of the*
12 *Corona Wind Projects* (“Corona Wind Economic Report” or “Report”) See CWC Exhibit
13 JCT-2. Because the Corona Wind Projects are an integrated complex of wind generation
14 and transmission development project activities in Guadalupe, Lincoln, and Torrance
15 Counties, New Mexico — as well as the related development of the SunZia Southwest
16 Transmission Project (“SunZia Transmission Project”)² — I will also offer observations
17 as to the larger economic and fiscal impacts on the regional economy. However, the
18 testimony will focus only on impacts anticipated from the development of the Corona
19 Wind Projects in the three-county siting area (“Study Area”) for the wind generation and

¹ I have been retained by Pattern Renewables Development Company 2 LLC (“Pattern Development”), who is participating in the development of the six individual projects collectively identified as the Corona Wind Projects.

² SunZia Transmission, LLC. See Federal Energy Regulatory Commission. “Order Authorizing Negotiated Rate Proposal and Accepting Anchor Customer Open solicitation and Selection Report,” Docket No. ER17-388-000 (September 20, 2017), for details of the interstate transmission project that will connect the Corona Wind Projects to its customers.



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1 required transmission system (the “Corona Wind Gen-Tie System”), as these are the
2 impacts which are germane to the Application pending before the Commission in this
3 proceeding.

4 The analysis presented here will only *generally* address the broad “downstream”
5 economic and fiscal impacts associated with the Corona Wind Projects’ development,
6 interconnection and service to the interstate electric transmission grid — that is, the
7 “synergistic” impacts of the Corona Wind Projects’ development with respect to other
8 renewable energy projects or infrastructure.

9 My analysis, and the testimony I present here, addresses the specific economic and fiscal
10 impacts of the Corona Wind Projects up to the point of interconnection with the SunZia
11 Transmission Project.

12 **Q. PLEASE DESCRIBE THE ANALYTIC FOUNDATIONS FOR YOUR OPINIONS**
13 **AND THE SPECIFIC ANALYSIS YOU PERFORMED.**

14 **A.** Regional economic impact analyses have been a component of my professional practice
15 for decades. Any significant regional economic development produces direct impacts in
16 the form of trade, income, employment and tax revenues within the specific communities
17 and regions affected, but also stimulates additional trade, income, employment and tax
18 revenues as the direct spending and employment creates additional economic activities.
19 Where these direct economic effects are the result of new business activities that are
20 external to the existing economic activities within a region, the analysis of these direct,
21 indirect, and induced impacts are the foundation for assessment of the specific economic
22 and fiscal benefits obtained by the economic development activities. This method can be

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1 described as an "export-base" method, because it recognizes only those local
2 expenditures that are supported by out-of-state revenues as having a tangible impact on
3 the state's economy. New Mexico in-state dollars would presumably flow to some other
4 existing activity and yield a similar economic impact if the Corona Wind Projects did not
5 exist.

6 **Q. DOES THE "EXPORT-BASE" METHODOLOGY HAVE A GREATER**
7 **SIGNIFICANCE WITH RESPECT TO THE CORONA WIND PROJECTS'**
8 **DEVELOPMENT IN NEW MEXICO?**

9 **A.** Yes. The Corona Wind Projects will develop a relatively new and under-developed
10 economic resource in the state of New Mexico — wind energy — that will be directly
11 exported from the state. Aside from the technology, innovation and capital investments
12 developed in conjunction with the Corona Wind Projects, this development creates new
13 economic activity, value and opportunity within New Mexico, which will be exported
14 from the state.³ This is a highly valuable attribute of the project, as the Corona Wind
15 Projects will not displace or capture existing commercial activities, but, instead, will
16 create new economic development that is anticipated to continue long-term, far past the
17 study period of the Report. Furthermore, the proposed economic development activities
18 consist of a highly desirable form of economic development in its exportation of
19 environmentally preferred New Mexico energy resources. In short, the Corona Wind

³ The analysis performed by Moss Adams assumes all power generated from the Projects is to be exported out of state. I understand that, while the Corona Wind Projects continue to explore possibilities for delivering some limited portion of the power generated from the Corona Wind Projects to New Mexico off-takers, this potential is speculative at this point and was thus ignored for purposes of the analyses performed.



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1 Projects will create new economic value that is obtained from economic activities that are
2 not currently a part of the New Mexico economy.

3 **Q. ARE THE ECONOMIC BENEFITS OF THE CORONA WIND PROJECTS**
4 **GENERALLY CONSISTENT WITH THE EXPRESSED PRIORITIES OF THE**
5 **STATE OF NEW MEXICO WITH RESPECT TO RENEWABLE ENERGY**
6 **DEVELOPMENT?**

7 **A.** Yes. The Corona Wind Projects embody many robust economic opportunities for the
8 state of New Mexico and its citizens. Development of electric generation facilities
9 comprising the Corona Wind Projects offers New Mexico highly desirable economic
10 development investments. Investments in these wind generation and transmission
11 facilities stimulate substantial growth in the renewable energy sector and foster an
12 economic development climate that broadens the state's long-standing role as a
13 sustainable participant in the energy marketplace. Aside from the technology, innovation,
14 and capital investments developed in conjunction with the Corona Wind Projects, this
15 development creates new economic value and opportunity within New Mexico, the
16 product of which will be exported from the state. This is a highly valuable attribute of the
17 Projects, as the Corona Wind Projects' facilities will not displace or capture existing
18 commercial energy market activities, nor are they dependent upon the very modest
19 energy consumption of New Mexico consumers relative to its energy generation
20 potential. Instead, these investments will create the most desirable form of new economic
21 development in its exportation of environmentally preferred New Mexico energy
22 resources. In summary, the Corona Wind Projects' facilities will create new economic

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1 value that is obtained from economic activities that are expansions of the New Mexico
2 economy.

3 New Mexico has a long-established priority for encouraging exactly the economic
4 development engendered by the Corona Wind Projects; the state has expressly
5 encouraged development of renewable energy.⁴ Further, in 2004 the state of New Mexico
6 also enacted a groundbreaking economic development initiative, prioritizing development
7 of renewable energy resources in conjunction with its recognition of the constraints
8 relating to siting and funding of renewable electric transmission facilities investments. In
9 establishing the New Mexico Renewable Energy Transmission Authority⁵ the state
10 formally established its goal to develop renewable energy for export and recognized the
11 need to expressly facilitate the siting of transmission facilities in the state for service to
12 multi-state customers seeking access to and development of renewable energy resources.
13 The Corona Wind Projects, SunZia Transmission Project, and the additional renewable
14 generation facilities development discussed in this testimony and my Report align
15 directly with the New Mexico State Energy Plan.⁶ In particular, that plan concludes:

16 Inadequate transmission access has long been cited as the primary
17 hindrance to New Mexico renewable energy development, as some of the
18 best wind resources, in particular, are located far away from electricity
19 markets. (p. 12)
20

⁴ See, e.g., Section 7-2A-19 NMSA 1978, Laws 2002, Ch. 59, § 1; 2003, Ch. 419, § 1; 2005, Ch. 104, § 7; 2005, ch.181, § 1; 2007, Ch. 204, § 1.

⁵ Section 62-16A-3 NMSA 1978; Laws 2007, Ch. 3, § 3; 2011, Ch. 51, § 4.

⁶ Energy, Minerals & Natural Resources Department, "Seizing Our Potential – the New Mexico State Energy Plan," State of New Mexico, Santa Fe, New Mexico (2015) ("New Mexico State Energy Plan").



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1 **Q. ARE THERE OTHER ECONOMIC BENEFITS THAT SHOULD BE**
2 **CONSIDERED IN THE CONTEXT OF THE CORONA WIND PROJECTS**
3 **MORE GENERALLY?**

4 **A.** Yes. It should be noted that once operational, the economic benefits and revenue streams
5 will be extremely stable, and certainly not fluctuate as significantly as is common to most
6 energy resource developments found in the state of New Mexico. Unlike fuel-based
7 sources of electricity, the Corona Wind Projects' generation costs are not based on
8 fluctuating commodity fuel prices, a stability that is enhanced by the life-of-financing
9 power purchase agreements that form a basis for the long-term economic foundations
10 supporting the development and operations. This stable foundation of economic activity
11 can be anticipated for at least the thirty-year life of the Projects that provides the basis for
12 the Corona Wind Economic Report and will likely continue beyond that time.
13 Additionally, the Projects establish a new economic infrastructure that will likely foster
14 further developments of a similar nature.

15 **Q. WHAT IS THE ROLE OF THE CORONA WIND PROJECTS IN THE CONTEXT**
16 **OF STATEWIDE ECONOMIC DEVELOPMENT?**

17 **A.** The Corona Wind Projects are the anchor tenant to the proposed expansive capabilities of
18 the SunZia Transmission Project and taken as a whole these renewable energy
19 developments provide significant and expanding statewide economic development
20 benefits. As the anchor tenant to the SunZia Transmission Project, the Corona Wind
21 Projects also create additional development opportunities for renewable generation
22 development, as only a portion of the total SunZia Transmission Project capacity will be

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1 utilized by the Corona Wind Projects' energy generation. The economic and capital
2 investment activities engendered in the development of these new energy resources inure
3 significant economic benefits to the citizens of New Mexico, and significantly fulfill the
4 stated social objectives for these economic development initiatives.

5 These robust economic opportunities include development of electric generation and
6 transmission facilities that offer highly desirable capital investments of \$2.4 billion for
7 the Corona Wind Projects in rural New Mexico, in part spurred by the availability of New
8 Mexico's renewable energy resources. The long-term capital investments have direct,
9 indirect, and induced economic benefits for New Mexico. Moreover, these investments
10 in developing the Corona Wind Projects' generation and transmission facilities will
11 stimulate substantial additional growth in the renewable energy sector and foster an
12 economic development climate that broadens the state's long-standing role as a
13 sustainable participant in the energy marketplace. In short, the wind energy facilities
14 developed will help mitigate the economic losses associated with closure of several of
15 New Mexico's coal-fired generation resources and provide an economic boost to the
16 state's rural economy.

17 **Q. PLEASE DESCRIBE THE RELATIONSHIP AMONG THE SPECIFIC**
18 **COMPONENTS OF THE CORONA WIND PROJECTS.**

19 **A.** The Corona Wind Projects are wind generation projects located in Guadalupe, Torrance,
20 and Lincoln Counties. The specifics of the Projects are more fully discussed in the
21 testimonies of other witnesses presented with this Application. In summary, the Corona
22 Wind Projects are designed to have a nameplate capacity of approximately 2,200

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1 megawatts ("MW") and will nominally occupy approximately 300,000 acres of private
2 and state land. The Corona Wind Projects will increase the total wind generation
3 capacity in New Mexico by more than 100%.⁷ It is also significant that the Corona Wind
4 Projects are expected to be the largest contiguous wind generation facility in North
5 America when built, and one of the largest wind projects in the world. The electric
6 generation facilities will be tied to the interstate transmission grid with development of
7 the Corona Wind Gen-Tie System, and its connection to the western interstate wholesale
8 grid with the construction of the SunZia Transmission Project. The total capital
9 expenditure to develop the Corona Wind Projects is estimated to be \$2.4 billion, and
10 these facilities will create new economic value that is obtained from economic activities
11 that are *expansions of the New Mexico economy*.

12 **Q. WHAT IS YOUR UNDERSTANDING OF THE TIMING OF THESE PROJECTS'**
13 **DEVELOPMENT?**

14 **A.** I understand that the projects will be developed in the next two years, with expected
15 development schedules based on the current deadline of December 31, 2020.

16 **Q. PLEASE SUMMARIZE YOUR FINDINGS WITH RESPECT TO THE**
17 **ECONOMIC AND FISCAL IMPACTS ASSOCIATED WITH THE CORONA**
18 **WIND PROJECTS.**

⁷ The current wind generation capacity of 1,682 MW only begins to tap the state's wind resources potential. See American Wind Energy Association, "US Wind Industry Fourth Quarter 2017 Market Report", January 25, 2018 ("American Wind Energy Association"). Recently several new projects have been announced including the Xcel's Energy's Sagamore Wind Project (552 MW in Roosevelt County, New Mexico), and Mesa Canyons Wind LLC (Phase I 330 MW, with full project build-out up to 1,000 MW in Lincoln County, New Mexico). It is anticipated that both of these projects will be completed by the end of 2020 to be eligible for the federal production tax credit.

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1 A. The economic and fiscal impacts of the Corona Wind Projects will make significant
2 contributions to the economic base of Guadalupe, Torrance, and Lincoln Counties with
3 both short-term development activities, and long-term contributions to the regional
4 economy. The comprehensive economic impacts over the thirty-year Study Period
5 analyzed (related to the Projects' financing)⁸ are summarized in Table 1.
6

⁸ The thirty-year Study Period is defined based on the anticipated financing of the Projects. However, the generation and transmission facilities are anticipated to have a significantly longer economic life. An additional justification for the less-than life-of-project analyses is that utilization of an economic discount rate to assess the present value of benefits results in *de minimis* net economic benefits.



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Table 1: Summary Economic Impacts of Corona Wind Projects

**SUMMARY ECONOMIC IMPACTS OF CORONA WIND PROJECTS
(30-YEAR ANALYSIS)**

	Local Construction Expenditures	Local Employment (jobs)*	Local W&S Expenses	Landowner Payments	Other Operating Costs	PILOT Payments	Direct Economic Impacts	Direct & Indirect Economic Impacts	Direct, Indirect & Induced Economic Impacts
TOTAL ECONOMIC IMPACT	\$116	94	\$195	\$430	\$1,928	\$105	\$2,609	\$3,380	\$3,751
DISCOUNTED PRESENT VALUE (DPV) OF IMPACTS (@ 5%)	\$116	N/A	\$129	\$221	\$988	\$54	\$1,395	\$1,807	\$2,015

Over thirty years of operations, the Corona Wind development will produce an estimated \$2.6 billion in direct economic impacts, and taking account of economic multiplier impacts, approximately \$3.8 billion in direct, indirect, and induced economic benefit to the local economy. Discounting this stream of benefits at a 5% annual rate (appropriate for public benefits analysis), and noting that the undiscounted economic impacts are stated in terms of 2018 dollars (i.e., unadjusted for inflation), the present value of the direct economic benefits from the Corona Wind Projects are estimated to be nearly \$1.4 billion, and the direct, indirect and induced economic benefits of the Projects are estimated to produce a present value of \$2.0 billion.

Note (specifically) that the stated impacts for the Corona Wind Projects do not include the SunZia Transmission Project, and that the summary table values do not sum due to the exclusion of Payments-in-Lieu-of-Taxes (“PILOT”) from the Direct and Indirect

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1 Economic Impact calculations (i.e., these are direct payments to government entities and
2 are captured as Induced Benefits).

3 There are basically three programs in which fiscal impacts occur. Income Tax (both
4 Personal and Corporate) will accrue to the state based on additional wage, salary and
5 income earnings, and Gross Receipts Tax will accrue associated with taxable gross
6 receipts relating to the generation Projects' economic activities. Property Tax is the third
7 fiscal impact, which is discussed in greater detail below.

8 New Mexico Gross Receipts Taxes ("GRT") are subject to numerous exemptions and
9 deductions, and certain costs incurred with respect to the generation facilities' acquisition
10 may not be taxable as a result of the Industrial Revenue Bond ("IRB") financing.⁹ As a
11 result, Pattern Development prepared an estimate of the GRT obligations it believes are
12 applicable to the construction activities (Table 2).

13 *Table 2: Estimated Gross Receipts Tax Liability*

14

15 **Estimated NM Gross Receipts Tax Liability**
(\$millions)

16 TOTAL Estimated Project Costs	\$2,383.1
17 Total Estimated NM GRT	\$22.4

⁹ The IRB financing treats the Projects as owned by the government entity sponsoring the IRBs, but does not obligate those governments to repayment of the bonds (i.e., the repayment obligation remains with the developer). The IRB financing, thus, avoids GRT and Property Tax liability during the repayment period. Pattern Development has estimated that approximately \$2.0 of the \$2.4 million expenditures to develop the Corona Wind Projects will avoid tax liability in this manner (i.e., the IRBs are still being negotiated), but some tax liability (primarily GRT) will still be paid with the Projects' development.

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1 Based on the experience of previously developed projects, Pattern Development
2 estimates there to be a GRT liability of an estimated \$22.4 million¹⁰ in the construction-
3 related activities. It is noteworthy that a portion of the GRT will flow back to the county
4 and municipal governments, but it is extremely difficult (based on the information
5 available at this time) to allocate these GRT revenues to any of the affected communities
6 as the tax liability relates to the specific location of the taxable transactions.

7 **Q. DO THE ECONOMIC AND FISCAL IMPACTS ASSOCIATED WITH THE**
8 **CORONA WIND PROJECTS MESH WITH THE BROADER ENERGY**
9 **DEVELOPMENT GOALS IN NEW MEXICO?**

10 **A.** Yes, as previously mentioned, the Corona Wind Projects align directly with several of the
11 specific goals of the *New Mexico State Energy Plan*. A significant attribute of the
12 Corona Wind Projects is the development of the SunZia Transmission Project, which
13 directly addresses the previously cited transmission obstacle. Moreover, several other
14 objectives of the *State Energy Plan* are embraced by the Corona Wind Projects and
15 related developments, including:

- 16 • Supporting regional energy policy, infrastructure, and development pathways and
17 solutions;
- 18 • Ensuring that sound science and economics, as well as the availability energy
19 resources drive state energy policy decisions;
- 20 • Focus on economic growth, diversification, and private sector job creation;

¹⁰ Due to the preliminary stage of engineering, procurement and construction ("EPC") contracting that exists at the time this estimate is being prepared, this GRT impact is based on data from Pattern Development, as discussed more fully in my Report.



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- 1 • Consider appropriate incentives that would increase market potential and
- 2 competitiveness with other states in the West;
- 3 • Accelerate reduction of fresh water consumption (i.e., gallons per MWH
- 4 generated) in the energy sector; and
- 5 • Establish the energy foundation of new and improved infrastructure in electric
- 6 power transmission.

7 **Q. HOW DO THE ECONOMIC AND FISCAL IMPACTS YOU HAVE IDENTIFIED**
8 **AS ASSOCIATED WITH THE CORONA WIND PROJECTS AFFECT YOUR**
9 **UNDERSTANDING OF THE IMPACTS OF THE PROJECTS’**
10 **DEVELOPMENT?**

11 **A.** If the definition of all impacts begins with maintaining the *status quo*, then virtually all
12 economic development has some undesirable impacts. However, the previously
13 described social and economic priorities which have been explicitly articulated through
14 the actions of New Mexico state government provide a substantial foundation for
15 asserting a conclusion and finding of no “undue impairment” associated with the
16 proposed siting of the Corona Wind Projects’ facilities.
17 Specifically, there are certainly claims that can be asserted that the development of the
18 Corona Wind Projects’ infrastructure and generation facilities will adversely impact other
19 social values (e.g., visual landscapes). Indeed, any economic development that alters the
20 physical environment (e.g., construction of a new hospital) may disrupt some members of
21 society’s preference for not changing the *status quo* physical environment. Economic
22 literature has devoted substantial discussion to these “externality” issues.

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1 The Corona Wind Projects will compensate affected landowners who are and have been
2 proponents of the Projects — who have contractually agreed to the siting the
3 development on their property — and it is logically valid to assume that these landowners
4 have no further claims related to siting impairment issues.

5 The interest of other landowners and the citizens of the state as a whole may still be
6 adversely impacted; however, it is manifestly intractable to quantify all possible claims of
7 impairment. But the decisions taken by the state's elected public officials — particularly
8 the actions of the legislature and Governor — form the basis for understanding the
9 expressed preferences and priorities related to competing social objectives (e.g.,
10 developing renewable energy versus preservation of the *status quo* environment). These
11 expressed social preferences and priorities, combined with the multi-billion dollar
12 economic and fiscal benefits associated with the Corona Wind Projects, form the basis for
13 my economic conclusion that no “undue impairment” claims should preclude the
14 Commission's approval of the siting request sought in these pending dockets.

15 **Q. PLEASE PROVIDE SOME GREATER DETAIL AS TO YOUR FINDINGS WITH**
16 **RESPECT TO THE ECONOMIC AND FISCAL IMPACTS ASSOCIATED WITH**
17 **THE CORONA WIND PROJECTS.**

18 **A.** These economic impacts come in the form of employment, income, construction
19 activities and additions to the tax base. The short-term impacts during the development
20 period will flow from the \$2.4 billion capital investment for Corona Wind Projects
21 facilities. These developments will occur over approximately 300 thousand acres of the

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1 three counties and will introduce significant new economic activities for decades to
2 come.

3 The employment impacts are significant,¹¹ with the Corona Wind Projects creating some
4 1,186-total full time equivalent (“FTE”) jobs during construction, with an estimated 356
5 of those jobs sourced from local labor resources.¹² Payroll during the development phase
6 can be anticipated to add approximately \$59.9 million in income to the local labor force
7 for the Corona Wind Projects construction alone. The bulk of these short-term impacts
8 will occur in 2018 through 2020.

9 Pattern Development estimates that of the total capital expenditures during construction
10 of Corona Wind Projects, it is likely that \$116.3 million in contracts will flow to local
11 construction service providers.

12 Once construction is completed and operations commence, the Corona Wind Projects are
13 expected to create approximately 94 permanent jobs with an annual payroll of
14 approximately \$4.5 million and total operating costs of approximately \$82.7 million per
15 year.

16 The land lease and easement agreements with the private landowners on which the wind
17 generation facilities will be sited will provide direct new revenues to up to 100

¹¹ Note that the that the development and operational information presented in the Report and this Testimony represents the best commercial information available based on contemporary markets, and was provided by Pattern Development who developed the estimates on the basis of their own expertise as well as through the solicitation of this information during the bidding process for construction contractors.

¹² Common to economic impact analyses are estimates of the “jobs” created by a development project. Direct jobs are relatively straight forward to estimate. Where development provides permanent jobs, economic multiplier models suggest indirect and induced job impacts may be forecast. However, as more fully discussed in the Corona Wind Economic Report, I do not think it is appropriate in this particular setting and opt for presenting only direct employment (jobs) impacts. Thus, I have adopted a conservative approach, ignoring the creation of additional indirect/induced jobs. However, I do identify direct, indirect and induced economic activities (expenditures) associated with the operational expenditures and income/wages paid to these new employees (jobs).

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1 landowners within the Corona Wind Projects' footprint. The Corona Wind Projects'
2 landowners are expected to realize approximately \$12.5 million of new revenues during
3 the development period, and an average of approximately \$13.9 million per year during
4 the operations period.

5 GRT revenues will increase as a result of the construction projects by an estimated \$22.4
6 million for Corona Wind development. Fiscal impacts associated with property taxes are
7 muted as a result of the financing through IRBs, but provision is being made by the
8 developers to provide PILOTs to several of the municipal and school district beneficiaries
9 of these tax revenues in an amount estimated at approximately \$3.5 million per year.

10 In sum, the direct economic impacts of Corona Wind during the development period are
11 anticipated to be \$128.8 million, with direct, indirect and induced (multiplier) impacts
12 suggesting a \$211.4 million impact from the development of the project. Once
13 operational, the Corona Wind Projects should generate an annual direct economic impact
14 of approximately \$82.7 million, and, when economic multipliers are considered, the
15 annual impact from the Corona Wind operation can be estimated to be approximately
16 \$118.0 million.

REGIONAL ECONOMIC ANALYSIS

18 **Q. DID YOU PREPARE A REGIONAL ECONOMIC ANALYSIS IN**
19 **CONJUNCTION WITH YOUR INVESTIGATIONS IN THIS MATTER?**

20 **A.** Yes. I prepared a survey of the economic and demographic data available for the three
21 county Study Area (i.e., Guadalupe, Torrance and Lincoln Counties), and present that
22 data in reference to the State of New Mexico as a whole. This detailed analysis is

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1 contained in my Report which is attached as CWC Exhibit JCT-2. Please note that for
2 expositive ease, in the following discussions of economic data I will *exclude* specific data
3 source references, as those detailed references for the data are presented and documented
4 in the Report.

5 **Q. PLEASE PROVIDE A SHORT SUMMARY OF THE ECONOMIC AND**
6 **DEMOGRAPHIC PROFILE YOU DEVELOPED FOR THE STUDY AREA.**

7 **A.** The Study Area is a largely a rural region of central New Mexico, dominated by high-
8 desert range lands and forested mountain landforms on the western margins of the area.
9 The largely rural area has significant access to major urban economic and cultural
10 centers, with relatively close access to recreation and resort facilities in the Ruidoso and
11 related mountain communities to the south and west, regional trade centers in Roswell
12 and Alamogordo to the south, and the state's largest metropolitan area comprising the
13 Albuquerque and middle Rio Grande suburban communities less than a two-hour drive
14 from the Project area. These larger population centers, combined with the traditional
15 ranching communities found within the Study Area, provide wide ranging economic and
16 cultural resources which will provide support project activities.
17 Guadalupe County is the smallest of the three by geographic areas, and has roughly a
18 quarter of the population of the other two counties (reflecting less than one-eighth of the
19 total Study Area population). Lincoln County has both the largest population and the
20 largest geographic area. Torrance County, however, has the greatest population density of
21 the three counties. An overview of the Study Area's population demographics is shown in
22 Table 3.

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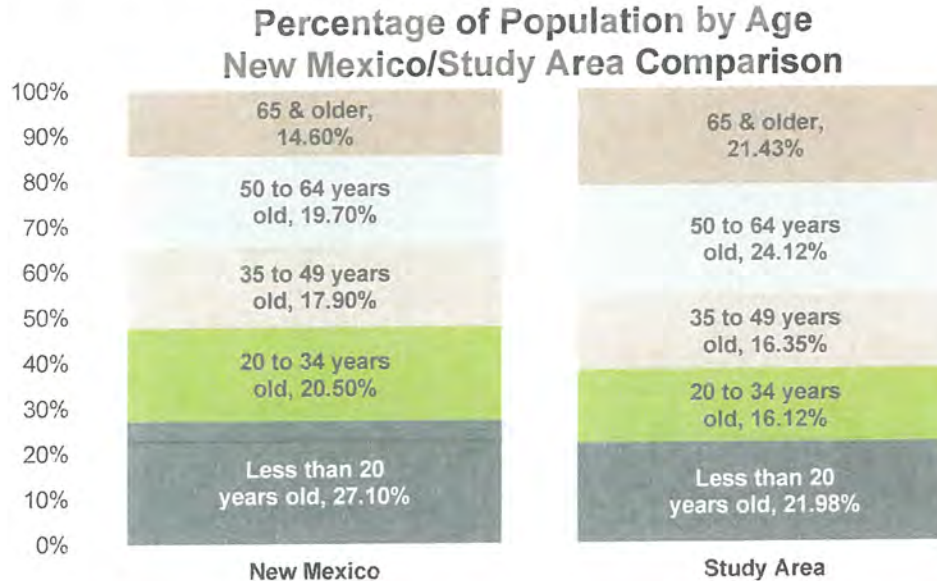
Table 3: Study Area Population and Density

Study Area Counties (2016 Population Figures)			
County	Population	Geographic Area (Sq. Mi.)	Population Density (people/square mile)
Guadalupe	4,376	3,032	1.4
Lincoln	16,622	4,831	3.4
Torrance	15,302	3,346	4.6
Study Area Total	36,300	11,209	3.2

Santa Rosa, with a 2016 estimated population of 2,680, is the county seat of Guadalupe County, and is also the only community in the county with a population exceeding one thousand. Lincoln County has several large communities — the county seat is Carrizozo (pop. 938), Capitan (pop. 1,388) and the county's commercial center is Ruidoso (pop. 7,770). And Torrance County has its primary population centers along the Interstate 40 corridor, with the county seat in Estancia (pop. 1,584) and Moriarty (pop. 1,786). Importantly, these 2016 population estimates also demonstrate a *decline* in the Study Area population of nearly 6.2% per annum since 2010. The Study Area as a whole comprises 1.74% of New Mexico's population. Generally stated, the Study Area has a higher concentration of its population which is 50 years old and older than is demonstrated in the age cohorts of New Mexico as a whole, as shown Figure 1.

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Figure 1: Study Area Population Cohorts



Q. PLEASE DESCRIBE THE STUDY AREA'S EMPLOYMENT AND THE LABOR MARKET CONDITIONS IN SOME GREATER DETAIL, PARTICULARLY AS RELATES TO THE POTENTIAL ECONOMIC AND FISCAL BENEFITS OF THE CORONA WIND PROJECTS.

A. The Study area has a total non-farm labor force reported in 2016 of 15,592, and employment of 14,494 (approximately 1.66% of statewide employment). The Study Area unemployment rate of 7.0%, is somewhat higher than the unemployment rate in the State (6.2%) in 2016.

2016 total wages and salaries reported for covered employment (non-farm) in the Study Area provides an estimated average annual compensation of \$29,618 per employee. The New Mexico statewide average compensation is \$42,599 per year, revealing that reported wages and salaries in the Study Area are approximately 70% of the state average.

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1 Additionally, the estimated per capita income of \$20,292 for the Study Area is as
2 compared with \$24,012 for the state of New Mexico. The higher proportion of the Study
3 Area per capita income (in relationship to New Mexico as a whole, and as compared to
4 the compensation data previously discussed) likely reflects the role of investment and
5 retirement income in the somewhat older profile of the Study Area population.

6 The largely rural, sparsely populated Study Area's dominant land use is focused on
7 agricultural business enterprises (particularly ranching), but the dominant economic
8 activities (measured by reported employment and output) are related to retail trade,
9 hospitality, and health care.

10 Private firms comprise about 83% of the business entities in the Study Area. However,
11 this data excludes agricultural employment, which is recognized to be a significant
12 component of the rural economy in the Study Area. Due to the population and
13 predominantly rural nature of the counties' land area, most of the establishments in the
14 Study Area are quite small, with a limited number of employees.

15 **Q. PLEASE PROVIDE AN OVERVIEW OF THE ECONOMIC ACTIVITIES**
16 **REPORTED IN THE STUDY AREA.**

17 **A.** Excluding the agricultural sectors, the statistics suggest that the Study Area's economy is
18 largely driven by retail; accommodations and food services; healthcare and social
19 assistance; and public administration. These four sectors alone comprise around two-
20 thirds of the Study Area's total annual employment by industry. (Table 4)

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1 *Table 4: Study Area Employment and Wages, by Sector*

2016 Data for Top Six NM Study Area Private Industry Sectors Ordered by Annual Employment					
Sector	Average Establishments		Annual Average Employment		Annual Wages Per Employee
	Count	% of Private Establishments	Count	% of Private Employment	
NAICS 44-45 Retail trade	192	15%	1 989	24%	\$24,602.16
NAICS 72 Accommodation and food services	140	11%	1 777	21%	\$15,706.87
NAICS 62 Health care and social assistance	153	12%	1 190	14%	\$42,995.17
NAICS 92 Public administration	95	7%	789	9%	\$41,034.08
NAICS 71 Arts, entertainment, and recreation	39	3%	578	7%	\$23,108.61
NAICS 23 Construction	164	13%	565	7%	\$32,944.86

2 Agriculture, and in particular, ranching, form a significant component of the economy in
3 the Study Area. Most of the agricultural products that are produced in the Study Area
4 come from Torrance County, but given the rural character of all the counties, agricultural
5 businesses still play a large role in all three counties. Table 5 presents an agricultural
6 profile for the Study Area; the table does not include forestry data, as this data was not
7 included in the 2007 and 2012 censuses.

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1 *Table 5: Study Area Farm Demographics*

2012 and 2007 New Mexico Study Area Farm Demographics					
2012 and 2007 Farm Demographics					
Number of Farms	2012	2007	Average Farm Size (acres)	2012	2007
	1,323	1,180		3,826	4,195
2012 Market Value of Agricultural Products Sold (\$ millions)					
Crops		Livestock and Poultry		Total	
\$24.26		\$68.84		\$93.10	
26.1%		73.9%			
2012 Value of Sales by Commodity Group (\$ millions)					
Grains, Dry Beans and Peas	Corn	Other Crops	Cattle and Calves	Other Livestock and Poultry	
\$9.99	\$9.44	\$4.81	\$56.47	\$12.37	

2 The significance of the economic role played by agriculture in the Study Area is best
3 reflected in comparing the reported \$93.1 million agricultural production to the \$972.8
4 million of reported Taxable Gross Receipts. It is clear that agriculture is a significant
5 foundation of the Study Area economy, but that the previously identified non-agricultural
6 sectors provide for the dominant employment and income in the regional economy.

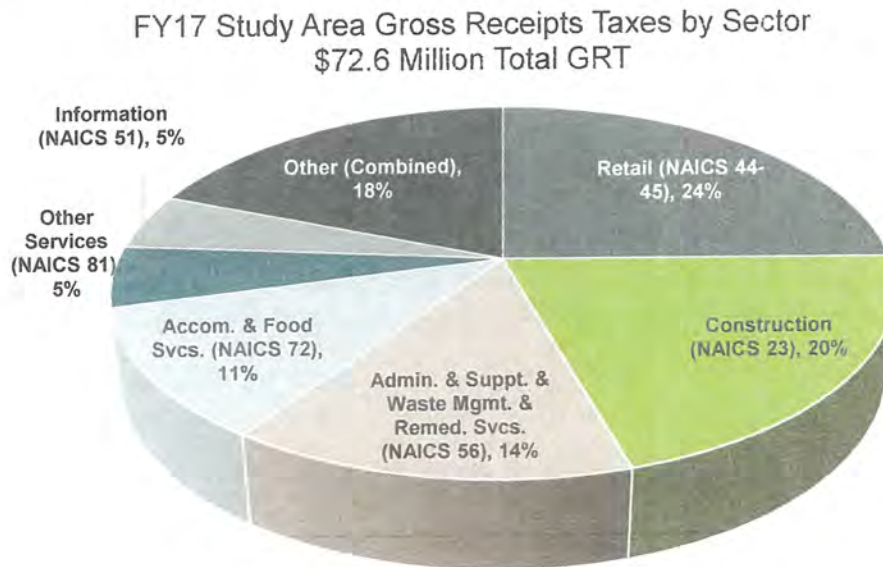
7 The Study Area had over \$72.6 million in GRT collections, providing 1.83% of the total
8 GRT collections in the State. The economic sector reporting the highest levels of GRT in
9 the Study Area is the Retail Trade sector, with revenues from the sales in this sector
10 constituting 24% of the GRT collections. This is followed by the Construction sector
11 which boasts 20% of the total GRT (Figure 2). Construction representing 20% of the
12 GRT and only 7% of the employment in the Study Area highlights the ready supply of

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1 construction firms and workers from the larger population centers surrounding the Study

2 Area.¹³

3 *Figure 2: FY2017 Study Area GRT Liability, by Sector*



4
5 The Administrative and Support and Waste Management and Remediation Services
6 sector also plays an important role in the Study Area. The reported data reflects that there
7 were two large privately-run prisons in the region – one in Torrance County and one in
8 Guadalupe County, though the Torrance County Detention Center (with 203 employees)
9 closed in October 2017. It is also important to note the contribution of Accommodation
10 and Food Services to both employment and gross receipts in the Study Area, as that
11 sector is especially important in southern Lincoln County.

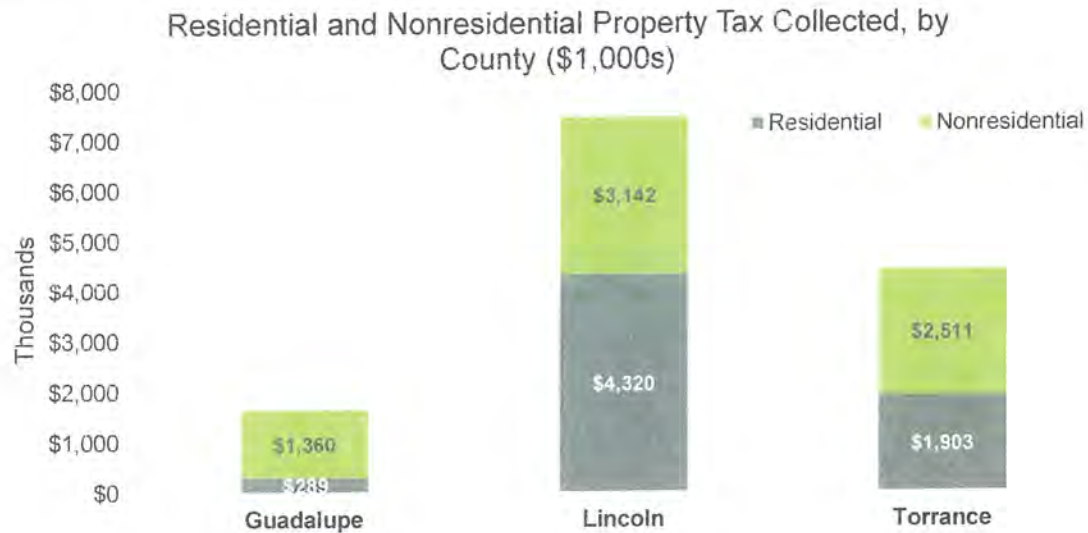
¹³ GRT liability is based on the location of the taxable business activity, while employment data is reported by place of residence.



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Property Taxes are a critical component of the fiscal impact analysis, as this is the primary revenue source for county government operational budgets in the Study Area. A look at the property tax collections by county for the Study Area (Figure 3) shows that Lincoln County accounts for over half of the total property tax receipts, while Torrance County counts for around a third.

Figure 3: Study Area Property Tax Collections



Statewide, property tax obligations for county operations and debt service within New Mexico total over \$466 million,¹⁴ with the Study Area counties collecting just over 3% of that for 2017. As a whole, about 53% of Study Area property taxes are collected from nonresidential property, and 47% from residential property. The mix of residential and nonresidential property taxes is not consistent between the three counties. For the counties in the Study Area, property tax revenues constitute more than 40% of the total

¹⁴ Local Government Division, Budget and Finance Bureau, "Property Tax Facts for Tax Year 2017," New Mexico Department of Finance Administration, Santa Fe, NM (Table 3).

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1 revenue, with GRT (and other taxes) providing nearly 15% of revenues supporting fiscal
2 activities in the three counties.

Corona Wind Projects Development Impacts

4 **Q. PLEASE DESCRIBE THE SPECIFIC IMPACTS THAT THE CORONA WIND**
5 **PROJECTS' DEVELOPMENT WILL HAVE IN THE STUDY AREA'S**
6 **ECONOMY.**

7 **A.** The development of wind generation facilities of the magnitude contemplated for the
8 Corona Wind Projects involves significant land resources and several specialized
9 construction capabilities. The wind turbines must be erected by specialized teams, and
10 manufacturers' warranties obligate many construction activities to be performed directly
11 by the manufacturer's construction teams. It is anticipated that some of these specialized
12 construction teams will consist of turbine manufacturer employees. However, there are
13 significant construction activities that require construction services obtained from local
14 resources. Table 6 provides an estimated level of employment during the construction
15 phase of the Corona Wind Projects.

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1 *Table 6: Corona Wind Projects Construction Employment*

Estimated Project Construction Employment Impacts			
	Total	Local	Non-Local
Wind Projects			
Projected Labor Hours*	2,302	691	1,611
Full Time Equivalents**	1,107	332	775
Projected Labor Cost***	\$186,462	\$55,939	\$130,523
Substations			
Projected Labor Hours*	67	20	47
Full Time Equivalents**	32	10	22
Projected Labor Cost***	\$5,395	\$1,618	\$3,776
345/500 kV Yard & Transmission Lines			
Projected Labor Hours*	99	30	69
Full Time Equivalents**	48	14	33
Projected Labor Cost***	\$8,019	\$2,406	\$5,613
Total			
Projected Labor Hours*	2,468	740	1,727
Full Time Equivalents**	1,186	356	830
Projected Labor Cost***	\$199,876	\$59,963	\$139,913

* Thousands of person-hours.

** Full Time Equivalents (FTE) calculated at 1 FTE per 2,080 person-hours. Rounded to the nearest FTE.

*** Thousands of dollars. Projected at \$81 per hour average wage.

2 The local labor requirements are significant. As previously shown, the Study Area
3 Construction sector has a total employment of 565 people by the 164 firms operating in
4 2016. Similarly, the study area's 65 firms operating in the Transportation sector
5 employed 138 individuals in 2016. These are two primary sectors that will be directly
6 impacted by the wind projects' construction activities (with total local employment
7 estimated to provide 356 FTE jobs), and it would appear that significant portions of the
8 local labor requirements may be sourced from the locally available labor force.
9 Specialized trade skills (e.g., high voltage linemen) may not be available in the Study

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1 Area *per se*, but the proximity to Albuquerque and the associated bulk of the state's
2 construction contracting firms increase the likelihood that the required skilled labor
3 requirements may be met by in state resources.

4 **Q. PLEASE DESCRIBE THE DIRECT EMPLOYMENT REQUIREMENTS FOR**
5 **THE CORONA WIND PROJECTS OVER THE THIRTY (OR MORE) YEARS**
6 **THEY ARE ANTICIPATED TO BE OPERATIONAL IN THE STUDY AREA.**

7 **A.** The developers have estimated that during the anticipated thirty-year (or greater)
8 operational phase of the Projects there will be a number of full-time positions created.
9 The developers have estimated that 74 full-time technicians will be employed, and the
10 project will be overseen by fifteen managers when fully operational. There will also be
11 five full-time site logistics coordinator positions created, for a total of approximately 94
12 FTE.

13 **Q. PLEASE DESCRIBE THE TOTAL PROJECT COSTS FOR DEVELOPMENT OF**
14 **THE CORONA WIND PROJECTS.**

15 **A.** Based on the information that has been provided by the Pattern Development personnel
16 in preparation of this analysis, I am able to summarize the wind generation facilities
17 project costs in Table 7. It should be noted that these are estimated costs, as the actual
18 costs will not be known until construction awards are made to the various entities who
19 will be involved in the development activities.

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Table 7: Estimated Corona Wind Project Costs

Estimated Corona Projects Costs	
	Project Costs (\$millions)
Turbines & BOP	\$2,074
Interconnection Costs	\$105
Developer / Finance / Contingency Expenses	\$204
Total Project Costs	\$2,383

With total project costs projected to be \$2.4 billion, the development of the Corona Wind Projects is a major capital investment in the Study Area that is anticipated to have a useful life of at least thirty years. Each of the generation turbines can be associated with an estimated installed cost of greater than \$2.2 million.

Q. PLEASE DESCRIBE YOUR UNDERSTANDING OF THE SPECIFIC DIRECT IMPACT OF THE DEVELOPMENT OF THE CORONA WIND PROJECTS' CONSTRUCTION ACTIVITIES IN NEW MEXICO AND THE STUDY AREA.

A. Pattern Development has provided information to assess the specific local contracting activities that are anticipated with the generation projects. The components of project costs that are likely to be provided by local contractors and labor resources are in the balance-of-project ("BOP") category of Total Costs, shown in Table 8. In particular, the following costs are thought to be associated with local resource providers:

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Table 8: *Estimated Local Construction-Related Expenditures*

Estimated Locally Sourced BOP Construction-Related Project Expenditures

Component Item Description	Total NM Local Costs (\$millions)
Civil / Foundation Works	\$80.6
Electrical	\$17.6
Other / Services / OM Building	\$18.1
EPC Subtotal	\$116.3

In summary, it is anticipated that the Corona Wind Projects will provide about \$116.3 million in local construction (and related) activities during its development. These EPC-related (i.e., engineering, procurement, and construction) costs are inclusive of labor costs in performing these activities.

Q. PLEASE SUMMARIZE THE DIRECT ECONOMIC IMPACTS ASSOCIATED WITH THE DEVELOPMENT OF THE CORONA WIND PROJECTS.

A. During the construction period, it can be anticipated that there will be approximately 356 additional local construction-related FTE jobs.¹⁵ Assuming the average wages estimated by the developer at \$81 per hour, this construction-related local employment could provide up to \$59.9 million in personal income in the study area over the course of construction. A more likely scenario is that some percentage of these jobs will be less than a full year in duration, and some proportion of New Mexico based labor will actually come from Albuquerque, but any attempt to refine this wage impact would rely on relatively meaningless assertions (at this time) of construction schedules and labor resource deployment.

¹⁵ FTE estimate based on total estimated Project construction person-hours divided by 2,080 per FTE.



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1 During the operational phase of the project, Corona Wind Projects are expected to require
2 approximately 94 full-time employees, who, if paid the average 2016 Study Area wage in
3 the Utilities sector (\$47,872 per year), would result in an annual payroll for the Corona
4 Wind Projects of \$4.5 million per year. The Corona Wind Projects will also create an
5 additional \$78.2 million in annual operating costs related to its operations in the Study
6 Area, for a total of \$82.7 million.

Economic and Fiscal Impacts Analysis

7
8 **Q. PLEASE DESCRIBE THE ECONOMIC AND FISCAL IMPACTS THAT YOU**
9 **HAVE ANALYZED.**

10 **A.** I have discussed the direct economic impacts of the Corona Wind Projects in the
11 proceeding as elements of construction-related costs likely to be sourced from local
12 resources, and local employment during construction and operations.
13 There are additional direct economic impacts associated with the landowners' benefits,
14 and the indirect and induced economic impacts that will occur with the new economic
15 activities brought to the Study Area (i.e., economic multipliers). The fiscal impacts relate
16 to gross receipts and income tax revenues generated by this new economic activity, and
17 the treatment given to the new assets in the context of property tax burdens in each of the
18 three counties.

19 **Q. PLEASE DESCRIBE THE ECONOMIC BENEFITS OBTAINED BY THE**
20 **LANDOWNERS IN THE DEVELOPMENT OF THE CORONA WIND**
21 **PROJECTS MORE GENERALLY.**

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1 A. The Corona Wind Projects will occupy approximately 300 thousand acres. There are up
2 to 100 landowners who will participate in the Corona Wind Projects. The Projects are
3 located on a mixture of state and private land.

4 I understand that the specific lease terms provide for a variety of easements and access
5 conditions, and several different provisions for compensation during both the
6 “Development” and “Operational” Period of the agreements. The Development Period is
7 defined to allow up to two years to bring the full wind facilities into service but is
8 anticipated to be (largely) completed in 2020.

9 Due to confidentiality considerations, I will only generally summarize the economic
10 terms of the landowner leases and easements that are being negotiated and entered into to
11 allow the projects’ development and operation. During the Development Period,
12 payments are made for easements and various facility installations for the Corona Wind
13 Projects, and, during the Operational Period, there are royalty payments based principally
14 on project performance. During the Development Period, New Mexico landowners in the
15 area are likely to realize a total of \$12.5 million in lease and royalty payments. During the
16 Operational Period, annual New Mexico land lease and royalty payments will likely
17 average \$13.9 million per year for the Corona Wind Projects. Both the royalty and land
18 lease payments escalate over time.¹⁶

¹⁶ As reflected in Table 1, the total direct impact from landowner payments is estimated to be \$430 million over the thirty-year Study Period. Pattern Development reports that of this total, \$43.5 million is related to State Trust Lands, although there is the possibility that Trust Land acreage could increase as final development configuration of the Projects is determined.



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1 Although there will be some very limited encroachment on the landowners' ability to
2 continue the current agricultural uses of the land, they will obtain significantly improved
3 access to those lands as a result of the development of surface maintenance roads to
4 support the project facilities. It is reasonable to assume there will only be a *de minimis*
5 reduction in the agricultural productivity of the lands leased to the wind generation
6 developments, and certainly the additional revenue associated with the wind generation
7 developments will substantially increase the economic productivity of the land resources
8 from its current opportunities. There is also reason to believe that the Projects may result
9 in *greater* agricultural productivity as participating landowners are able to use payments
10 associated with project leases to reinvest in existing business activities (e.g., ranching).

11 **Q. ARE THERE ANY PROPERTY TAX ISSUES ASSOCIATED WITH THE**
12 **DEVELOPMENT OF THE WIND GENERATION PROJECTS?**

13 **A.** Yes. As previously mentioned, IRBs are currently being negotiated for the Corona Wind
14 Projects in New Mexico, but given the total estimated project costs of \$2.4 billion, the
15 total amount of IRB financing can be expected to exceed \$2 billion. The specifics of the
16 Property Tax benefits flow from the statutory provisions relating to IRBs. The specific
17 benefit is to treat the tangible property acquired with the proceeds of the bonds as non-
18 taxable property assets. Without discussing the details of how IRBs create property tax
19 benefits, it is enough to say the tangible property assets that are purchased with the IRBs
20 are exempted from property tax liability for the thirty-year life of the bonds.

21 **Q. WHAT IS THE ECONOMIC ROLE OF PROPERTY TAX IN THE STUDY AREA**
22 **CURRENTLY?**

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1 **A.** The Study Area 2017 Property Tax rates are established for each of three counties as a
2 whole, and the major communities and school districts based on an assessed taxable value
3 of nearly \$1.8 billion, comprised of \$1.08 billion in Residential and \$721 million in Non-
4 Residential assessed tangible property. 2017 property tax obligations totaled over \$43
5 million, with approximately \$14.5 million going to county operations and debt service,
6 and \$2.4 million of that total shared with New Mexico state government, and \$4.4 million
7 going to municipal governments. School districts within Study Area will receive
8 approximately \$13.0 million of this tax revenue. Other recipients include Guadalupe
9 County Hospital (\$652 thousand), Luna Community College (\$297 thousand), Lincoln
10 Community Medical Center (\$2.5 million), Lincoln County Rural Clinics (\$741
11 thousand), and ENMU Ruidoso Instructional Center (\$1.3 million). Details of these
12 Property Tax rates and revenues are provided in the Corona Wind Economic Report and
13 its Technical Appendix.

14 **Q. WILL THE DEVELOPMENT OF THE CORONA WIND PROJECTS IMPACT**
15 **CURRENT PROPERTY TAX COLLECTIONS?**

16 **A.** No, at least not directly. The only specific impact will be to provide additional income
17 that potentially supports additional tangible property investments that could raise the total
18 assessed property value over time, and thereby indirectly increase Property Tax revenues.
19 However, the direct effect of the IRBs is to keep the tangible property values associated
20 with the nearly \$2.4 billion capital project from being subject to Property Tax liability
21 during the term of the revenue bonds. This can be considered to be a fiscal opportunity
22 cost associated with the wind generation development.

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Q. HAS THE PROPERTY TAX OPPORTUNITY COST BEEN ADDRESSED IN THE CONTEXT OF THE CORONA WIND PROJECTS PROPOSAL?

A. Yes. The Corona Wind Projects are or will be negotiating to provide annual PILOT compensation agreements with several of the Study Area entities directly impacted by the potential property tax abatements under the proposed project IRBs. Details as to the specific status of these negotiated PILOTs are not final and must be kept confidential until completed. However, these PILOTs may be thought to reduce or eliminate the fiscal impacts of the Property Tax “opportunity costs” that result from the issuance of IRBs for the Corona Wind Projects while providing traditionally elusive long-term revenue for rural municipalities and counties.

Q. YOU MENTIONED THAT THE DIRECT ECONOMIC IMPACTS WILL PRODUCE INDIRECT AND INDUCED ECONOMIC IMPACTS. PLEASE EXPLAIN THIS ECONOMIC IMPACT FURTHER.

A. When economists discuss the benefits of the expansion of an economic activity, they also recognize that direct economic benefits create an indirect benefit associated with the additional economic activity from industries buying from other local business sectors. For example, the direct construction activities associated with the project will result in additional lodging and hospitality revenues for the local businesses hosting the out-of-area workers, and other indirect retail trade purchases as a result of increased disposable income in the economy. These are referred to as indirect impacts, or Type I economic multipliers. A further extension of the economic multiplier analysis takes account of the increased economic activities on the social “institutions” (i.e., households, state and local

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1 government, Federal government, and capital) that first obtain direct and indirect
2 benefits, and then recognize that every dollar collected locally by that institution will be
3 re-spent for that local institution's operations. Including the induced effects in the
4 economic multiplier analysis provides a "Type SAM" (Social Account Matrix)
5 multiplier.

6 Without belaboring the derivation of these two multipliers, both the US Department of
7 Commerce and private firms provide information as to the economic multipliers for
8 specific states or local regions. With respect to a state with an economic "footprint" as
9 small as New Mexico, the statewide economic multipliers are generally a more accurate
10 depiction of the indirect and induced economic impacts from new economic activities.

11 **Q. WHAT ARE APPROPRIATE TYPE I AND TYPE SAM ECONOMIC**
12 **MULTIPLIERS FOR THE CORONA PROJECTS' DEVELOPMENT AND**
13 **OPERATIONS?**

14 **A.** The Minnesota IMPLAN Group, Inc. provides a commonly utilized model, and I have
15 relied on multipliers from a 2015 version of this model for New Mexico. The specific
16 economic multipliers used in this analysis are provided in Table 9:

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1 *Table 9: Economic Multipliers, by Sector*

Economic Multipliers for Analysis of Corona Wind Farm Project Impacts		
Sector Description	Indirect Impacts (Type I)	Indirect & Induced Impacts (Type SAM)
Construction of other new nonresidential structures	1.286478	1.598957
Construction of new power and communication structures	1.180549	1.461355
Electric power generation, transmission, and distribution	1.167653	1.254574
Maintenance and repair construction of nonresidential structures	1.335974	1.634624
Cattle ranching and farming (Beef cattle)	1.708563	2.030960
Electric power generation - Wind	1.210142	1.305250

2 During the Development Period for the Corona Wind Projects, it is appropriate to utilize
3 a set of multipliers for the sector defined as “construction of other new nonresidential
4 structures”, which provides a Type I (indirect) multiplier of 1.286478, and a Type SAM
5 (indirect & induced) multiplier of 1.598957. During the Operational Periods of the
6 Projects, it is appropriate to use multipliers for the “Electric power generation - Wind”
7 sector, with a Type I multiplier of 1.210142 and a Type SAM multiplier of 1.305250.
8 Landowner payments pose a unique problem in the context of economic multiplier
9 analysis. The payments to be received by the landowners are in addition to the normal
10 income obtained from their agricultural operations. It is appropriate to presume that these
11 landowners will continue their primary agriculturally-related economic activities, and to a
12 certain extent the payments obtained are simply additional return to the land. As such,
13 the most meaningful economic multipliers relate to the “Cattle ranching and farming
14 (Beef cattle)” sector of the economy.

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Q. PLEASE SUMMARIZE THE ECONOMIC IMPACTS OF THE CORONA WIND PROJECTS.

A. Table 10 summarizes the economic impacts, including the Type I (Direct & Indirect) and Type SAM (Direct, Indirect & Induced) economic multiplier impacts of the Corona Wind Projects as a whole (note: Operational Period Impacts are reported as annual impacts).

Table 10: Summary of Economic Impacts

Summary of Economic Impacts (\$millions)

	Direct Impact	Direct & Indirect Impact	Direct, Indirect, & Induced
Development Period Impacts			
Local Construction Contracts	\$116.3	\$149.6	\$186.0
Land Owner Benefits	\$12.5	\$21.4	\$25.4
Total Development Period Impacts	\$128.8	\$171.0	\$211.3
Operational Period Impacts (Annual Average)			
Operational Costs	\$68.8	\$83.2	\$89.7
Land Owner Benefits	\$13.9	\$23.8	\$28.3
Total Annual Operational Period	\$82.7	\$107.0	\$118.0

It is anticipated that the Development Period is likely to be completed in 2020, and that the Operational Period will commence in 2021 and continue for approximately thirty years. While the Corona Wind Projects may well continue operations after thirty years, and it is reasonably likely that these projects or substantially similar wind generation and transmission projects will persist in the Study Area long-after this timeframe, we have limited our analysis to a thirty-year reasonable useful life timeframe.

Q. PLEASE SUMMARIZE THE FISCAL IMPACTS OF THE CORONA WIND PROJECTS.

A. There are basically three programs in which fiscal impacts occur. Income Tax (personal and corporate) will accrue to the state based on additional wage, salary and income

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1 earnings, and GRT will accrue associated with taxable gross receipts relating to the
2 generation projects' economic activities. The third fiscal impact relates to Property Tax,
3 which I have previously discussed.

4 New Mexico GRT is subject to numerous exemptions and deductions, and certain costs
5 incurred with respect to the generation facilities' acquisition may not be taxable as a
6 result of the IRB financing. As a result, we prepared an estimate of the GRT obligations
7 we believe are applicable to the construction activities (Table 11 summarizes details of
8 estimate presented in Report).

9 *Table 11: Estimated GRT Liability*

Estimated NM Gross Receipts Tax Liability (\$millions)	
TOTAL Estimated Project Costs	\$2,383.1
Total Estimated NM GRT	\$22.4

13 With respect to Corona Wind Projects, there is anticipated to be a GRT liability of
14 approximately \$22.4 million in the construction-related activities. It is noteworthy that a
15 portion of the GRT will flow back to the county and municipal governments, but it is
16 extremely difficult (based on the information available at this time) to allocate these GRT
17 revenues to any of the affected communities as the tax liability relates to the specific
18 location of the taxable transactions.

19 It is useful to understand the specific economic benefit obtained by the county and local
20 municipal entities from the distribution of GRT revenues. In the case of construction
21 services, which will form the bulk of development phase taxable activities, the location of
22 the actual activity will determine the location of the tax revenue. The location of the
23 activity will also determine the GRT rate that is applied to the activity and how that

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1 revenue is distributed. A brief discussion of the structure of the GRT in New Mexico will
2 provide a better understanding of how local governments stand to benefit from the
3 Corona Wind Projects.

4 Each local government is allowed to enact a certain amount of local GRT increments.
5 The State of New Mexico also imposes a 5.125% GRT rate. The GRT rate in a given
6 location is the combination of the state, county, and applicable city rates. To add a further
7 complication, the state shares 1.225% of its 5.125% with municipalities, but not with
8 counties. The rates imposed in each county and municipality in the Study Area are
9 discussed in greater detail in my Report (CWC Exhibit JCT-2).

10 All of this is to illustrate how revenues from taxable activities associated with the Corona
11 Wind Projects will flow to the various government entities. For example, every dollar of
12 GRT generated in unincorporated Guadalupe County — with a total gross receipts rate of
13 6.4375% — will be shared between the state and Guadalupe County at about \$0.20 to the
14 county and \$0.80 to the state. In the City of Santa Rosa, the situation would be slightly
15 different: every dollar of GRT generated there — at a total GRT rate of 8.0% — would
16 be shared three ways; the state would receive about \$0.49, Guadalupe County would
17 receive about \$0.13, and the City of Santa Rosa about \$0.38.

18 Similarly, New Mexico Income Tax liabilities have significant exemptions and
19 deductions that make estimates of the actual revenues collected nearly impossible with
20 the information available. It is not reasonable to speculate with respect to Income Tax
21 liabilities related to project activities (at this time).



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1 **Q. DO THE GRT FISCAL IMPACTS INCLUDE TAX ON THE TRANSMISSION**
2 **REVENUES EARNED BY THE SUNZIA TRANSMISSION PROJECT FROM**
3 **THE PROJECT ACTIVITIES?**

4 **A.** No. Although there are significant transmission costs, previously discussed in
5 relationship to SunZia's transmission of the electricity generated by the Corona Wind
6 Projects, there are no GRT implications for those transmission activities. In particular,
7 the statute provides that:

8 Receipts from transporting . . . property from one point to another in this
9 state may be deducted from gross receipts when such . . . property,
10 including any special or extra service reasonably necessary in connection
11 therewith, is being transported in interstate . . . under a single contract.
12 [§7-9-56 (A) NMSA 1978]
13

14 Thus, the long-term direct sale Purchase Power Agreements that Pattern Development
15 will execute with the out-of-state utilities (or other purchasers) are a single contract
16 transaction of property (i.e., electricity) in interstate commerce that is not subject to GRT.

17 **Q. DO THE STUDY AREA GOVERNMENTAL ENTITIES BENEFIT DIRECTLY**
18 **FROM THE GRT REVENUES COLLECTED BY THE STATE?**

19 **A.** Yes. The specific economic benefit obtained in the Study Area from Corona Wind is
20 shared by the counties and local municipal entities from the distribution of GRT
21 revenues. In fiscal year 2017 (July of 2016 through June of 2017) there was
22 approximately \$25.6 million in GRT distributions to the counties and municipalities in
23 the Study Area, as shown in Table 12.

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1

Table 12: FY2017 GRT Distribution, Study Area

Gross Receipts Tax Distributions Fiscal Year 2017 (\$ Thousands)			
	Total GRT Distribution	Percent of County	Percent of Study Area
Guadalupe County	\$1,193.6	34.6%	4.7%
Santa Rosa	\$2,053.3	59.6%	8.0%
Vaughn	\$198.1	5.7%	0.8%
Lincoln County	\$1,432.6	8.9%	5.6%
Ruidoso	\$11,077.8	69.1%	43.3%
Capitan	\$393.4	2.5%	1.5%
Carrizozo	\$293.4	1.8%	1.1%
Corona	\$74.6	0.5%	0.3%
Ruidoso Downs	\$2,759.4	17.2%	10.8%
Torrance County	\$3,132.7	51.2%	12.2%
Mountainair	\$255.8	4.2%	1.0%
Moriarty	\$1,881.2	30.8%	7.4%
Willard	\$31.4	0.5%	0.1%
Encino	\$63.0	1.0%	0.2%
Estancia	\$752.5	12.3%	2.9%
Study Area Total	\$25,592.8		

2

Thus, it can be seen that the estimated \$22.4 million in GRT liability associated with the

3

Corona Wind Projects development will provide significant additional direct

4

contributions to the government operations in the Study Area during the Development

5

Period. However, discussion of the specific allocation of those tax revenues to the

6

government entities in the Study Area is not possible with the data available, as the

7

location of the business activities that produce GRT liabilities is dependent on the

8

specific location of the business entity engaged in those activities.

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1 The direct fiscal impacts quantified here are tied to the developer's (and its contractors')
2 specific business activities that are not exempt from GRT pursuant to the financing of the
3 Corona Wind Projects' development through IRBs.

4 Additional fiscal impacts will occur as a result of the effects of indirect and induced
5 "economic multiplier" impacts; however, these "multiplier-related" impacts are entirely
6 speculative. That is, there is no ability to identify where these indirect and induced
7 multiplier impacts will occur, and correspondingly the tax rates applicable to the
8 additional Taxable Gross Receipts generated by these additional economic activities. For
9 the impact estimates provided in this Report they are noted and summarily ignored, with
10 the additional note that this approach provides a conservative assumption related to fiscal
11 impacts.

12 Similarly, New Mexico Income Tax liabilities have significant exemptions and
13 deductions that make estimates of the actual revenues to be collected nearly impossible
14 with the information available. It is not reasonable to speculate with respect to Income
15 Tax liabilities related to project activities (at this time).

16 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

17 **A. Yes.**

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**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)**

Case No. 18-_____

**ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, VIENTO LOCO LLC,)
)
)
)**

JOINT APPLICANTS.)

Exhibit JTC-1

JOHN C. TYSSELING, PH.D.

TELEPHONE: 505-837-7665 ❖ EMAIL: john.tysseiling@mossadams.com
 Two Park Square, 6565 Americas Parkway NE, Suite 600 Albuquerque, New Mexico 87110

EMPLOYMENT HISTORY:

2013-present Consulting Director, Moss Adams LLP
 Albuquerque, New Mexico

Moss Adams offers diverse professional services, with the firm's practice comprising one of the nation's largest accounting and business consulting firms. Consulting services are focused on analysis of economic value, strategic capital investment, market regulation, tax policy, litigation strategies, regulated utility services and a variety of energy and natural resource issues. Offering expertise in broad array of economic market and natural resource analyses, including strategic planning analysis, economic performance assessment, transfer pricing, and market valuation with particular focus on electricity, natural gas, natural gas liquids, oil, coal, renewable energy, air quality emissions compliance strategies, and energy information systems. Extensive litigation support and analysis services are provided, including recognized expert witness testimony on issues relating to market competition, economic damages, economic valuation, natural gas and electric market regulation, utility rates, renewable energy resources, lease and sales contracts, water resource issues, and other natural resource policy issues. Acknowledged leadership in design and deploying information systems applications in natural resource management, market monitoring, royalty/tax systems, energy performance and management, and life-cycle analyses of capital investment and business planning to both public and private clients.

2012-2013 Chief Economist — Tax Analysis, Research and Statistics Division
 Office of the Secretary, Taxation and Revenue Department State of New Mexico,
 Santa Fe, New Mexico

Direction of research, forecasting, and analyses of New Mexico state government's revenues (nearly \$6.0 billion in FY2014), with responsibilities for analyses of all tax programs including gross receipts, compensating, corporate income, personal income, severance, motor vehicle, fuel and other taxes administered by the state. Leadership in multi-agency efforts providing consensus forecasting of state general fund and other revenue funds relying on comprehensive econometric modeling and complex statistical methodologies. Primary role in developing analyses of state tax expenditures, including estimation of tax base and economic impacts of various exemptions, credits and deductions allowed pursuant to statutory and agency regulatory policies. Mentoring, supervision and direction of staff economic analysts, with responsibility for coordination of state tax policy investigations across various revenue divisions of department and other state agencies. Duties include ad hoc investigations and analysis for Office of the Governor and other executive agencies, as well as coordination of executive agencies analyses of tax policy and revenue forecasting with legislative entities.

1992-2013 President, Energy, Economic and Environmental Consultants
(A Division of E3c, Inc.) Albuquerque, New Mexico

Association of consulting professionals focused on analysis of energy and environmental resource market issues. Expertise in broad array of economic market and natural resource analyses, including capital investment strategies, economic performance, and market valuation with particular focus on natural gas, natural gas liquids, oil, coal, renewable energy, air quality emissions compliance strategies, and energy information systems. Expert witness services provided on issues relating to market competition, economic damages, economic resource valuation, natural gas and electric market regulation, utility rates, renewable energy resources, lease and sales contracts, water resource issues, and other natural resource policy issues. Emphasis on integration of natural resource market information systems applications, and life-cycle analyses of capital investment and business planning.

1985-1992

Director, Economic, Statistical & Policy Analysis Division

New Mexico State Land Office, State of New Mexico, Santa Fe, New Mexico

Direction of research, resource management and policy analyses pertaining to diverse economic values of the natural resource attributes of New Mexico state trust lands encompassing approximately nine million surface acres and thirteen million mineral rights acres. Supervisor of staff statistical and economic analysts engaged in natural resource management and leasing. Specific natural resource issues addressed:

Natural Gas — Interstate natural gas pipeline tariffs, international gas resource/transportation competition, competitive access to domestic natural gas markets, pipeline service comparability, natural gas transportation agreements, natural gas sales contracts, unconventional gas resource valuation/production incentives, natural gas processing plants and processing agreements, natural gas pricing issues, Clean Air Act and alternative fuel opportunities for natural gas resources.

Oil — Interstate oil pipeline regulations and tariffs, market pricing and valuation issues, secondary and tertiary recovery techniques and incentives, international and domestic oil pricing issues, and oil lease property reclamation.

Coal — Coal resource valuation, coal lease policy, coal market competition, transportation and lease development constraints.

Water — Regional water resource planning, water rights issues, resource development policy, competitive market valuation, water easement contract negotiations and export application litigation strategy.

Wilderness Land Policy — Inventory of wilderness land values and land exchange policy analysis.

Surface Resources — Establishment of grazing fees, exchange valuation, environmental damage remediation, and recreational/hunting access.

Responsibilities include various economic, administrative and management issues relating royalty valuation policy, mineral audit management and strategy, natural resource market evaluations, lease term extension policy, revenue, employment/wages and fiscal policy management. Procurement manager, lead negotiator, management team and contract administration responsibilities for multi-agency oil and natural gas database design and development project (\$13 million contract, thirty-month project).

1979-1985 **Economist**, Bureau of Business and Economic Research, University of New Mexico, Albuquerque, New Mexico

Direction and participation in numerous multi-disciplinary and analytical research projects. Topics investigated included: water rights markets and water resources planning; coal resources; employment, wage, construction and mining forecasting (by sector); general economic activities and conditions in New Mexico. Responsibilities include: research design, supervision, scheduling, budgeting, field interviews, computer modeling, writing and editing final reports of all research activities. Several private consulting engagements also taken, and courses taught as guest lecturer in both Economics Department and Law School during this period.

1977-1979 **Graduate Research Assistant**, Department of Economics, University of New Mexico, Albuquerque, New Mexico

Responsible for multi-disciplinary research activities, draft and final report preparation, coordination of research activities among differing groups of researchers, and substitute teaching of economics courses. Research topics included water resources, recreation demand analysis, and the wrecker industry in New Mexico.

EDUCATION:

Ph.D., University of New Mexico, Department of Economics, 1986. Major Fields: Applied Natural Resource Economics and Natural Resources Law.

M.A., University of New Mexico, Department of Economics, 1979.

B.A., University of New Mexico, 1978. Majors: Economics and Philosophy.

EXPERT TESTIMONY:

Recognized expert testimony and commentary before United States District Courts, New Mexico State District Courts, Texas State District Courts, Colorado State District Courts, Oklahoma State District Courts, Federal Energy Regulatory Commission, U.S. Department of Energy, California Public Utilities Commission, California Energy Commission, Colorado Public Utility Commission, Mississippi Public Service Commission, Public Utilities Commission of Nevada, New Mexico Public Regulation Commission, New Mexico State Engineer, and the New Mexico Legislature relating to market structure and competition issues, economic damages, energy commodities market valuation, public utility rate regulation, renewable energy resource development, energy contract issues, natural resource royalty valuation and taxation, natural gas gathering and processing facilities, natural gas pipeline capacity brokering, energy transportation and distribution services, utility service comparability issues, regulated asset gain allocation and distribution, energy utility procurement and planning issues, water resource management policy and public welfare issues in water right applications.

WILLIAM LYON HOMES, INC.

In the matter of the Application of Great Basin Water Company for authority to adjust its annual revenue requirement for water and sewer service rates charged to all classes of customers in the Pahrump Division, and for other relief properly related thereto, PUCN Docket No. 16-12037, Public Utilities Commission of Nevada, Testimony, August 10, 2017.

SOUTHERN CROSS TRANSMISSION LLC

In the matter of Southern Cross Transmission, LLC Petition for a Certificate of Public Convenience and Necessity for the Proposed Southern Cross Transmission Project, MPSC Docket No. 17-UA-079, Mississippi Public Service Commission, Testimony, April 17, 2017.

ALAN MARBAKER, ET AL. (CLASS ACTION)

In the matter of Alan Marbaker, et al. v. Statoil USA Onshore Properties, Inc., et al., Class in Arbitration, Scranton, Pennsylvania: Report, April 12, 2016, Report (Confidential), March 7, 2016 (Confidential).

PATTERN RENEWABLES DEVELOPMENT COMPANY LLC

In the matter of Grady Wind Energy Center, LLC Application for the Location of the Grady Project in Township 6N, Range 35E, Township 7N, Range 34E, and Township 8N, Range 35E., Pursuant to the Public Utility Act, NMSA § 62-9-3, Case No. 15-00373-UT, New Mexico Public Regulation Commission, Testimony, December 16, 2015.

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.

In the matter of La Plata Electric Association, Inc., et al. v. Tri-State Generation & Transmission Association, Inc., Docket No. 13F-0145E, Colorado Public Utilities Commission: Testimony, September 10, 2014.

SUNRIVER OWNERS' ASSOCIATION

In the matter of Sunriver Water LLC Request for Revision of its Water Service Rates, Docket No. UW 160, Oregon Public Utilities Commission: Report, July 28, 2014; Report, May 6, 2014.

STEVEN J. ABRAHAM, ET AL. (CLASS ACTION)

In the matter of Steven J. Abraham, et al. v. WPX Energy Production, LLC., et al., Case No. 12-CV-00917-JB-ACT, U.S. District Court for the State of New Mexico: Testimony, March 14, 2014; Deposition, February 26, 2014; Report, February 14, 2014, Report, October 7, 2013.

LOS ALAMOS NATIONAL SECURITY, LLC

In the matter of Marlayne Mahar v. Los Alamos National Security, LLC, Randy Fraser, and Joel Williams, Cause No. D101-CV-2010-00536, First Judicial District, County of Santa Fe, State of New Mexico: Rebuttal Expert Report, April 6, 2012; Testimony, February 14, 2013.

In the matter of Melissa Lucero v. Los Alamos National Security, LLC, Cause No. D132-CV-2010-00061, First Judicial District, County of Santa Fe, State of New Mexico: Report, May 16, 2011.

VIRIDITY ENERGY, INC.

In the matter of the Demand Response Compensation in Organized Wholesale Energy Markets, Federal Energy Regulatory Commission, Docket Number RM10-17-000: Affidavit, June 16, 2010.

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY

In the matter of Public Service Company of New Mexico's Revised Renewable Energy Portfolio Procurement Plan for 2011, New Mexico Public Regulation Commission Case Number 10-00373-UT: Testimony, March 25, 2011.

In the matter of the Renewables Stipulation and Public Service Company of New Mexico's Revised 2010 Renewable Energy Portfolio Procurement Plan, New Mexico Public Regulation Commission Case Number 10-00037-UT: Testimony, April 27, 2010, May 11, 2010, May 20-21, 2010.

SAN JUAN BASIN ROYALTY TRUST

In the matter of San Juan Basin Royalty Trust v. Burlington Resources Oil & Gas Company, L.P., Case No. D-1329-CV-2008-00751, Thirteenth Judicial District, County of Sandoval, State of New Mexico: Report, July 14, 2009; Affidavit, March 18, 2010; Deposition April 20, 2010.

THE BOARD OF REGENTS OF THE UNIVERSITY OF NEW MEXICO

In the matter of a Rulemaking to Revise NMPRC Rule 17.7.2 NMAC to Implement the Efficient Use of Energy Act, New Mexico Public Regulation Commission Case Number 08-00024-UT: Report, July 31, 2009; Testimony, June 28, 2009; Affidavit, May 11, 2009, April 13, 2009.

In the matter of the Application of Public Service Company of New Mexico for a Revision of its Retail Electric Rates Pursuant to Advice Notice No. 352, New Mexico Public Regulation Commission Case Number 08-00273-UT: Testimony, April 9, 2009, March 16, 2009.

In the matter of the Joint Motion of Public Service Company of New Mexico and International Brotherhood of Electrical Workers for Implementation of Emergency Fuel and Purchase Power Adjustment Clause, New Mexico Public Regulation Commission Case Number 08-00092-UT: Testimony, May 17, 2008, May 9, 2008.

In the matter of the Application of Public Service Company of New Mexico for a Revision to its Retail Electric Rates Pursuant to Advice Notice No. 334, New Mexico Public Regulation Commission Case Number 07-00077-UT: Testimony, December 17, 2007, November 19, 2007, October 22, 2007.

In the matter of the Application of Public Service Company of New Mexico for Approval of Electric Energy Efficiency and Load Management Programs and Program Cost Tariff Riders Pursuant to the New Mexico Public Utility and Efficient Use of Energy Acts, New Mexico Public Regulation Commission Case Number 07-00053-UT: Testimony, May 25, 2007.

In the matter of the Commission's Investigation of the Rates for Gas Service of Public Service Company of New Mexico, New Mexico Public Regulation Commission Case Number 03-00017-UT: Testimony, May 23, 2003.

In the matter of the Commission's Investigation of the Rates for Electric Service of Public Service Company of New Mexico, New Mexico Public Regulation Commission Case Number 2761; Testimony, June 11, 1999, May 6, 1998, April 30, 1998, April 6, 1998.

In the matter of the Commission's Investigation of the Rates for Gas Service of PNM Gas Services, a Division of Public Service Company of New Mexico, New Mexico Public Utilities Commission Case Number 2762; Testimony, February 13, 1998.

In the matter of the Petition of PNM Gas Services, a Division of Public Service Company of New Mexico, for a Revision to its Rates, Rules, Forms and Charges Pursuant to Advice Notices Nos. 592, 593, and 594, New Mexico Public Utilities Commission Case Number 2662: Testimony, February 23, 1996, January 16, 1996.

UNITED STATES DEPARTMENT OF JUSTICE, CIVIL FRAUD DIVISION, ON BEHALF OF THE UNITED STATES DEPARTMENT OF INTERIOR, MINERALS MANAGEMENT SERVICE

In the matter of United States of America ex rel. Harrold E. (Gene) Wright v. Chevron U.S.A., Inc. et al., Civil Action No. 5:03 CV264, United States District Court for the Eastern District of Texas, Texarkana Division: Deposition, March 12-13, 2008; Report, May 1, 2008, April 25, 2008, March 10, 2008, December 7, 2007.

TAXATION AND REVENUE DEPARTMENT, STATE OF NEW MEXICO

In the matter of The Consolidated Protests of Lea Power Partners LLC to State Assessed Property Tax Bureau Notices of Property Value for 2012, 2013, 2014, 2015 and 2016, before the Administrative Hearing Office, State of New Mexico: Testimony, June 21-22, 2017; Deposition May 18, 2017; Report, May 18, 2017.

Consensus Forecast of New Mexico General Fund Revenues, presented to the New Mexico Legislature; Testimony before the Legislative Finance Committee, August 22, 2012, December 3, 2012; Testimony before the Revenue Stabilization and Tax Policy Committee, August 30, 2012, December 10, 2012.

In the matter of Ute Mountain Ute Tribe v. Goodwin (New Mexico Taxation and Revenue Department), Case No. 07-CV-00772, United States District Court for the District of New Mexico: Testimony, May 8, 2009; Deposition, October 8, 2008; Report, August 20, 2008.

In the matter of Hess Corporation v. New Mexico Taxation and Revenue Department, Cause No. D-0101-CV-2006-01293, First Judicial District, County of Santa Fe, State of New Mexico: Testimony, December 19, 2007.

In the matter of BP America Production Company v. New Mexico Taxation and Revenue Department, Cause No. D-0101-CV-2006-01082, and Hess Corporation v. New Mexico Taxation and Revenue Department, Cause No. D-0101-CV-2006-01293, First Judicial District, County of Santa Fe, State of New Mexico, Deposition, November 28, 2007.

In the matter of BP America Production Company v. State of New Mexico ex rel. Department of Taxation and Revenue, Cause No. D-0101-CV-2003-01309, First Judicial District, County of Santa Fe, State of New Mexico: Deposition, November 28, 2007; Affidavit, January 5, 2004.

In the Matter of Tenneco, Inc., I.D. No. 02-113074-001, Assessment No. 1325721, Before the Hearing Officer of the Taxation and Revenue Department, State of New Mexico: Report, June 22, 1992.

BOLACK MINERALS COMPANY

In the matter of Bolack Minerals Company v. Burlington Resources Oil and Gas Company, et al., Cause No. CV-97-96-1, Eleventh Judicial District, County of San Juan, State of New Mexico: Report, December 11, 2006.

JOE R. VASQUEZ, ET AL., (CLASS ACTION)

In the matter of Joe R. Vasquez, et al., v. Republic Waste Industries, Inc., et al., Cause No. C-5798-99-B, District Court of Hidalgo County, Texas, 93rd Judicial District: Report, October 23, 2006.

J.C. DOBBINS, ET AL. (CLASS ACTION)

In the matter of J.C. Dobbins, et al. v. Mobil Oil Corporation, et al., Case No. CJ-2001-53, District Court of Custer County, Oklahoma: Testimony, May 1, 2008; Deposition, March 26, 2008; Report, July 15, 2005, August 31, 2004.

JACK HOLMAN AND DOROTHY HOLMAN, ET AL. (CLASS ACTION)

In the matter of Jack Holman and Dorothy Holman, et al. v. Patina Oil & Gas Corporation., Case No. 03 CV 9, District Court of Weld County, Colorado: Affidavit, May 16, 2005, May 13, 2004.

F.T. BARR

In the matter of F.T. Barr v. CMS Energy Corp., et al., Cause No. 2001-61529, 333rd District Court of Harris County, Texas: Deposition, March 11, 2004; Report, January 30, 2004.

VILLAGE OF CORRALES, NEW MEXICO

In the matter of Application of the City of Rio Rancho for Permit to Appropriate Water and Drill New Wells, RG-6745 through RG-6745-S-34, Before the New Mexico State Engineer: Testimony, January 17, 2001; Report, June 12, 2000.

In the matter of Intel Corporation Applications, RG-57125, RG-57125-S and RG-57125-S-2, Before the New Mexico State Engineer: Report, March 25, 1994.

RUTTER & WILBANKS CORPORATION, ET AL. (CLASS ACTION)

In the matter of CO2 Claims Coalition, LLC v. Shell Oil Company, et al., Cause No. 96-Z-2451, United States District Court, District of Colorado; Margaret Ann Ainsworth, et al v. Shell Oil Company, et al., Cause No. 00-Z-1856, United States District Court, District of Colorado; Rutter & Wilbanks Corporation, et al v. Shell Oil Company, et al., Cause No. 00-Z-1854, United States District Court, District of Colorado, & Thomas E. Watson, et al. v. Shell Oil Company, et al., Cause No. 00-Z-1855, United States District Court, District of Colorado: Affidavit, January 25, 2002.

In the matter of Rutter & Wilbanks Corporation, et al vs. Shell Oil Company, et al, Cause No. 00-Z-1854, United States District Court, District of Colorado, and Margaret Ann Ainsworth, et al vs. Shell Oil Company, et al., Cause No. 00-Z-1856, United States District Court, District of Colorado: Affidavit, October 22, 2001.



ELLIOTT INDUSTRIES LIMITED LIABILITY COMPANY

In the matter of Elliott Industries Limited Liability Company v. Conoco Inc., Amoco Production Company and Amoco Energy Trading Corp., Cause No. CIV00-655-JC-WWD-ACE, United States District Court, District of New Mexico: Testimony, September 17, 2002; Deposition, June 22, 2001, May 3, 2001; Affidavit, August 30, 2002, March 28, 2002, June 14, 2001, June 1, 2001, January 19, 2001; Report, May 31, 2002, December 19, 2000.

RUSSELL NEINAST, ET AL. (CLASS ACTION)

In the matter of Russell Neinast, et al. v. Union Pacific Resources Group, Inc., et al., Cause No. 32040, In the 21st Judicial District Court of Washington County, Texas; In the matter of Lowell F. Hankins, et al. v. Union Pacific Resources Group, Inc., et al., Cause No. 97-12-06021-CV, In the 112th Judicial District Court of Crockett County, Texas: Testimony, November 20, 2004; Report, November 16, 2004.

In the matter of Russell Neinast, et al. v. Union Pacific Resources Group, Inc., et al., Civil Action No. 32040, In the District Court of Washington County, Texas, 21st Judicial District: Affidavit, November 13, 2000.

JACK D. STIRMAN (CLASS ACTION)

In the matter of Jack D. Stirman v. Mobil Oil Corporation, et al., Civil Action No. 9:99CV225, United States District Court, Eastern District of Texas, Lufkin Division: Deposition, September 14, 2000.

SARAH PYLE, ET AL. (CLASS ACTION)

In the matter of Sarah Pyle, et al. v. Fina, Inc., et al., Civil Action No. 9:99CV285, United States District Court, Eastern District of Texas, Lufkin Division: Deposition, December 15, 2000; Affidavit, September 12, 2000.

JACK D. STIRMAN AND BETH BLAKEMORE HUNTER (CLASS ACTION)

In the matter of Jack D. Stirman and Beth Blakemore Hunter v. Exxon Corp., Civil Action No. SA-99-CA-0763-EP, United States District Court, Western District of Texas, San Antonio Division: Testimony, May 9, 2001; Deposition, October 25, 2000; Affidavit, December 10, 2004, October 7, 2004, June 11, 2004, January 25, 2004, August 24, 2000.

CARL ENGWALL ET AL. (CLASS ACTION)

In the matter of Carl Engwall et al. v. Amerada Hess, et al., Case No. D-504-CV-95-00322, District Court of Chaves County, New Mexico: Testimony, July 28, 1999.

HAGOOD-NEW MEXICO TRUST NO. 1

In the matter of Hagood- New Mexico Trust No. 1 v. Phillips Petroleum Company, CV 97-00515, United States District Court, District of New Mexico; Testimony, March 8-10, 2000; Deposition, February 17, 2000; Affidavit, October 18, 1999, December 18, 1998; Report, October 15, 1998.

CINCO GENERAL PARTNERSHIP, ET AL.

In the matter of Cinco General Partnership, et al. v. Burlington Resources Oil and Gas Company, et al., CIV-97-01891, District Court for Bernalillo County, New Mexico; Affidavit, May 7, 1998.

NEW MEXICO PRESS ASSOCIATION

In the matter of Media Advertising Gross Receipts, Senate Bill 19; Testimony before the Senate Ways and Means Committee, State of New Mexico, January 28, 1998.

THE FLORANCE LIMITED COMPANY (THE NORTHERN TRUST BANK, TRUSTEE)

In the matter of Florance Limited Company, et al. v. Amoco Production Company, et al., Case No. D-0101-CV-00097-02928, District Court of Santa Fe County, New Mexico: Affidavit, January 20, 2000; Affidavit, December 23, 1999; Deposition, November 8, 1999; Report, October 19, 1999.

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PROFESSIONAL MEMBERSHIPS:

AMERICAN ECONOMIC ASSOCIATION
INTERNATIONAL ASSOCIATION FOR ENERGY ECONOMICS
ROCKY MOUNTAIN MINERAL LAW FOUNDATION
NEW MEXICO OIL AND GAS ASSOCIATION
APPA: LEADERSHIP IN EDUCATIONAL FACILITIES
NEW MEXICO WATER RESOURCES RESEARCH INSTITUTE, ANNUAL MEETING STEERING COMMITTEE



PROFESSIONAL AWARDS, RECOGNITION AND APPOINTMENTS:

CHAIRMAN, TAX POLICY COMMITTEE, New Mexico Association of Commerce and Industry, 2015-2017.

MEMBER, United States Extractive Industries Transparency Initiative Advisory Committee, 2012-2013.

ALUMNUS OF THE YEAR, Department of Economics, University of New Mexico, May 2012.

"PROJECT OF THE YEAR," *EnergyUserNews*, for the University of New Mexico Campus-Wide Physical Plant Department Utility Projects, October 2004.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**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)**

Case No. 18-_____

**ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, VIENTO LOCO LLC,)
)
)
)**

JOINT APPLICANTS.)

Exhibit JTC-2



***Report on the Economic and Fiscal Impacts
of the Corona Wind Projects, New Mexico***

February 28, 2018

Prepared by:

*John C. Tysseling, Ph.D.
Moss Adams LLP
6565 Americas Parkway NE
Suite 600
Albuquerque, NM 87110
(505) 878-7200*

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Introduction and Summary

INTRODUCTION

Moss Adams LLP has been retained by Pattern Renewables Development Company 2 LLC ("Pattern Development") to provide an economic and fiscal impact analysis for the development of the six wind turbine electric generation facilities potentially located in Guadalupe, Lincoln, and Tarrant Counties ("Corona Wind Projects" or "Projects").¹ The Projects, located in east-central New Mexico, are composed of commercial scale wind powered electric generation and transmission interconnection facilities ("Corona Gen-Tie System") being developed as the anchor tenant to the interstate SunZia Southwest Transmission Project ("SunZia Transmission Project").²

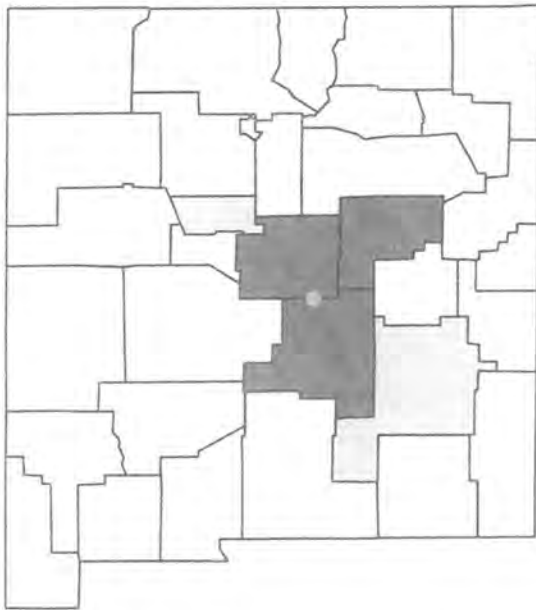
The SunZia Transmission Project consists of two phases: the first will be an approximately 515-mile 500-kilovolt ("kV") alternating current ("AC") transmission line, and a second 500-kV line that will be either AC or direct current ("DC"). The Corona Wind Projects will serve as the anchor tenant facilities to the first phase of the SunZia Transmission Project.

This report is prepared in support of the New Mexico Public Regulation Commission ("PRC" or "Commission") approval process for the siting of the Corona Wind Projects. Because of complex timing requirements for the Projects' approval and completion (e.g., siting approval for the SunZia Transmission Project, timely completion of the Corona Wind Projects to qualify for federal production tax credits, etc.), this Report is being prepared as project plans are still being finalized. For this reason, the Projects' impacts are presented here as preliminary values and subject to modification as the Projects are more accurately defined. Moss Adams expects that this report may be supplemented at a later date with more precise estimates of the economic and fiscal impacts once the Projects' specifications are finalized.

¹ The Corona Wind Projects are comprised of six wind generation projects, each separately owned by a project-specific company. These companies are Ancho Wind LLC, Cowboy Mesa LLC, Duran Mesa LLC, Red Cloud Wind LLC, Tecolote Wind LLC, and Viento Loco LLC. Each project name follows the name of the respective project company (e.g., Red Cloud Wind LLC owns the Red Cloud Wind Project).

² SunZia Transmission, LLC. See Federal Energy Regulatory Commission, "Order Authorizing Negotiated Rate Proposal and Accepting Anchor Customer Open Solicitation and Selection Report," Docket No. ER17-388-000 (September 20, 2017) ("FERC SunZia Order"), for details of the interstate transmission project that will connect the Corona Wind Projects to its customers.

Figure 1: Corona Projects & Facilities Location



With a projected generating capacity of 2,200 megawatts ("MW"),³ the finished Corona Wind Projects will collectively be the largest renewable energy generation facility in New Mexico, and would be the largest contiguous wind farm in the US when completed in 2020.⁴ The Projects will be located across parts of three New Mexico counties: Guadalupe, Lincoln, and Torrance. This central New Mexico region is located on the far western edge of the Great Plains, and is considered to be a prime wind power region recognized for its superior generation resource potential.⁵ See Figure 1 for Study Area location.

Specifically, this report will analyze economic impacts including the

construction and operation of the Corona Wind Projects, and focuses on the employment, spending/income and base economic development impacts.⁶ The fiscal impact assessment will address taxation and government revenue impacts. This report presents the specific results of the impact analyses, as well as outlining the data and methods used to arrive at these results.

A particular focus of this report is the role of the Corona Wind Projects in the context of realizing the local and regional economic objectives with the development of these energy resources. Where meaningful measures quantifying these values are possible, we report the

³ The analyses presented herein are based on the Projects' currently estimated generation capacity, as all components of the Projects' development are not finalized at the time of this Report's drafting. Final development issues relating to specification of all final locations for generation and transmission facilities, other limitations on siting of specific required infrastructure, and issues related to the approval of the SunZia Transmission Project's configuration may impact the specific characteristics of the Corona Wind Projects. These uncertainties, however, do not impact the ability to analyze the economic and fiscal impacts based on an assumed configuration of the Projects' capacity development. The Report will annotate the calculations and assumptions taken where appropriate, and may be impacted by final Projects' development configuration(s). All efforts have been taken to make conservative assumptions of the economic impacts of the Projects to avoid overestimation of these impacts.

⁴ Additionally, based on previously announced or constructed projects, the Corona Wind Projects will constitute one of the two or three largest wind generation installations in the world at the time of its completion (Source: communications with Pattern Development, February 2018).

⁵ US Department of Energy, Office of Energy Efficiency & Renewable Energy, "New Mexico's Clean Energy Resources and Economy", 2013.

⁶ This method can be described as an "export-base" method because it recognizes only those local expenditures that are supported by out-of-state revenues as having a tangible impact on the state economy. New Mexico in-state investment dollars would presumably flow to some other activity and yield a similar economic impact if the Corona Wind Projects did not exist.

estimates of these measured benefits. Where the Projects' development addresses goals articulating general economic and energy policy objectives, we will express those principles and analyze benefits as unquantified components of the development's impact assessment. It is anticipated that as Project-related approvals and development continues, the estimates of the impacts will be able to be refined and quantified with greater precision.

Additionally, although widely recognized as providing positive external economic benefits — such as providing additional electric generation with no carbon emissions, decreasing water use in electricity generation related to development of wind energy, relative compatibility with existing agricultural land uses, and public health benefits associated with avoidance of air quality degradation — the broader economic benefits associated with increased penetration of renewable energy generation in electricity markets are not quantified in the Report's analysis.⁷ Commonly identified as "positive externalities" in the economic literature, the valuation of such external benefits are difficult to quantify and require speculation as to future values provided by these social benefits from the wind turbine generation facilities. It is sufficient to simply mention these additional economic benefits from the Corona Wind Projects' development.

POSITIVE EXTERNALITIES

Externalities generally are discussed as a form of market failure — that is, the transaction values that are observed to occur in a market process *fail to incorporate all the economic values that impact the people in the affected area.*

Where *benefits* are realized by third-parties (not directly involved in the economic activities) that are not incorporated in the transacted economic values, *positive externalities* are present.

Individuals who benefit from positive externalities (without paying) are considered to be free-riders, and it may be important in a society's decision process to acknowledge free-riders and expressly recognize any substantial external benefits.

[See Baumol, W. J. (1972). "On Taxation and the Control of Externalities". *American Economic Review*, 62 (3): 307–22; Pigou, A.C. (1920). *Economics of Welfare*. Macmillan and Co.]

⁷ There are both directly measureable benefits (e.g., health-related hydrocarbon emissions reductions, reductions in water used in energy, etc.) and economic benefits that reflect social preferences that cannot be directly measured (e.g., reduction in the risk of environmental contamination from petroleum production, transportation and storage; increased economic security associated with sustainable energy strategies, etc.).

ECONOMIC DEVELOPMENT IMPACTS OF THE CORONA WIND PROJECTS

Viewed from a broad statewide economic development perspective, the siting and development of renewable wind generation and related infrastructure of the scope contemplated by the Corona Wind Projects creates many robust and long-term economic opportunities for the state of New Mexico.

Development of the electric generation and transmission facilities comprising the Corona Wind Projects offers New Mexico highly desirable economic development investments. Investments in these wind generation and transmission facilities stimulate substantial growth in the renewable energy sector, and foster an economic development climate that broadens the state's long-standing role as a sustainable participant and energy exporter in the energy marketplace. This Report also demonstrates that the economies of the three counties most directly impacted by the Projects will obtain sorely needed injections of substantial new capital assets and related development benefits, both of which will stimulate broader economic growth in rural New Mexico for decades to come. In short, the renewable energy facilities developed will help mitigate the economic challenges facing the rural New Mexico economy, and the economic losses associated with the closure of several of New Mexico's coal-fired generation resources.

Importantly, the Corona Wind Projects will develop new and underdeveloped economic resources in the state of New Mexico — wind energy — that will be directly exported from the state.⁸ Aside from the technology, innovation, and capital investments developed in conjunction with the Corona Wind Projects, this development creates new economic value and opportunity within New Mexico, the product of which will be exported from the state. This is a highly valuable attribute of the Projects, as the Corona Wind Projects will not displace or capture existing commercial energy market activities. Instead, these investments will create the most desirable form of new economic development in its exportation of environmentally preferred New Mexico energy resources. Furthermore, because the Projects are not expected to interconnect to the New Mexico grid, instead utilizing the new SunZia Transmission Project to deliver out-of-state power, they would likewise not negatively affect the transmission capacity of New Mexico's grid. In summary, the Corona Wind Projects will create new economic value that is obtained from economic activities that are expansions of the New Mexico economy.

⁸ NOTE: Corona Projects generation capacity will be committed to long-term Power Purchase Agreements ("PPA's"), but these have not been fully executed at time of this Report's release. Although this contractual component is critical to the development of the Projects, it has little significance to the assessment of economic and fiscal impacts. That is, the out-of-state purchases of exported power are not subject to taxation pursuant to the interstate transaction restrictions under the Commerce Clause of the Constitution, and income earned is retained by the out-of-state Developer of the resources. On the other hand, some landowner compensation is tied to PPA revenue, requiring assumptions to be taken as to the impacts of these PPA's. The uniform nature of the terms of these landowner agreements allow for an aggregated assumption as to the impacts of these contract terms.

New Mexico has a long-established priority for encouraging exactly the economic development engendered by the Corona Wind Projects; the state has expressly encouraged development of renewable energy.⁹ Further, in 2004, the state of New Mexico also enacted a groundbreaking economic development initiative, prioritizing development of renewable energy resources in conjunction with its recognition of the constraints relating to siting and funding of renewable electric transmission facilities investments. In establishing the New Mexico Renewable Energy Transmission Authority,¹⁰ the state formally established its goal to develop renewable energy for export, and recognized the need to expressly facilitate the siting of transmission facilities in the state for service to multi-state customers seeking access to and development of New Mexico renewable energy resources.¹¹

Corona Wind Projects' Scope

To give some idea of the of the scale of the Corona Wind Projects as it relates to current wind generation facilities, as of the end of 2017 the state of New Mexico had a total installed wind power capacity of 1,682 MW available from an installed base of 1,005 wind turbines.¹² The Corona Wind Projects (2,200 MW) by themselves will potentially more than double the currently installed wind generation capacity in New Mexico. The Corona Wind Projects are also projected to be nearly 50% larger than the largest currently installed wind generation facility in the United States.¹³ ***At the time of completion, the 2,200 MW Corona Wind Projects would be the largest contiguous wind farm in the US, and the second or third largest contiguous wind generation installation in the world.***

⁹ See, e.g., Section 7-2A-19 NMSA 1978; Laws 2002, Ch. 59, § 1; 2003, Ch. 419, § 1; 2005, Ch. 104, § 7; 2005, Ch. 181, § 1; 2007, Ch. 204, § 1.

¹⁰ Section 62-16A-3 NMSA 1978; Laws 2007, Ch. 3, § 3; 2011, Ch. 51, § 4.

¹¹ Ashley C. Brown and Jim Rossi, MULTISTATE DECISION MAKING FOR RENEWABLE ENERGY AND TRANSMISSION: SPOTLIGHT ON COLORADO, NEW MEXICO, UTAH, AND WYOMING: Siting Transmission Lines in a Changed Milieu: Evolving Notions of the "Public Interest" in Balancing State and Regional Considerations, 81 U. Colo. L. Rev. 705, Summer 2010.

¹² American Wind Energy Association, "US Wind Industry Fourth Quarter 2017 Market Report", January 25, 2018 ("American Wind Energy Association").

¹³ United States Energy Information Administration, "Today In Energy", May 2, 2017: <https://www.eia.gov/todayinenergy/detail.php?id=31032>. Note that numerous projects throughout North America are proposed and subject to approval, with this report referencing "best available" information at the time of preparation.

The Corona Wind Projects and supporting transmission infrastructure align directly with the New Mexico State Energy Plan.¹⁴ In particular, that plan concludes:

Inadequate transmission access has long been cited as the primary hindrance to New Mexico renewable energy development, as some of the best wind resources, in particular, are located far away from electricity markets.

A significant component of the Projects is their status as the anchor tenant projects for the SunZia Transmission Project,¹⁵ which directly addresses the cited obstacle. Moreover, several other objectives of the State Energy Plan are addressed by the Corona Wind Projects, including:

- Supporting regional energy policy, infrastructure, and development pathways and solutions;
- Ensuring that sound science and economics, as well as the availability of underdeveloped energy resources, drive state energy policy decisions;
- Focus on economic growth, diversification, and private sector job creation;
- Consider appropriate incentives that would increase market potential and competitiveness with other states in the West;



Development of the Corona Wind Projects and the associated SunZia Transmission Project open a new chapter in the New Mexico energy market landscape. Although the Phase I capacity of the additional transmission assets will be fully subscribed by the Corona Wind Projects, the new transmission infrastructure represents long-term assets that are designed to link high-wind speed areas to markets as efficiently as possible. Further, the lifespan of major infrastructure projects — such as SunZia Transmission, and the Corona Wind Projects' internal approximately 60-mile Corona Gen-Tie System assets — is not equal to the engineered lifespan of its infrastructure (e.g., ROW easements and permits for transmission lines will generally have renewal optionality and transferability). As such, these facilities and capacity constitute a further public benefit (i.e., positive externality) which is not quantified in the analyses presented in this Report.

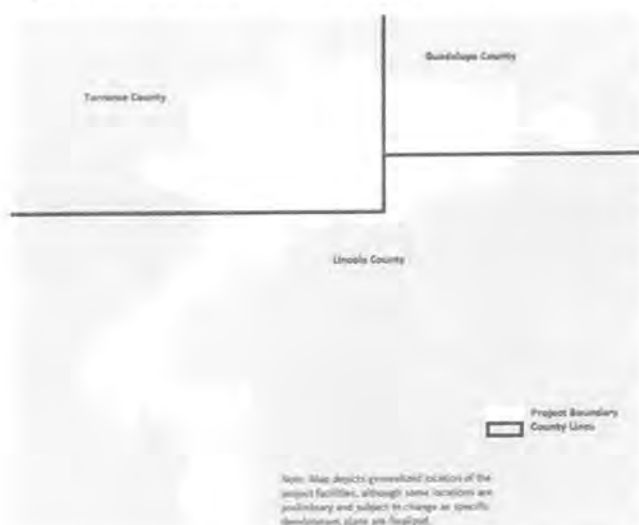
¹⁴ Energy, Minerals & Natural Resources Department, "Seizing Our Potential – the New Mexico State Energy Plan," State of New Mexico, Santa Fe, New Mexico (2015), p. 12.

¹⁵ Pattern Energy Group, LP has been selected as the "anchor customer" for the SunZia Transmission Project, and has entered into a precedent agreement for up to 1,500 MW of Merchant Capacity (100% of Phase I) from the transmission project (See FERC SunZia Order, at p 3). In turn, Pattern Energy will assign its rights to the capacity to the six Corona Wind Projects. It is notable that the Corona Wind Projects and SunZia Transmission Project will provide a significant strategic contribution to New Mexico's role in delivering renewable electric generation to the western electric grid. However, the two projects are connected only pursuant to a Precedent Agreement. Although the two Projects' relationship is significant in relation to synergistic economic development impacts, this report focuses only on the economic and fiscal impacts of the Corona Projects capital investment, development, and operations.

- Accelerate reduction of fresh water consumption (i.e., gallons per MWH generated) in the energy sector; and
- Establish the energy foundation of new and improved infrastructure in electric power transmission.

Additionally, once operational, the economic benefits and revenue streams provided (more generally) by the Corona Wind Projects will be extremely stable and not be as economically volatile as is common to most energy resource developments found in the state of New Mexico. As wind generation technology continues to improve and lower wind speed resources become increasingly economically viable, it is reasonable to expect that high-quality wind resources with transmission solutions such as the Corona Projects will be competitive far beyond the anticipated lifetime of these projects. This stable foundation of economic activity can be anticipated for at least the projected thirty-year life of the Projects ("Study Period"),¹⁶ and will likely continue beyond that time.

Figure 2: Corona Wind Projects Development Area



The Projects establish a new economic infrastructure in both the specific development area (Figure 2) and more generally in New Mexico that will likely foster further developments of a similar nature, potentially spurring a virtuous cycle of renewable energy development and operations. This is particularly true with recognition that the proposed transmission capacity of both phases of the SunZia Transmission facilities will not be fully utilized by the development of the Corona Wind Projects (as currently designed), but the role of the Projects as the anchor tenant to the first phase

of the SunZia Transmission Project's development assures that additional development will have access to an export market for New Mexico's renewable energy resources. Additional wind generation facilities subsequently developed in association with the second phase of the SunZia Transmission Project has not been analyzed in this Report, but would be directly facilitated by the development of the Corona Wind Projects. The Projects and the transmission infrastructure they facilitate represent major infrastructure investments

¹⁶ The thirty-year Study Period is based on the reasonable useful life of a wind facility. This is not a projection of how long the Corona Wind Projects or other similar facilities within the Corona Wind Area will be in operations. Importantly, financing will match PPA terms that are shorter than the anticipated useful life of the facilities, assuring a competitive opportunity for these wind generation resources beyond initial financial commitments to the Corona Wind Projects.

efficiently linking high-wind speed resources to the grid and energy markets the benefits of which New Mexico can reasonably expect to enjoy for the foreseeable future.

As previously noted, there remains some uncertainty as to the specific configuration of the Corona Wind Projects. Landowner negotiations continue to refine the specific locations for Project components, but - as of this writing - the configuration of anticipated locations in the three affected counties are shown in Figure 2.

Summary of Impacts

The economic and fiscal impacts of the Corona Wind Projects will make a significant contribution to the economic base of Guadalupe, Lincoln, and Torrance Counties, with both short-term development activities and long-term contributions to the regional economy. These economic impacts will come in the form of employment, income, construction activities, and additions to the tax base. The short-term impacts during the Development Period will flow from approximately \$2.4 billion in capital investment for the development of the Corona Wind Projects. These developments will occur over approximately 300 thousand acres ("Corona Wind Area") in the three-county area, and will introduce significant economic activities for decades to come.

The comprehensive impacts of the Corona Wind Projects are summarized in the following table. These impacts are calculated over the thirty-year Study Period, although there is certainly reason to believe that the impacts will have longer-term and permanent beneficial consequences for the New Mexico economy (i.e., structural economic changes).

Table 1: Local Economic Impacts

Summary Economic Impacts of The Corona Project (30-Year Analysis) (\$millions)									
	Local Construction Expenditures	Local Employment (jobs)*	Local W&S Expenses	Landowner Payments	Other Operating Costs	PILOT Payments	Direct Economic Impacts	Direct & Indirect Economic Impacts	Direct, Indirect & Induced Economic Impacts
Total Economic Impact	\$116	94	\$195	\$430	\$1,928	\$106	\$2,609	\$3,380	\$3,751
Discounted Present Value ("DPV") of Impacts (@5%)	\$116	N/A	\$129	\$221	\$988	\$54	\$1,395	\$1,807	\$2,015

*Operations and Maintenance jobs. Does not include construction related employment, but construction-related employment included in dollar value of construction-related expenditures.

REGIONAL ECONOMIC IMPACTS: SUMMARY

The three-county region in which the Corona Wind Projects will be developed is dominated by high desert ranchland, and bordered by forested mountain landforms on its western boundaries. The largely rural area has significant access to major urban economic and cultural centers — the Corona Wind Area has relatively close access to recreation and resort facilities in the Ruidoso and related mountain communities to the south and west; regional trade centers in Roswell and Alamogordo to the south; and the state's largest metropolitan area comprising the Albuquerque and middle Rio Grande suburban communities less than a two-hour drive from the Corona Wind Area. These larger population centers, combined with the traditional ranching communities found within the Corona Wind Area, provide robust economic and cultural resources which will provide support Project activities.

The employment impacts are expected to be significant, with the Corona Wind Project creating an estimated 1,186 total jobs during construction, with an estimated 356 of those jobs sourced from local labor resources. Payroll during the development phase can be anticipated to add approximately \$59.9 million in income to the local labor force for the Corona Wind Project construction alone. These jobs will be created nearly simultaneously with the SunZia Transmission Line construction with local labor resources creating significant economic impacts not only to firms based in the three-county area, but also significant skilled labor resources attracted from the middle Rio Grande suburban areas and large regional trade centers, such as Roswell and Alamogordo, which are adjacent to the Study Area. The bulk of these short-term impacts will occur in 2019 through 2020. Of the total capital expenditures during construction of the Corona Project, it is estimated that \$116.3 million in contracts will flow to local construction service providers.

Once construction is completed and operations commence, the Corona Project is expected to result in the employment of approximately 94 full-time personnel with a payroll estimated to be approximately \$4.5 million per year and total operating costs of approximately \$82.7 million per year.

The land lease, easement, and royalty agreements with the private landowners on which the wind generation facilities will be sited will provide direct new revenues to a total of up to 100 landowners within the Corona Wind Area and including New Mexico State Lands. The Corona Wind Projects' landowners are expected to realize approximately \$12.5 million of new revenues during the Development Period, and an average of approximately \$13.9 million per year during the Operational Period.

The regional significance of the Corona Wind Projects as the anchor tenant facilities to the SunZia Transmission Project cannot be ignored. We do not attempt to specifically quantify the additional benefits of the renewable resource development opportunities (e.g., new generation capacity associated with the second phase of the SunZia Transmission Project, regional economic impacts of development and operations, etc.) facilitated by the

development of the SunZia Transmission infrastructure. However, the Corona Wind Projects' role in developing and interconnecting the new New Mexico transmission system capacity (i.e., as the anchor tenant for the first phase of the SunZia Transmission Project) with the rest of the western interstate electric grid has significant economic importance. In short, the Corona Wind Projects are an important catalyst in promoting both New Mexico energy exports and the further development of the state's renewable energy resources.

Pattern Development estimates Gross Receipts Tax ("GRT") revenues will be increased as a result of the construction activities by an estimated \$22.4 million for the Corona Wind Projects during the development period (2019–2020). Fiscal impacts associated with property taxes are muted as a result of the financing through Industrial Revenue Bonds ("IRBs"),¹⁷ but provisions have been made by the developers to provide payments in lieu of taxes ("PILOTs") to a number of the municipal and school district beneficiaries of these tax revenues that are expected to be approximately \$3.5 million annually.

Table 2: Summary of Economic Impacts

Summary of Economic Impacts (\$millions)			
	Direct Impact	Direct & Indirect Impact	Direct, Indirect & Induced
Development Period Impacts			
Local Construction Contracts	\$116.3	\$149.6	\$186.0
Land Owner Benefits	\$12.5	\$21.4	\$25.4
Total Annual Development Period Impacts	\$128.8	\$171.0	\$211.3
Operational Period Impacts (Annual Average)			
Operational Costs	\$68.8	\$83.2	\$89.7
Land Owner Benefits	\$13.9	\$23.8	\$28.3
Total Annual Operational Period	\$82.7	\$107.0	\$118.0

In sum, the direct economic impacts of the Corona Wind Projects during the Development Period is expected to be about \$128.8 million and approximately \$211.3 million if the full economic multiplier effects are considered. Fiscal impacts during the Development Period will directly add an estimated \$22.4 million to government coffers. Once operational, the Corona Wind Projects is expected to generate a direct annual economic impact of approximately \$82.7 million, and with consideration of the economic multiplier impacts, this

¹⁷New Mexico counties and municipalities are authorized to approve IRBs, which provide government-sponsored financial underwriting, providing developers tax-exempt treatment as relates to New Mexico Gross Receipts Tax and Property Tax liabilities with respect to significant Project components. Typically, the government sponsors also negotiate provisions for PILOT payments to offset the lost tax revenue distributions to the local governments.

economic benefit is estimated to be about \$118.0 per year.¹⁸ Fiscal impacts from operations are estimated to add approximately \$3.5 million annually through PILOT payments to local governmental entities.

¹⁸ Common to economic impact analyses are estimates of the "jobs" created by a development project. Direct jobs are relatively straight forward to estimate, and in this case Pattern Development has provided total labor hours (by job category) as the basis for the Development Period employment. Where development provides permanent jobs, economic multiplier models suggest indirect and induced job impacts may be forecast. This approach is not appropriate in this particular setting.

That is, the local construction/development period employment are not permanent jobs (i.e., would probably employ existing New Mexico construction workers – or use itinerate workers – in the various trades required), and therefore are less likely to create jobs in the same sense as permanent construction jobs (which attract/employ new workers to NM who become permanent residents). For example, the additional expenditures made by the construction workers at the "Corona Diner" (a hypothetical establishment) will not likely cause the Diner to hire additional workers, but simply meet this additional demand with the labor resources they already employ.

In a similar fashion, during the operations period the estimated 94 permanent employees (further described herein) will likely be deployed in numerous communities, and their economic activities highly "diluted" (e.g., geographically). With respect to these employees, it may be more reasonable to project indirect and induced job impacts, but at most will be likely to create 40-50 additional permanent jobs (if any). Thus, I have adopted a conservative approach, ignoring the creation of additional indirect/induced jobs, but I do identify direct, indirect and induced economic activities (expenditures) associated with the wages paid to these new employees (jobs).

Economic Foundations

DESCRIPTION AND OVERVIEW OF THE CORONA WIND PROJECTS

The prospect for large scale development of wind resources in New Mexico has been apparent for some time, and the current wind generation capacity of 1,682 MW¹⁹ only begins to tap the state's wind resources potential. The Corona Wind Projects will more than double the total wind generation capacity in New Mexico, as the Projects are anticipated to bring additional wind generation capacity of about 2,200 MW on-line in the State of New Mexico by the end of 2020.²⁰

The Corona Wind Projects will cover parts of three Central New Mexico counties: Guadalupe, Lincoln, and Torrance, and will be constructed on a mix of private and state trust land. Project construction is expected to be completed in 2020.

The Corona Wind Projects will be the anchor tenant for the SunZia Transmission Project, which is proposed to consist of two approximately 1,500 MW 500-kV alternating current transmission lines²¹ that will transport electricity from New Mexico across the Desert Southwest.

In total, it is anticipated that the Corona Wind Projects will create approximately \$2.4 billion in capital investment in renewable energy generation facilities in New Mexico, and significant economic benefit to the neighboring communities.

NOTE TO READER:

The data reported herein attempts to rely on the most current and/or relevant data available. There are numerous sources for many data series, and in many cases, inferences must be taken by "cross-referencing" data from multiple sources of information and sometimes data from multiple years. A reader should undertake review of the information presented with the expectation that the narrative is assembled to relate a comprehensive perspective on the economic activities described and understand that the specific data referenced may be the "best available" to support the economic analyses presented.

¹⁹ American Wind Energy Association, *op. cit.*

²⁰ Several new projects have recently been announced, including the Xcel's Energy's Sagamore Wind Project (552 MW in Roosevelt County, New Mexico), and Mesa Canyons Wind LLC (Phase I 330 MW, with full project build-out up to 1,000 MW in Lincoln County, New Mexico). It is anticipated that both of these projects will be completed by the end of 2020 to be eligible for the federal production tax credit.

²¹ SunZia Transmission plans to complete the Project in two phases. Phase I includes a 500kV HVAC transmission line and substations, total 1,500 MW of capacity. Phase II includes a 500 kV HVAC transmission line (for an additional 1,500 MW of capacity or a high voltage direct current transmission line for an additional 3,000 MW of capacity). Federal Energy Regulatory Commission, Order Authorizing Negotiated Rate Proposal and Accepting Anchor Customer open solicitation and Selection Report, FERC Docket No. ER17-388-000, September 20, 2017.

The Application submitted to the PRC seek approval for the location of the Corona Wind Projects generation and transmission facilities, with this Report focusing its analysis of economic and fiscal impacts on the specific activities relating to the Projects (to the extent allowed by available data).

Table 3: Estimated Project Costs

Estimated Corona Projects Costs	
	Project Costs (\$millions)
Turbines & Balance of Project ("BOP")	\$2,074
Interconnection Costs	\$105
Developer / Finance / Contingency Expenses	\$204
Total Project Costs	\$2,383

Located in the heart of central New Mexico and southeast of Albuquerque, the Corona Wind Projects will cover approximately 300 thousand acres over three counties and a mix of state and private lands. Land rights agreements are in place with the owners of the properties, with both direct payments for Rent and Easements; specific facilities fees (e.g., meteorological towers, turbine installation), Wind Turbine Rental, and Transmission Corridor; as well as production-based payments during operations.²² In addition, some of the landowners participating in the Wind Projects will receive development payments as they are the original owners of the Projects that have subsequently been acquired by Pattern Development. IRBs have yet to be negotiated by the county and local governments, with provisions for PILOT payments for the impacted counties and various school districts in the region. Given total project costs of nearly \$2.4 billion, IRBs can be expected to exceed \$2.0 billion in total amount. In short, the Corona Wind Projects will provide new economic based development opportunities to the three-county region in which it will be located.

²² There are also land owner agreement provisions relating to payments for damages (if any) to crops and livestock in conjunction with the development and operations of the wind project facilities.

Economic and Demographic Profiles

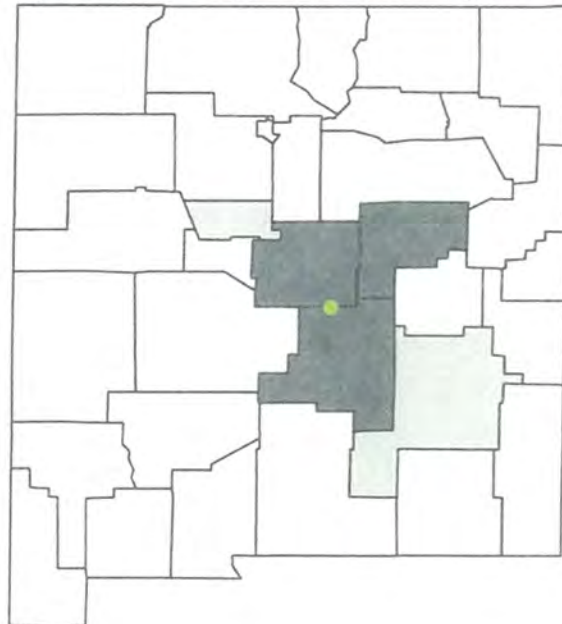
The economic and demographic profiles were compiled using data from a variety of sources including:

- The Bureau of Labor Statistics
- The US Census Bureau
- The United States Department of Agriculture
- New Mexico Taxation and Revenue Department

The most recently available data is used throughout the profiles, ranging from 2012, for agricultural data, to 2016, for certain population and demographic information.

Specific source information is provided in the Appendix. A map of the Study Area is shown in Figure 3, below. The three counties which will contain portions of the Projects are shaded in dark green. Because of the proximity of the Projects to the Albuquerque Metropolitan Statistical Area ("MSA"), it is expected that the MSA will contribute significant resources. The city of Roswell is also expected to contribute to the Projects. For that reason, Bernalillo and Chaves counties are shaded in light gray. Corona, the Projects' namesake town, is marked with a bright green circle.

Figure 3: Map of Study Area and Surrounding Counties



STUDY AREA - ECONOMIC AND DEMOGRAPHIC PROFILE

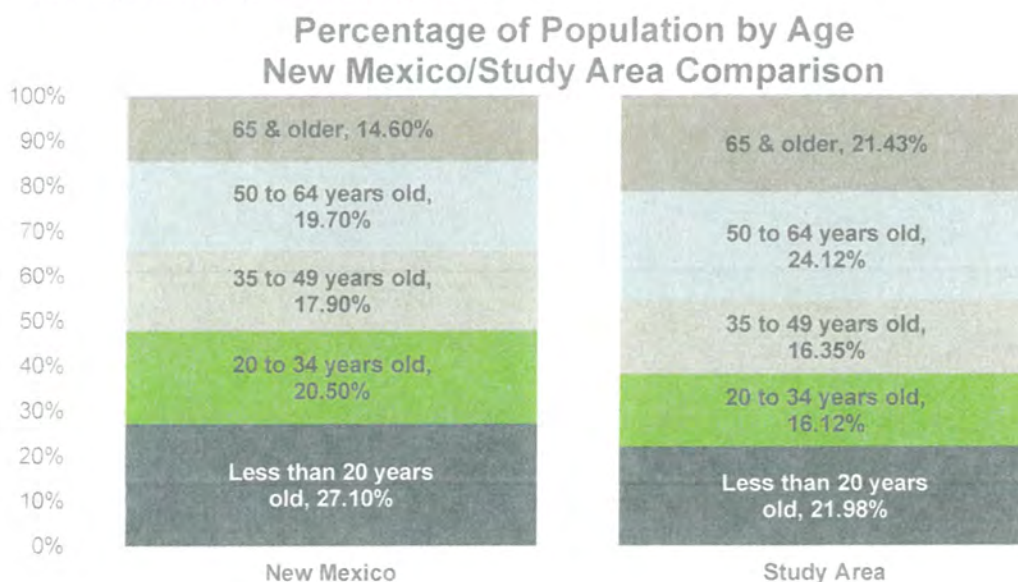
The Study Area is composed of three central New Mexico counties: Guadalupe, Lincoln, and Torrance. It covers a diverse geographical area, ranging from high plains to tree covered mountains. Guadalupe County is the smallest of the three by geographic area, and also has roughly a quarter of the population of the other two counties (reflecting less than one-eighth of the total Study Area population). Lincoln County has both the largest population and the largest geographic area. Torrance County, however, has the greatest population density of the three counties. An overview of the area's population demographics is shown in Table 4.

Table 4: Study Area County Population

Study Area Counties (2016 Population Figures)			
County	Population	Geographic Area (Sq. Mi.)	Population Density (people/square mile)
Guadalupe	4,376	3,032	1.4
Lincoln	16,622	4,831	3.4
Torrance	15,302	3,346	4.6
Study Area Total	36,300	11,209	3.2

Generally stated, the Study Area has a higher concentration of its population which is fifty years old and older than is demonstrated in the age cohorts of New Mexico as a whole (Figure 4).

Figure 4: Comparison of Age Distribution by Cohort



The Study Area as a whole comprises 1.74% of New Mexico's population and has been experiencing a significant population decrease over the past six years. Table 5 demonstrates additional population demographics of the Study Area and the State.

Table 5: Study Area Population and Growth

2016 Population and Growth for Study Area ²³			
Study Area Population		State Population	
2016 Population	2010 – 2016 Population Growth Rate	2016 Population	2010 – 2016 Population Growth Rate
36,300 (1.74% of NM state population)	- 6.15% per annum	2,085,109	+1.06% per annum

The Study Area has an unemployment rate of 7.0%, which is somewhat higher than the unemployment rate in the State (6.2%). Table 6 shows a labor force and employment profile for the Study Area as compared to the state as a whole, reflecting that the Study Area comprised 1.7% of the total New Mexico labor force in 2016.

Table 6: State and Study Area Labor Force

2016 Labor Force and Employment Data ²⁴					
Study Area			State Total		
Labor Force	Employment	Unemployment Rate	Labor Force	Employment	Unemployment Rate
15,592	14,494	7.0%	931,908	873,924	6.2%

Figure 5: State and Study Area Average Annual Compensation



The US Bureau of Labor Statistics 2016 total wages and salaries report for covered employment in the Study Area provides an estimated average annual compensation of \$29,618 per employee. The New Mexico statewide average compensation is \$42,599 per year, revealing that reported wages and

²³ US Census Bureau, American Community Survey 2015.

²⁴ Bureau of Labor Statistics, Quarterly Census of Employment and Wages 2016 Annual Averages (note: non-farm employment only).

salaries in the Study Area are approximately 70% of the state average (Figure 5).

Additionally, the US Census Bureau estimates a per capita income of \$20,292 for the Study Area, as compared with \$24,012 for the state of New Mexico.²⁵ The higher proportion of the Study Area per capita income (in relation to New Mexico as a whole, as compared to the compensation data previously discussed) likely reflects the role of investment and retirement income in the somewhat older profile of the Study Area population.

The largely rural, sparsely populated Study Area's dominant land use is focused on agricultural business enterprises (particularly ranching), but the dominant economic activities (measured by reported employment and output) are related to retail trade, hospitality, and health care.

Private firms comprise about 83% of the business entities in the Study Area. However, this data excludes agricultural employment, which is recognized to be a significant component of the rural economy in the Study Area. Due to the population and predominantly rural nature of the counties' land area, most of the establishments in the Study Area are quite small, with a limited number of employees.

Focusing on employment, the top six private business sector employers are reflected in Figure 6 and Table 7. Excluding the agricultural sectors, the statistics suggest that the Study Area's economy is largely driven by retail, accommodations and food services; healthcare and social assistance; and public administration. These four sectors alone comprise around two-thirds of the Study Area's total annual employment by industry.

SURROUNDING AREA INPUTS

A distinguishing characteristic of the Corona Wind Projects is that its location, covering parts of three largely rural counties, is also in relatively close proximity to a large proportion of the specialty construction contracting capacity of the state. As reflected in Figure 3, Corona is in the heart of the three Study Area counties (Guadalupe, Lincoln, and Torrance) and is less than a two-hour drive from the Albuquerque Metropolitan Statistical Area (MSA). The MSA is expected to be competitive in contributing a large proportion of project labor. Over 47% of state-wide construction workers (who are employed by over 1,900 firms) reside in the Albuquerque MSA. The major highways and a variety of secondary roads are available to reach the Projects locations from the MSA. This provides significant opportunity for BOP contracting and staging of Projects labor and materials. Also, the City of Roswell is about the same distance from the Projects area, and could also contribute to the overall mix of labor force, though likely not as much as Albuquerque.

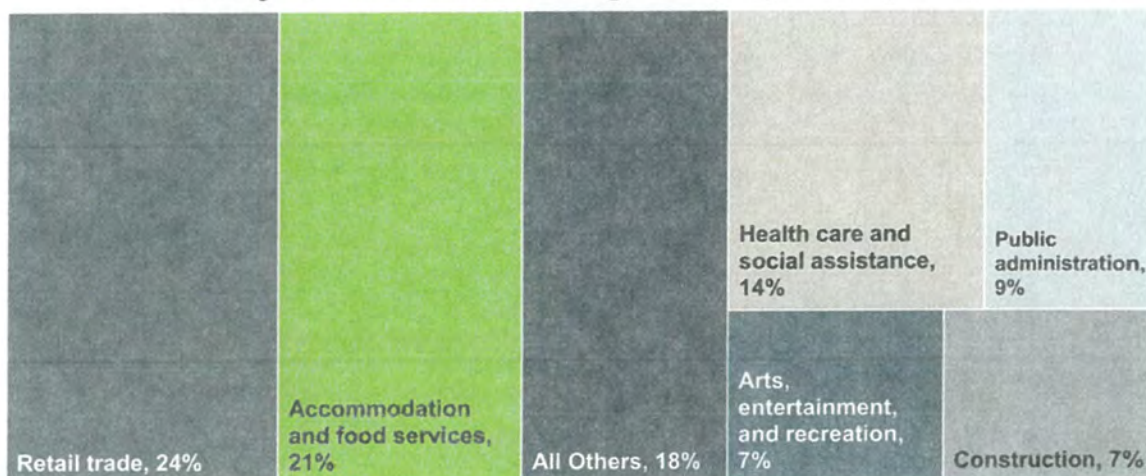
SOURCE: New Mexico Department of Workforce Solutions, Quarterly Census of Employment and Wages.

²⁵ Bureau of Labor Statistics, Quarterly Census of Employment and Wages 2016 Annual Averages



Figure 6: Study Area Average Annual Employment By Industry

Study Area Annual Average Employment (2016)



The demographic data, combined with the analysis of employment and output by industry suggests that there is a valuable regional labor resource in the Study Area and surrounding communities available for the development, construction, and maintenance of the Projects.

Table 7: Top Six Industry Sectors by Employment

2016 Data for Top Six NM Study Area Private Industry Sectors Ordered by Annual Employment ²⁶					
Sector	Average Establishments		Annual Average Employment		Annual Wages Per Employee
	Count	% of Private Establishments	Count	% of Private Employment	
NAICS 44-45 Retail trade	192	15%	1,989	24%	\$24,602.16
NAICS 72 Accommodation and food services	140	11%	1,777	21%	\$15,706.87
NAICS 62 Health care and social assistance	153	12%	1,190	14%	\$42,995.17
NAICS 92 Public administration	95	7%	789	9%	\$41,034.08
NAICS 71 Arts, entertainment, and recreation	39	3%	578	7%	\$23,108.61
NAICS 23 Construction	164	13%	565	7%	\$32,944.88

Agriculture — ranching in particular — forms a significant component of the economy in the Study Area. Most of the agricultural products that are produced in the Study Area come from Torrance County, but given the rural character of all of the counties and the predominance

²⁶ Bureau of Labor Statistics, Quarterly Census of Employment and Wages 2016 Annual Averages.

of ranching activities throughout the Study Area, agricultural businesses still play a large role in all three counties. Table 8 presents an agricultural profile for the Study Area; the table does not include forestry data, as this data was not included in the 2007 and 2012 censuses.

Table 8: Study Area Farm Demographics

2012 and 2007 New Mexico Study Area Farm Demographics					
2012 and 2007 Farm Demographics					
Number of Farms	2012	2007	Average Farm Size (acres) ²⁷	2012	2007
	1,323	1,180		3,826	4,195
2012 Market Value of Agricultural Products Sold (\$ millions)					
Crops		Livestock and Poultry		Total	
\$24.26		\$68.84		\$93.10	
26.1%		73.9%			
2012 Value of Sales by Commodity Group (\$ millions)					
Grains, Dry Beans and Peas	Corn	Other Crops	Cattle and Calves	Other Livestock and Poultry	
\$9.99	\$9.44	\$4.81	\$56.47	\$12.37	

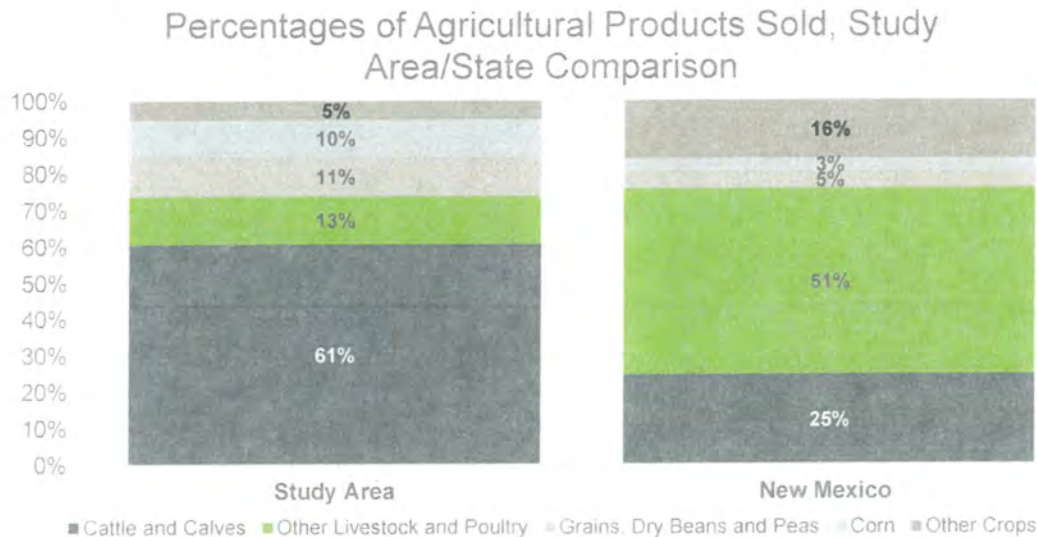
As noted in Table 8, the trend for the time period between 2007 and 2012 indicates an increase in the number of farms within the Study Area. Between 2007 and 2012, the number of farms increased 12%. Due to this sizable increase in the number of farms, combined with the decrease in the average farm size, it appears that a relatively small amount of additional acreage was brought into production and a number of the farms were divided up. In 2012, there was reported to be almost 5.1 million acres in agricultural production in the Study Area. ²⁸

The mixture of agricultural products sold for the Study Area is reflected in Figure 7 and reveals a heavy concentration of cattle and calf production, followed by the production of other livestock and poultry. The production of crops in the Study Area contributed nearly \$24.3 million to its economy, including grains, dry beans and peas; corn, and other crops, but most of these crops are produced solely in Torrance County.

²⁷ Weighted average of farm size by number of farms.

²⁸ Approximately 7,909 square miles, representing almost 71% of the total Study Area.

Figure 7: Percentages of Agricultural Products Sold, Study Area & State



While New Mexico as a whole has a similar percentage of total crops sold to that of the Study Area, there is a stark difference when it comes to livestock production. The Study Area's agricultural sales are strongly focused in cattle and calves (61% of total agricultural sales). The state, on the other hand, focuses more heavily on other livestock and poultry, not just cattle and calves. The total share of livestock in agricultural production output is roughly similar.

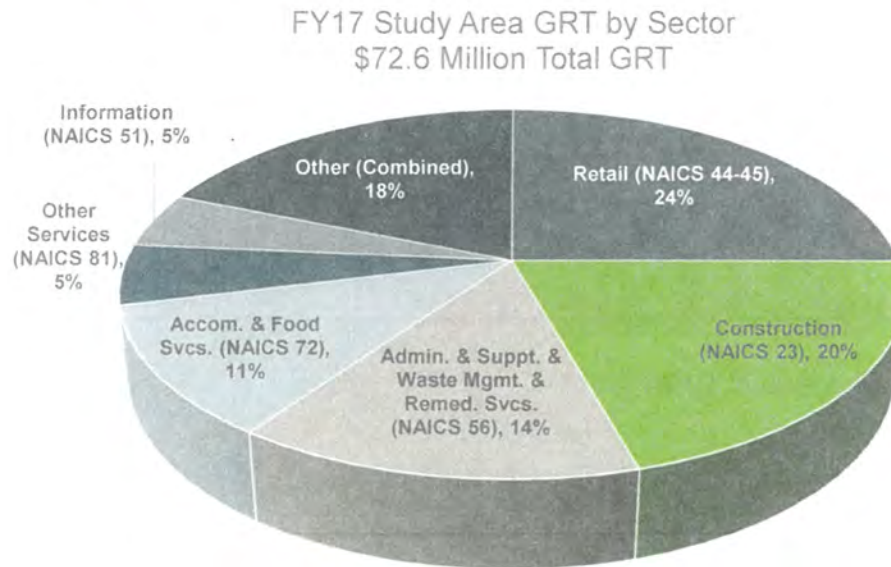
The role of agriculture in the Study Area's economy is best reflected in comparing the reported \$93.1 million agricultural production to the \$972.8 million of reported Taxable Gross Receipts.²⁹ It is clear that agriculture is a significant foundation of the Study Area economy, but that the previously identified non-agricultural sectors provide for the dominant employment and income in the regional economy.

The Study Area had over \$72.6 million in GRT collections in Fiscal Year 2017, providing 1.83% of the total GRT collections in the State. The economic sector reporting the highest levels of GRT in the Study Area is the Retail Trade sector, with revenues from the sales in this sector constituting 24% of the GRT collections. This is followed by the Construction sector which boasts 20% of the total GRT (Figure 8). Construction representing 20% of the GRT and only 7% of the employment in the Study Area highlights the ready supply of

²⁹ New Mexico Taxation and Revenue Department RP-80 Monthly Report. Note also that agricultural production activities are largely excluded from GRT liability.

construction firms and workers from the larger population centers surrounding the Study Area.³⁰

Figure 8: Study Area GRT by Sector



The Administrative and Support and Waste Management and Remediation Services sector also plays an important role in the Study Area. There are two large privately run prisons in the region — one in Torrance County and one in Guadalupe County — though the Torrance County Detention Center (with 203 employees) closed in September 2017.³¹ It is also important to note the contribution of Accommodation and Food Services to both employment and gross receipts in the Study Area, as that sector is especially important in southern Lincoln County.

In sum, the economic data for the Study Area reflects overall weakness in business activities, and associated employment. The Corona Wind Project will make a very positive contribution to the economic activities in the Study Area, with a reasonable expectation that the negative trends and conditions discussed in the preceding substantially reversed by the development and operation of the Corona Wind Project (and related facilities).

Property Taxes are a critical component of the fiscal impact analysis, as this is the primary revenue source for county government operational budgets in the Study Area. A look at the property tax collections by county for the Study Area (Figure 9) shows that Lincoln County

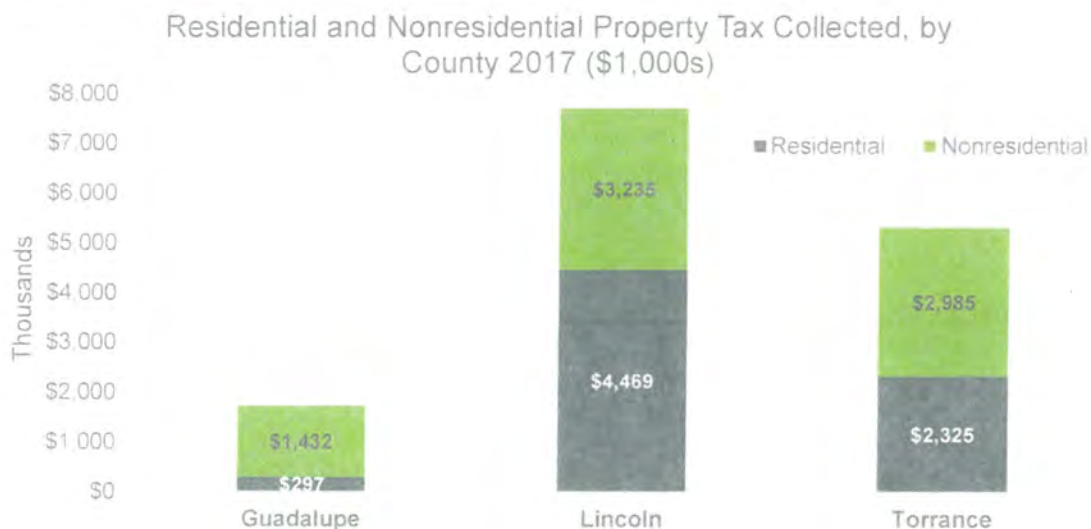
³⁰ GRT is reported based on the location where the economic activities occur, and employment is reported based on place of residence.

³¹ Of recent there has been discussion of re-opening the closed prison facility, but no additional information is available as to the potential for this to occur.

accounts for over half of the total property tax receipts, while Torrance County counts for just over one third.

Statewide, property tax obligations for county operations and debt service within New Mexico total over \$466 million,³² with the Study Area counties collecting just over 3% of that for 2017. As a whole, about 53% of Study Area property taxes are collected from nonresidential property, and 47% from residential property. The mix of residential and nonresidential property taxes is not consistent between the three counties, as can be seen in Figure 9. Important to note that in the Study Area, school districts receive about 30% of property tax revenues. Other recipients, in addition to the state, county, and municipal governments include community colleges and hospitals (See Table TA-1 in Technical Appendix for additional property tax details).

Figure 9: Study Area Property Taxes Collected by County³³

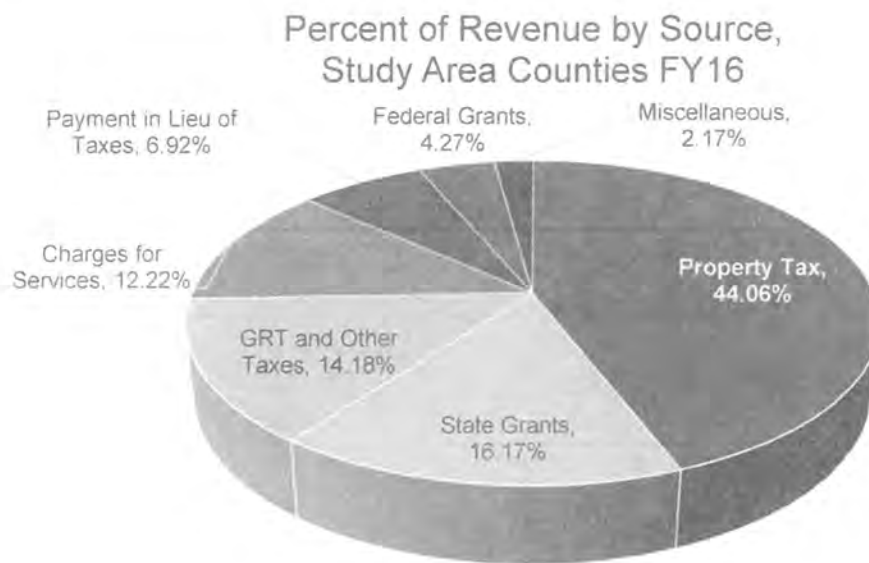


³² Local Government Division, Budget and Finance Bureau, "Property Tax Facts for Tax Year 2017," New Mexico Department of Finance Administration, Santa Fe, NM (Table 3).

³³ Property tax obligations reflect property taxes due based on 2017 rate certificates filed with the New Mexico Department of Finance and Administration, for County Operations and Debt Service Purposes.

The role of taxes and other revenue sources in the county budgets for the three counties comprising the Study Area is revealed in the following graphic (Figure 10). It is apparent that property taxes are an important component of the revenues relied on in for the fiscal activities of the county governments, and that GRT and other taxes are a lesser source of revenues for the governments. Although the assets developed by the Corona Wind Projects will be largely excluded from the Property Tax and GRT liabilities as a result of IRB support for these investments, there will be significant additional economic activities created by the development of these generation and transmission assets as a result of the development activities.

Figure 10: Study Area County Budget Revenue, by Source



Analysis of Economic and Fiscal Impacts

DIRECT ECONOMIC IMPACTS OF CORONA WIND PROJECTS

The development of a wind generation facility of the magnitude contemplated for the Corona Wind Projects, and the associated Corona Gen-Tie System involves significant land resources and several specialized construction capabilities. The wind turbines must be erected by specialized teams, and manufacturers' warranties obligate many construction activities to be performed directly by the manufacturer's construction teams. However, there are significant construction activities that require construction services obtained from local resources. Table 9 provides an estimate of total employment during the construction phase of the Corona Wind Projects.

Table 9: Estimated Total Construction Employment Impact

Estimated Project Construction Employment Impacts			
	Total	Local	Non-Local
Wind Projects			
Projected Labor Hours*	2,302	691	1,611
Full Time Equivalents**	1,107	332	775
Projected Labor Cost***	\$186,462	\$55,939	\$130,523
Substations			
Projected Labor Hours*	67	20	47
Full Time Equivalents**	32	10	22
Projected Labor Cost***	\$5,395	\$1,618	\$3,776
345/500 kV Yard & Transmission Lines			
Projected Labor Hours*	99	30	69
Full Time Equivalents**	48	14	33
Projected Labor Cost***	\$8,019	\$2,406	\$5,613
Total			
Projected Labor Hours*	2,468	740	1,727
Full Time Equivalents**	1,186	356	830
Projected Labor Cost***	\$199,876	\$59,963	\$139,913

* Thousands of person-hours.

** Full Time Equivalents (FTE) calculated at 1 FTE per 2,080 person-hours. Rounded to the nearest FTE.

*** Thousands of dollars. Projected at \$81 per hour average wage.

The local labor requirements are significant. As previously shown, the Study Area Construction sector has a total employment of 565 people by the 164 firms operating in 2017. Similarly, the Study Area's 65 firms operating in the Transportation sector employed

138 individuals in 2017. These are two primary sectors that will be directly impacted by the Wind Projects' construction activities (with total local employment estimated to provide 356 Full Time Equivalent ("FTE") jobs³⁴), and it would appear that significant portions of the local labor requirements may be sourced from the locally available labor force. Specialized trade skills (e.g., high voltage linemen) may not be available in the Study Area *per se*, but the proximity to Albuquerque and the associated bulk of the state's construction contracting firms increase the likelihood that the required skilled labor requirements may be met by in state resources.

During the anticipated thirty-year (or greater) operational phase of the Projects there will be a number of full-time positions created. The developers have estimated that 74 full-time technicians will be employed, and the Projects will be overseen by up to fifteen managers when fully operational. There will also be five full-time site logistics coordinator positions created, for a total of up to 94 full-time employees.³⁵

Based on the information that has been provided by Pattern Development personnel in preparation of this analysis, it is possible to summarize the wind generation facilities project costs in Table 10. It should be noted that these are estimated costs, as the costs will not be definitely known until construction awards are made to the various entities who will be involved in the development activities.

Table 10: Estimated Project Costs

Estimated Corona Projects Costs	
	Project Costs (\$millions)
Turbines & BOP	\$2,074
Interconnection Costs	\$105
Developer / Finance / Contingency Expenses	\$204
Total Project Costs	\$2,383

With total project costs projected to be approximately \$2.4 billion, the development of the Corona Wind Projects is a major capital investment in the Project Area that is anticipated to have a useful life of at least thirty years. Each of the generation turbines (and associated infrastructure) can be linked with an estimated installed cost of approximately \$2.2 million.

Construction Period Impacts on the Study Area – Pattern Development has provided information to assess the specific local contracting activities that are anticipated with the

³⁴ Employment numbers estimated at one FTE per 2,080 person hours.

³⁵ As previously noted, this Report takes a conservative assumption that jobs reported herein are only the direct jobs associated with the Corona Wind Projects. Employment multipliers (i.e., indirect and induced jobs) are often reported in economic development projects, but in the context of the geographical diversity of jobs and the nature of the employment (less than two-year construction jobs, and limited permanent employment) it is a conservative assumption to address multiplier effects only with respect to increased economic expenditures and income in the Study Area.

generation projects. The components of project costs that are likely to be provided by local contractors and labor resources are in the balance-of-project ("BOP") category of Total Costs, shown above. In particular, the costs listed in Table 11 are thought to be associated with local resource providers.

Table 11: Estimated Locally Sourced Construction Expenditures

Estimated Locally Sourced BOP Construction-Related Project Expenditures	
Component Item Description	Total NM Local Costs (\$millions)
Civil / Foundation Works	\$80.6
Electrical	\$17.6
Other / Services / OM Building	\$18.1
EPC Subtotal	\$116.3

In summary, it is anticipated that the Corona Wind Projects will provide approximately \$116.3 million in local construction (and related) activities during its development. These EPC-related (i.e., engineering, procurement, and construction) costs are inclusive of labor costs in performing these activities. During the construction period, it can be anticipated that there will be approximately 356 additional local construction-related jobs.

Assuming average hourly wages of \$81 estimated by the developers can be applied to these employment opportunities, this construction-related local employment could provide approximately \$59.9 million in personal income in the study area over the course of construction of the Projects. A more likely scenario is that some percentage of these jobs will be less than a full year in duration, and some proportion of New Mexico based labor will actually come from Albuquerque, but any attempt to refine this wage impact would rely on relatively meaningless assertions (at this time) of construction schedules and labor resource deployment.

Operational Period Impacts on the Study Area – Pattern Development has provided information related to the operational phase of the Projects, projecting that the Corona Wind Projects is expected to require approximately 94 full-time employees, who, if paid the average 2016 Study Area wage in the Utilities sector (\$47,462.27 per year³⁶), would result in an annual payroll for the Corona Wind Projects of approximately \$4.5 million per year. There are additional operational costs not quantified in this analysis related to facility management offices and transportation related expenses.

³⁶ Bureau of Labor Statistics, Quarterly Census of Employment and Wages 2016 Annual Averages.

ECONOMIC AND FISCAL IMPACT ANALYSIS

The preceding discussion of the direct economic impacts of the Corona Wind Projects has addressed the construction-related expenditures that are likely to be sourced from local resources and local employment during construction and operations.

There are additional direct economic impacts associated with the landowner's benefits, and the indirect and induced economic impacts that will occur with the new economic activities brought to the three-county Study Area (i.e., economic multipliers).

The fiscal impacts which are analyzed below are related to gross receipts and income tax revenues generated by this new economic activity, and the treatment given to the new assets in the context of property tax burdens in the Projects area.

Landowner Economic Benefits — The Corona Wind Projects will occupy approximately 300 thousand acres. There are up to 100 landowners who will participate in the Corona Wind Projects. The Projects are located on a mixture of state and private land.

The specific lease terms provide for a variety of easements and access conditions, and several different provisions for compensation during both the "Development" and "Operational" Period of the agreements. The Development Period for the Corona Projects began in late 2016 and is anticipated to be completed in 2020.

Due to confidentiality considerations, this Report will only generally summarize the economic terms of the landowner leases and easements that have been executed to allow the Projects' development and operation. During the Development Period, payments are made for easements and various facility installations for the Corona Wind Projects. During the Operational Period, there are royalty payments related to turbine output and land rental payments per acre.

During the Development Period, New Mexico landowners in the area are likely to realize a total of \$12.5 million in lease payments. During the Operational Period, annual New Mexico land lease and royalty payments will average \$13.9 million per year in total for the Corona Wind Projects. Both the royalty and land lease payments escalate over time.

Although there will be some limited encroachment on the landowners' ability to continue the current agricultural uses of the land, they will obtain significantly improved access to those lands as a result of the development of surface maintenance roads to support the Projects facilities. It is reasonable to assume there will only be a *de minimis* reduction in the agricultural productivity of the lands leased to the wind generation developments, and certainly the additional revenue associated with the wind generation developments will substantially increase the economic productivity of the land resources from its current opportunities.

Property Tax Issues — Industrial Revenue Bonds ("IRB") are being or will be negotiated for the Corona Wind Projects in New Mexico. The total amount is unknown at this time, but can be expected to exceed \$2 billion. The specifics of the Property Tax benefits flow from the statutory provisions relating to IRBs.³⁷ The specific benefit is to treat the tangible property acquired with the proceeds of the bonds as non-taxable property assets. Without further belaboring the discussion, it is enough to say the tangible property assets of the Corona Wind Projects that are purchased with the IRBs are exempted from property tax liability for the thirty-year life of the bonds.

The Study Area property tax rates and revenues have been previously discussed, and details of these property tax rates and revenues are provided in the Economic and Demographic Profiles, above.

The only specific property tax impact of the development of the Corona Wind Projects³⁸ will be to provide additional income that potentially supports additional tangible property investments that could raise the total assessed property value over time, and thereby indirectly increase property tax revenues. However, the direct effect of the IRBs is to keep much of the tangible property values associated with the capital project worth approximately \$2.4 billion from being subject to property tax liability during the term of the revenue bonds. This can be considered to be a fiscal opportunity cost associated with the wind generation development.

However, the developers have recognized these impacts, and will be entering into agreements (or have offered proposals) to provide annual payments in lieu of taxes ("PILOT") agreements with the relevant local governments and school districts currently anticipated to amount to about \$3.5 million per year for thirty years. The PILOT payments may be thought to reduce or eliminate the fiscal impacts of the property tax "opportunity costs" that result from the issuance of IRBs for the Corona Wind Projects.

Indirect and Induced Impacts: Economic Multipliers — When economists discuss the benefits of the expansion of an economic activity, they also recognize that direct economic benefits create an indirect benefit associated with the additional economic activity from industries buying from other local business sectors. For example, the direct construction activities associated with the Projects will result in additional lodging and hospitality revenues for the local businesses hosting the out-of-area workers, and other indirect retail trade purchases as a result of increased disposable income in the economy.

³⁷ Section 7-36-3 NMSA 1978. Note that the foregone property tax revenues associated with the IRB financing vehicle is significantly less than the approximately \$2 billion of assets financed, and these are all new property asset values developed by the Corona Wind Projects' investments. The specific impact, however, is dependent on the specific location of the property and cannot be readily assessed in the context of the Corona Wind Projects' facilities at this time, and are in part offset by PILOT payments.

³⁸ It is anticipated that nearly all capital costs related to tangible property will be IRB financed, although some limited project facilities may be subject to property tax.

These are referred to as indirect impacts, or Type I economic multipliers. A further extension of the economic multiplier analysis takes into account the increased economic activities on the social “institutions” (i.e., households; state and local government; Federal government; and capital) that first obtain direct and indirect benefits, and then recognize that every dollar collected locally by that institution will be re-spent for that local institution’s operations. Including the induced effects in the economic multiplier analysis provides a “Type SAM” (Social Account Matrix) multiplier.

Regional economic impact analyses have for decades relied on input-output summaries of economic activities, with most of these modeling efforts providing adaptations of national business sector outputs and inter-sector transactions to characterize the interaction of economic agents. The national models are then regionalized based on a variety of analytical methods. Both the US Department of Commerce³⁹ and private firms provide information as to the economic multipliers for specific states or local regions. With respect to a state with an economic “footprint” as small as New Mexico, the statewide economic multipliers are generally a more accurate depiction of the indirect and induced economic impacts from new economic activities.

For the purposes of this analysis there is reliance on IMPLAN Group model,⁴⁰ a commonly utilized model, and on economic multipliers from a 2015 version of this model for New Mexico. Specific multipliers used depend on the character of the activity being performed. During the Development Period, it is appropriate to utilize a set of multipliers for the sector defined as “construction of other new nonresidential structures”, which provides a Type I (indirect) multiplier of 1.286478, and a Type SAM (indirect & induced) multiplier of 1.598957.

During the Operational Periods of the Projects, it is appropriate to use multipliers for the “Electric Power Generation - Wind” sector, with a Type I multiplier of 1.210142 and a Type Sam multiplier of 1.305250.

Landowner payments pose a unique problem in the context of economic multiplier analysis. The payments to be received by the landowners are in addition to the normal income obtained from their agricultural operations. It is appropriate to presume that these landowners will continue their primary agriculturally-related employment, and to a certain extent, the payments obtained are simply an additional return to the land. As such, the most meaningful economic multiplier relates to the “cattle ranching and farming” sectors of the economy. A summary of relevant multipliers are provided in Table 12.

³⁹ US Department of Commerce, Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMS II) [see <https://www.bea.gov/regional/rims/index.cfm>]

⁴⁰ Formerly MIG, Inc., since 2013 doing business as IMPLAN Group LLC [<http://www.implan.com/>]

Table 12: New Mexico Economic Multipliers

Economic Multipliers for Analysis of Corona Wind Farm Projects Impacts		
Sector Description	Indirect Impacts (Type I)	Indirect & Induced Impacts (Type SAM)
Construction of other new nonresidential structures	1.286478	1.598957
Construction of new power and communication structures	1.180549	1.461355
Electric power generation, transmission, and distribution	1.167653	1.254574
Maintenance and repair construction of nonresidential structures	1.335974	1.634624
Grain farming	1.504777	1.696640
Cattle ranching and farming (Beef cattle)	1.708563	2.030960
Electric power generation - Wind	1.210142	1.305250

Table 13 summarizes the economic impacts, including the Type I (direct & indirect) and Type SAM (direct, indirect & induced) economic multiplier impacts of the Corona Projects.

For purposes of this impact analysis, it is anticipated that the Development Period is likely to be completed in 2020, and that the Operational Period will commence in 2020 and continue for approximately thirty years.

Table 13: Summary Economic Impacts

Summary of Economic Impacts (\$millions)			
	Direct Impact	Direct & Indirect Impact	Direct, Indirect & Induced
Development Period Impacts			
Local Construction Contracts	\$116.3	\$149.6	\$186.0
Land Owner Benefits	\$12.5	\$21.4	\$25.4
Total Annual Development Period Impacts	\$128.8	\$171.0	\$211.3
Operational Period Impacts (Annual Average)			
Operational Costs	\$68.8	\$83.2	\$89.7
Land Owner Benefits	\$13.9	\$23.8	\$28.3
Total Annual Operational Period	\$82.7	\$107.0	\$118.0

Summary of Fiscal Impacts — There are basically three programs in which fiscal impacts occur. Income Tax (both Personal and Corporate) will accrue to the state based on additional wage, salary and income earnings, and GRT will accrue associated with taxable

gross receipts relating to the generation Projects' economic activities. Property Tax is the third fiscal impact, and has previously been discussed.

New Mexico GRT is subject to numerous exemptions and deductions, and certain costs incurred with respect to the generation facilities' acquisition may not be taxable as a result of the IRB financing. As a result, Pattern Development prepared an estimate of the GRT obligations it believes are applicable to the construction activities (Table 14).

Table 14: Estimated GRT Liability

Estimated NM GRT Liability (\$millions)	
TOTAL Estimated Project Costs	\$2,383.1
Total Estimated NM GRT	\$22.4

Based on prior experience in developing large scale wind developments, there is anticipated to be a GRT liability of \$22.4 million in the construction-related activities. It is noteworthy that a portion of the GRT will flow back to the county and municipal governments, but it is extremely difficult (based on the information available at this time) to allocate these GRT revenues to any of the affected communities as the tax liability relates to the specific location of the taxable transactions.

It should also be noted that although there are significant transmission costs, relationship to SunZia's transmission of the electricity generated by the Corona Wind Projects, there are no GRT implications for those transmission activities. In particular, the statute provides that:

Receipts from transporting . . . property from one point to another in this state may be deducted from gross receipts when such . . . property, including any special or extra service reasonably necessary in connection therewith, is being transported in interstate . . . under a single contract. [§7-9-56 (A) NMSA 1978]

Thus, the long-term direct sale PPAs that Pattern Development will execute with utilities in California and other western states utilities are a single contract transaction of property (i.e., electricity) in interstate commerce that is not subject to GRT.

It is useful to understand the specific economic benefit obtained by the county and local municipal entities from the distribution of GRT revenues. In the case of construction services, which will form the bulk of development phase taxable activities, the location of the actual activity will determine the location of the tax revenue. The location of the activity will also determine the GRT rate that is applied to the activity and how that revenue is distributed. A

brief discussion of the structure of the GRT in New Mexico will provide a better understanding of how local governments stand to benefit from the Corona Wind Projects.

Each local government is allowed to enact a certain amount of local GRT increments. The State of New Mexico also imposes a 5.125% GRT rate. The GRT rate in a given location is the combination of the state, county, and applicable city rates. To add a further complication, the state shares 1.225% of its 5.125% with municipalities, but not with counties. Table 15 lists the rates imposed in each county and municipality in the Study Area.

All of this is to illustrate how revenues from taxable activities associated with the Corona Wind Projects will flow to the various government entities. For example, every dollar of GRT generated in unincorporated Guadalupe County, with a total GRT rate of 6.4375%, will be shared by the state and Guadalupe County at about \$0.20 to the county and \$0.80 to the state. In the City of Santa Rosa, the situation would be slightly different: every dollar of GRT generated there, at a total rate of 8.0%, would be shared three ways – the state would receive about \$0.49, Guadalupe County would receive about \$0.13, and the City of Santa Rosa about \$0.38.

Table 15: GRT Rates by Location

Local Government GRT Rates*					
	Total GRT Rate	County Imposed Rate	City Imposed Rate	Municipal Share of State GRT	Effective State Rate
Guadalupe County	6.4375%	1.3125%	0.0000%	0.0000%	5.1250%
Santa Rosa	8.0000%	1.0625%	1.8125%	1.2250%	3.9000%
Vaughn	8.2500%	1.0625%	2.0625%	1.2250%	3.9000%
Lincoln County	5.5000%	0.3750%	0.0000%	0.0000%	5.1250%
Ruidoso	8.4375%	0.2500%	3.0625%	1.2250%	3.9000%
Capitan	6.8125%	0.2500%	1.4375%	1.2250%	3.9000%
Carrizozo	7.0000%	0.2500%	1.6250%	1.2250%	3.9000%
Corona	6.9375%	0.2500%	1.5625%	1.2250%	3.9000%
Ruidoso Downs	7.4375%	0.2500%	2.0625%	1.2250%	3.9000%
Torrance County	6.7500%	1.6250%	0.0000%	0.0000%	5.1250%
Mountainair	7.9375%	1.1250%	1.6875%	1.2250%	3.9000%
Moriarty	7.6875%	1.1250%	1.4375%	1.2250%	3.9000%
Willard	7.5625%	1.1250%	1.3125%	1.2250%	3.9000%
Encino	7.3125%	1.1250%	1.0625%	1.2250%	3.9000%
Estancia	8.1875%	1.1250%	1.9375%	1.2250%	3.9000%

*Gross Receipts Tax Rates in effect as of January 1, 2018.

It would be impossible to predict the amount of actual GRT which will be generated in any given location. However, based on the structure of the New Mexico GRT, what is clear is that there will be significant local government revenues generated as a portion of the estimated \$22.4 million in total GRT generated by the Projects.

To get an idea of the magnitude of the local GRT revenue impact that the Corona Wind Projects will create, in fiscal year 2017 (July of 2016 through June of 2017) there was approximately \$25.6 million in GRT distributions to the counties and municipalities in the Study Area.⁴¹ See Table 16. The majority of GRT revenues are retained by New Mexico state government, but as described above, a significant percentage is allocated to the counties and the municipalities.

⁴¹ New Mexico Taxation and Revenue Department, "RP500 Report, Fiscal Year 2017."

Table 16: FY17 GRT Distributions by Location

GRT Distributions Fiscal Year 2017 (\$ Thousands)			
	Total GRT Distribution	Percent of Total GRT Distributed (by County)	Percent of Total GRT Distributed (by Study Area)
Guadalupe County	\$1,193.6	34.6%	4.7%
Santa Rosa	\$2,053.3	59.6%	8.0%
Vaughn	\$198.1	5.7%	0.8%
Lincoln County	\$1,432.6	8.9%	5.6%
Ruidoso	\$11,077.8	69.1%	43.3%
Capitan	\$393.4	2.5%	1.5%
Carrizozo	\$293.4	1.8%	1.1%
Corona	\$74.6	0.5%	0.3%
Ruidoso Downs	\$2,759.4	17.2%	10.8%
Torrance County	\$3,132.7	51.2%	12.2%
Mountainair	\$255.8	4.2%	1.0%
Moriarty	\$1,881.2	30.8%	7.4%
Willard	\$31.4	0.5%	0.1%
Encino	\$63.0	1.0%	0.2%
Estancia	\$752.5	12.3%	2.9%
Study Area Total	\$25,592.8		

Thus, it can be easily seen that the total \$22.4 million in GRT liability associated with the Corona Wind Projects development will provide significant additional direct contributions to the government operations in the three-county area during the Development Period. Discussion of the specific allocation of those tax revenues to the government entities in the Study Area is not possible with the data available, as the location of the business activities that produce GRT liabilities is dependent on the specific location of the business entity engaged in those activities.

The direct fiscal impacts quantified here are tied to the developer's (and its contractors') specific business activities that are not exempt from GRT pursuant to the financing of the Corona Wind Projects development through IRBs. Additional fiscal impacts will occur as a result of the effects of indirect and induced "economic multiplier" impacts; however, these "multiplier-related" impacts are entirely speculative. That is, there is no ability to identify where these indirect and induced multiplier impacts will occur, and correspondingly the tax rates applicable to the additional Taxable Gross Receipts generated by these additional economic activities. For the impact estimates provided in this Report they are noted and

summarily ignored, with the additional note that this approach provides a conservative assumption related to fiscal impacts.

Similarly, New Mexico Income Tax liabilities have significant exemptions and deductions that make estimates of the actual revenues to be collected nearly impossible with the information available. It is not reasonable to speculate with respect to Income Tax liabilities related to Project activities (at this time).



Summary of Economic and Fiscal Impacts & Conclusion

Development of the Corona Wind Projects and associated Corona Gen-Tie System brings highly beneficial economic development activities to New Mexico. The addition of approximately 2,200 MW of renewable energy generation will raise New Mexico into the top ten renewable energy producing states in the country, knocking on the door of the top five.⁴² The capital investment of approximately \$2.4 billion by Pattern Development represents a significant commitment of resources, which is in support of stated goals of the state as expressed in the 2015 State Energy Plan, as well as the statutory provisions encouraging renewable energy resource development in New Mexico.

From a broader statewide economic development perspective, development of wind generation and related infrastructure of the scope contemplated by the Corona Wind Projects embodies many robust economic opportunities for the state of New Mexico. Importantly, the Corona Wind Projects will develop new and under-developed economic resources in the state of New Mexico — wind energy — that will be directly exported from the state.

This development creates new economic value and opportunity within New Mexico, the product of which will be exported from the state. This is a highly valuable attribute of the Projects, as these investments will create the most desirable form of new economic development in its exportation of environmentally preferred New Mexico energy resources. In summary, the Corona Wind Projects will provide significant expansion in the New Mexico economy.

Additionally, once operational, the economic benefits and revenues streams provided by the Corona Wind Projects will be extremely stable and not be as economically volatile as is common to most energy resource developments found in the state of New Mexico.

The economic and fiscal impacts of the Corona Wind Projects will make a significant contribution to the economic base of Guadalupe, Lincoln, and Torrance Counties, with both short-term development activities, and long-term contributions to the regional economy. These economic impacts will come in the form of employment, income, construction activities, and additions to the tax base. The short-term impacts during the Development Period will flow from an estimated \$2.4 billion in capital investment for the Corona Wind Projects. These developments will occur over approximately 300 thousand acres of three counties, and will introduce significant economic activities for decades to come.

⁴² American Wind Energy Association, *op. cit.*

THE PROBLEM:

- 20% of all toilets leak
- A "slow" flapper leak can waste 200 gallons per day
- A hung up flapper can waste 4,800 gallons per day.

THE EFFECT:

- The following table shows relative water loss over time for each type of leak.

Gallons of Water	Typical Slow Leak	Typical Severe Leak
Per Minute	0.14	3
Per Hour	8	200
Per Day	200	4,800
Per Week	1,400	33,600
Per Month	5,600	134,400
Per Year	67,205	1,612,800

The comprehensive impacts of the Corona Wind Projects are summarized in Table 17. These impacts are calculated over the thirty-year period of the Projects financing, although there is certainly reason to believe that the impacts will have permanent beneficial consequences for the New Mexico economy.

Table 17: Local Economic Impacts and Multiplier Effects

Summary Economic Impacts of The Corona Project (30-Year Analysis) (\$millions)									
	Local Construction Expenditures	Local Employment (jobs)*	Local W&S Expenses	Landowner Payments	Other Operating Costs	PILOT Payments	Direct Economic Impacts	Direct & Indirect Economic Impacts	Direct, Indirect & Induced Economic Impacts
Total Economic Impact	\$116	94	\$195	\$430	\$1,928	\$105	\$2,609	\$3,380	\$3,751
DPV of Impacts (@5%)	\$116	N/A	\$129	\$221	\$988	\$54	\$1,395	\$1,807	\$2,015

*Operations and Maintenance jobs. Does not include construction related employment, but construction-related employment included in dollar value of construction-related expenditures.

The Corona Wind Projects will produce a direct impact over thirty years of over \$2.6 billion. When taking into consideration indirect and induced impacts, the regional economy can be expected to realize approximately \$3.8 billion in increased economic activities associated with the Projects' development.

Viewed from the perspective of a present value return on the economic development activities, the capital investment in the Corona Wind Projects facilities will generate nearly \$1.4 billion in new direct economic benefits, and with consideration of the indirect and induced economic impacts these benefits have a present value of \$2.0 billion in new economic activities.

It is important to understand that these economic benefits are earned to the regional economy — not the developers of the Projects. The developers' return on investment is internal to the economics of the Projects operations, while the economic benefits reported here are external to the Projects' owners.

The employment impacts are expected to be significant. The Corona Wind Projects will create an estimated 1,186 FTE during its development, with an estimated 356 of those

employing local resources providing additional payroll income of approximately \$59.9 million.

Of the total capital expenditures during construction of the Corona Wind Projects, it is estimated that \$116 million in contracts will flow to local construction service providers. Once construction is completed and operations commence, the Corona Wind Projects is expected to result in the employment of up to 94 full-time personnel with total operating costs of approximately \$83 million per year.

The land lease, easement, and royalty agreements with the private landowners for the Corona Wind Projects will provide additional income between approximately \$12.5 million during the Development Period, and \$13.9 million per year on average during the Operational Period.

Gross Receipts Tax revenues will be increased as a result of the construction Projects by \$22.4 million for the construction of the Corona Wind Projects. Fiscal impacts associated with payments in lieu of property taxes will be made by the developers to several municipal and school district beneficiaries in an average amount of \$3.5 million annually.

In sum, the direct local economic impacts of the Corona Wind Projects during the Development Period are anticipated to be approximately \$129 million, with direct, indirect and induced (multiplier) impacts suggesting a total impact of \$211 million from the development of the Projects. Once operational, the Corona Wind Projects should generate an annual direct economic impact of approximately \$83 million, and when economic multipliers are considered, the annual impact from the Corona Wind Projects operation can be estimated to be approximately \$118 million.

Study Area County Profiles

GUADALUPE COUNTY, NM - ECONOMIC AND DEMOGRAPHIC PROFILE

Guadalupe County, named after Our Lady of Guadalupe, is the fifth least-populous county in New Mexico. The county is located in east-central New Mexico and encompasses 3,032 square miles with a population density of 1.4 people per square mile. The City of Santa Rosa is the county seat and makes up over half of the county's total population. Other significant communities within the county include Vaughn and Anton Chico. A current demographic profile is provided in Table 18.

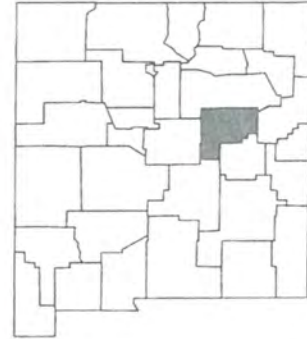


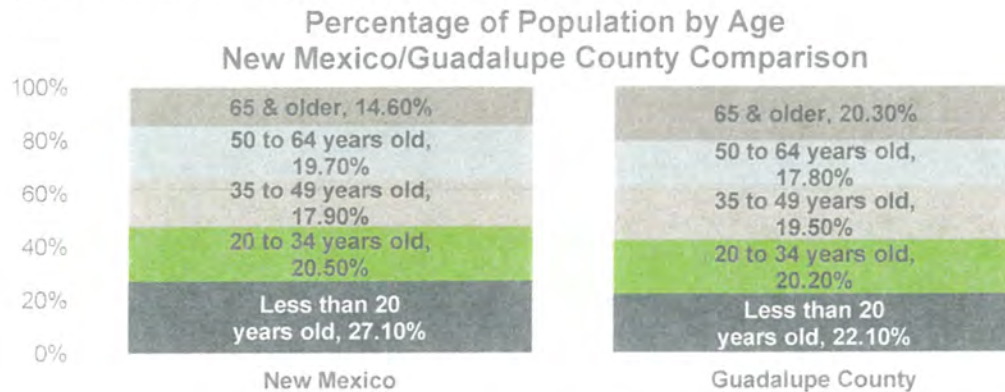
Table 18: Guadalupe County Population and Employment

Guadalupe County Population and Employment (w/ Selected Comparisons to New Mexico) ⁴³					
2016 Population est. 4,376 (0.21% of NM population)			2010 – 2016 Population Growth Rate -6.64% per annum		
2010 & 2014 Population by City/Village					
Santa Rosa Vaughn	2010	2016 (est.)	Anton Chico	2010	2016 (est.)
	2,848	2,680		188	N/A
	446	412			
2016 Labor Force and Employment Data – Guadalupe County					
Labor Force 1,648	Employment 1,541	Unemployment 6.5%	NM Unemployment 6.2%		

As is true of the rest of the Study Area, Guadalupe County's population is generally older than that of New Mexico as a whole (Figure 11).

⁴³ Based on 2014 US Census and 2016 US Dept. of Labor, Bureau of Statistics data.

Figure 11: Guadalupe County Age Distribution by Cohort



Agriculture is a significant economic sector which is dominated by cow/calf ranching activities. An agricultural profile is provided in Table 19.

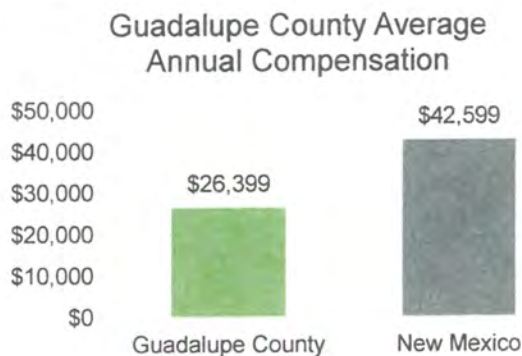
Table 19: Guadalupe County Agricultural Profile

Guadalupe County Agricultural Profile					
2012 and 2007 Farm Demographics					
Number of Farms	2012	2007	Average Farm Size (acres)	2012	2007
	372	258		4,417	5,446
2012 Market Value of Agricultural Products Sold (millions)					
Crops		Livestock and Poultry		Total	
\$0.38		\$17.33		\$17.71	
2.1%		97.9%			
2012 Value of Sales by Commodity Group (millions)					
Vegetables and Other Crops		Cattle and Calves		Other Livestock and Poultry	
\$0.38		\$16.35		\$0.98	

The US Bureau of Labor Statistics 2016 total wages and salaries report for covered employment⁴⁴ in Guadalupe County provides an estimated average annual pay of \$29,422 per employee. The New Mexico statewide average compensation is \$42,599 per year, reflecting that reported wages and salaries in Guadalupe County are approximately 69% of the state average (Figure 12).

⁴⁴ Non-farm wage and salary employment not covered by unemployment insurance.

Figure 12: Guadalupe County Average Annual Compensation



Additionally, the US Census Bureau estimates a per capita income of \$16,820 for Guadalupe County, as compared with \$24,012 for the state of New Mexico,⁴⁵ substantially consistent with the County's disparity in statewide wage and salary income levels.

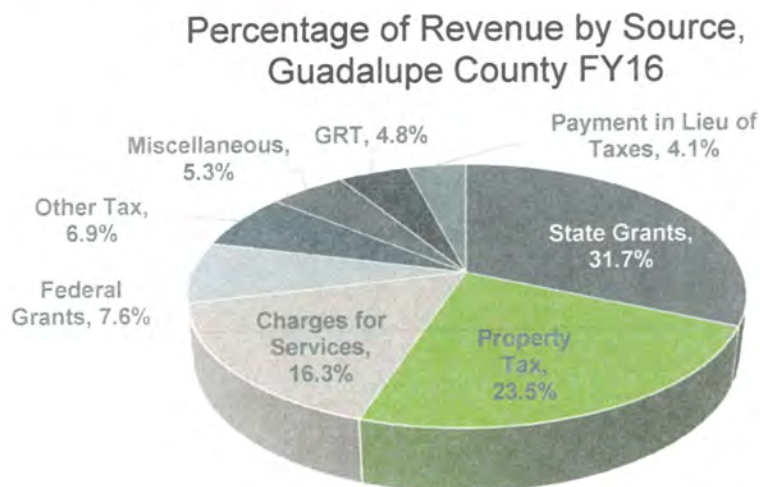
Table 20: Guadalupe County Employment and Wages

Guadalupe County Employment and Wages by Major Industry					
Sector	Average Establishments		Annual Average Employment		Annual Wages Per Employee
	Count	% of Establishments	Count	% of Employment	
Accommodation and food services (NAICS 72)	24	15%	432	38%	\$14,905
Health care and social assistance (NAICS 62)	21	13%	290	26%	\$23,819
Construction (NAICS 23)	32	19%	162	14%	\$50,909
Other services, except public administration (NAICS 81)	22	13%	118	10%	\$33,500

According to Bureau of Labor Statistics annual data, there were an average of 164 establishments providing employment in Guadalupe County in 2016, with 113 (68.9%) of those private firms.

⁴⁵ US Census Bureau, American Community Survey 2015.

Figure 13: Percentage of Revenue by Source, Guadalupe County



A significant component of Guadalupe County revenues are derived from Property Tax receipts (Figure 13). With regard to property taxes, the Guadalupe County 2017 millage rates are established by various authorities (i.e. County, Municipal, and School District) to meet specified revenue goals. Total county operations and debt service property tax obligations totaled over \$1.7 million in Guadalupe County for 2017. The total assessed property tax in Guadalupe County makes up 12% of the total Study Area property tax collections and its net taxable value is just 0.3% of the state wide net taxable value.

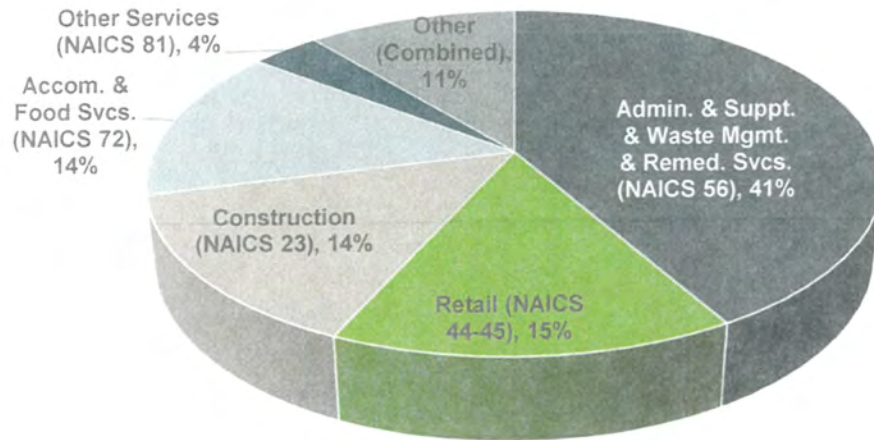
County operations and debt service represent 41% of property tax collected in the county. Other recipients of property tax revenue in Guadalupe County are school districts (25% of total), the state (5%), and municipalities (7%). Guadalupe Hospital (15%) and Luna Community College (7%) also benefit from property tax revenues in Guadalupe County.

The economic sector reporting the highest levels of GRT is (by far) the Administrative and Support and Waste Management and Remediation Services sector, with GRT revenues from the sales in this sector constituting 41% of the total GRT, followed by Retail Trade and Construction with 15% and 14%, respectively (Figure 14). Guadalupe had over \$13.6 million in GRT, providing 1% of the total GRT collections in the Study Area.⁴⁶

The dominance of GRT collection by Administrative and Support and Waste Management and Remediation Services sector in Guadalupe County is due to the presence of the Guadalupe County Correctional Facility. The facility houses 600 medium security state prisoners in a 191,400 square foot private prison on a 440-acre site.

⁴⁶ New Mexico Taxation and Revenue Department RP80 Report.

Figure 14: Guadalupe County GRT by Sector
FY17 Guadalupe County GRT by Sector



LINCOLN COUNTY, NM - ECONOMIC AND DEMOGRAPHIC PROFILE

Lincoln County was named in honor of President Abraham Lincoln and, in 1878, was the setting for the Lincoln County War, involving such infamous outlaws as Billy the Kid. The county, in the south central part of New Mexico, encompasses a total area of 4,831 square miles with a population density of 3.4 people per square mile.



Lincoln County has a diverse geography. The northeastern portion of the county, near the Projects' namesake of Corona, lies on the western edge of the Great Plains. In southern Lincoln County, the mountain resort town of Ruidoso and surrounding area provide for a variety of recreational activities, including skiing at the Mescalero Apache-owned Ski Apache Resort, and Quarter Horse Racing at Ruidoso Downs. The All American Futurity race at Ruidoso Downs is the final leg of the Triple Crown of American Quarter Horse Racing.

The Town of Carrizozo is the county seat. Other significant communities within the county include Ruidoso, Capitan, and Corona, but Ruidoso is by far the most populated community in the county. A current demographic profile is provided in Table 21.

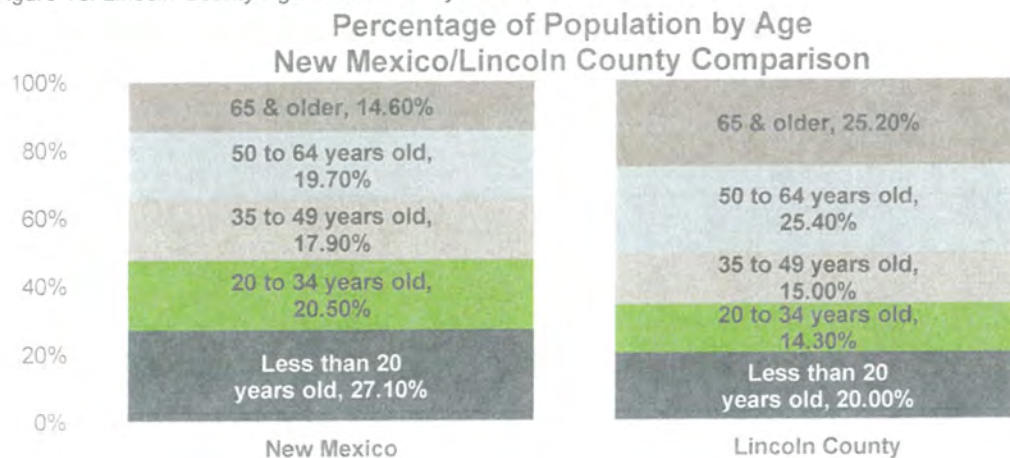
Table 21: Lincoln County Population and Employment

Lincoln County Population and Employment (w/ Selected Comparisons to New Mexico) ⁴⁷					
2016 Population est. 16,622 (0.80% of NM population)			2010 – 2016 Population Growth Rate -5.21% per annum		
2010 & 2014 Population by City/Village					
Carrizozo Ruidoso	2010	2016 (est.)	Capitan Corona	2010	2016 (est.)
	996 8,029	938 7,770		1,489 172	1,388 162
2016 Labor Force and Employment Data – Lincoln County					
Labor Force 8,450	Employment 7,939	Unemployment 6.0%		NM Unemployment 6.2%	

From Figure 15, it can be seen that Lincoln County has a significantly higher concentration of its population in the age cohorts over 50 years of age than New Mexico as a whole.

⁴⁷ Based on 2014 US Census and 2016 US Dept. of Labor, Bureau of Statistics data.

Figure 15: Lincoln County Age Distribution by Cohort



Agriculture is a significant economic sector which is dominated by ranching activities. An agricultural profile is provided in Table 22.

Table 22: Lincoln County Agricultural Profile

Lincoln County Agricultural Profile					
2012 and 2007 Farm Demographics					
Number of Farms	2012	2007	Average Farm Size (acres)	2012	2007
	362	361		4,291	4,849
2012 Market Value of Agricultural Products Sold (millions)					
Crops		Livestock and Poultry		Total	
\$0.54		\$16.33		\$16.87	
3.2%		96.8%			
2012 Value of Sales by Commodity Group (millions)					
All Crops		Cattle and Calves		Other Livestock and Poultry	
\$0.54		\$14.62		\$1.71	

The US Bureau of Labor Statistics 2016 total wages and salaries report for covered employment in Lincoln County provides an estimated average annual compensation of \$30,125 per employee. The New Mexico statewide average compensation is \$42,599 per year, reflecting that reported wages and salaries in Lincoln County are approximately 71% of the state average.

Table 23: Lincoln County Employment and Wages by Sector

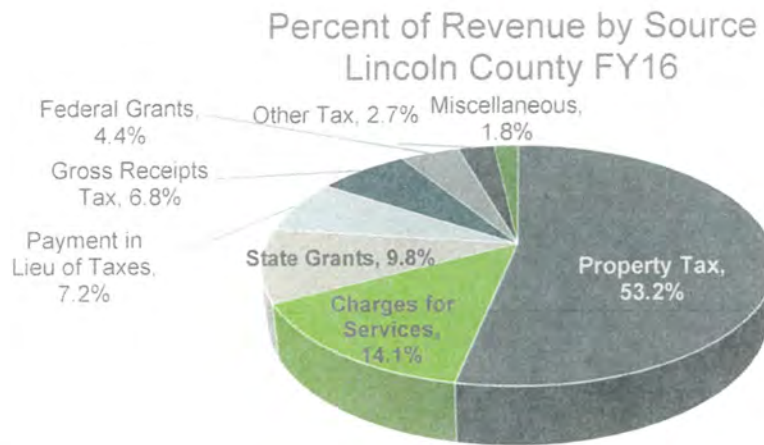
Lincoln County Employment and Wages by Major Industry					
Sector	Average Establishments		Annual Average Employment		Annual Wages Per Employee
	Count	% of Establishments	Count	% of Employment	
NAICS 72 Accommodation and food services	95	12%	1345	24%	\$15,965
NAICS 44-45 Retail trade	129	16%	1195	22%	\$24,854
NAICS 62 Health care and social assistance	78	10%	665	12%	\$49,463
NAICS 71 Arts, entertainment, and recreation	30	4%	556	10%	\$22,449
NAICS 92 Public administration	42	5%	442	8%	\$47,066
NAICS 23 Construction	106	13%	340	6%	\$30,306
NAICS 81 Other services, except public administration	51	6%	197	4%	\$23,787

The US Census Bureau estimates a per capita income of \$25,756 for Lincoln County, as compared with \$24,012 for the state of New Mexico.⁴⁸ Note that the high per capita income, relative to the Average Annual Wage and Salary Compensation and statewide average for both income measures – combined with the previously noted generally older population – suggests that significant levels of passive income (i.e., investment income) is likely earned by Lincoln County residents.

Property taxes provide Lincoln County with its largest source of revenue (Figure 16), with more than half of the county revenue contributed from that source. Gross Receipts Taxes are a relatively minor component of County revenues, but the development of the Corona Wind Project will contribute to both County and incorporated municipalities' GRT revenues.

⁴⁸ US Census Bureau, American Community Survey 2015.

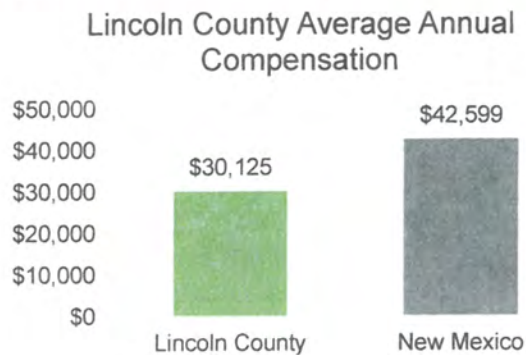
Figure 16: Percent of Revenue by Source, Lincoln County FY16



With regard to property taxes, the Lincoln County 2017 millage rates are established by various authorities (i.e. County, Municipal, and School District) to meet specified revenue goals. Total county operations and debt service property tax obligations totaled over \$7.7 million in Lincoln County for 2017. The total assessed property tax in Lincoln County makes up 53% of the total Study Area property tax collections and its net taxable value is just 2.2% of the state wide net taxable value.

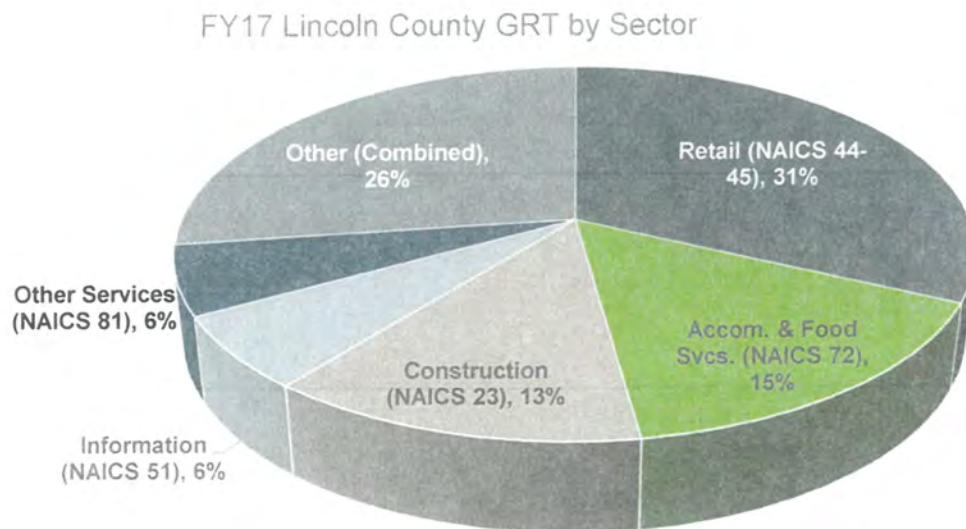
County operations and debt service represent 26% of property tax collected in the county. Lincoln also has a special mill levy that goes to county government for about 11% of total obligations. Other recipients of property tax revenue in Lincoln County are school districts (28% of total), the state (6%), and municipalities (13%). Lincoln Community Medical Center (8%), Rural Clinics (3%), and ENMU Ruidoso Instructional Center (4%) also benefit from property tax in Lincoln County.

Figure 17: Lincoln County Average Annual Compensation



As shown in Figure 18, the largest sector in terms of GRT is Retail Trade, with revenues from the sales in these sectors constituting 31% of the total GRT followed by Accommodation and Food Services with 15%. Lincoln County had over \$36.6 million in GRT, providing, 50.4% of the total GRT collections in the Study Area.⁴⁹ The combination of a strong retail presence and a relatively large Accommodation and Food Services sector is a reflection of the resort nature of the Ruidoso area in particular.

Figure 18: Lincoln County GRT by Sector



⁴⁹ New Mexico Taxation and Revenue Department RP80 Report.

TORRANCE COUNTY, NM - ECONOMIC AND DEMOGRAPHIC PROFILE

Torrance County has the 11th highest agricultural output in New Mexico. The county is located in the center of New Mexico atop the rolling grasslands and encompasses a total area of 3,346 square miles with a population density of 4.6 people per square mile, the most densely populated of the Study Area Counties. The county primarily produces pinto beans, corn, alfalfa, and pumpkins in its large agricultural sector and sits at an elevation above 6,000 feet. The Town of Estancia is the county seat. Other significant communities within the county include Mountainair and Moriarty, which is the counties most populated town. A current demographic profile is provided in Table 24.



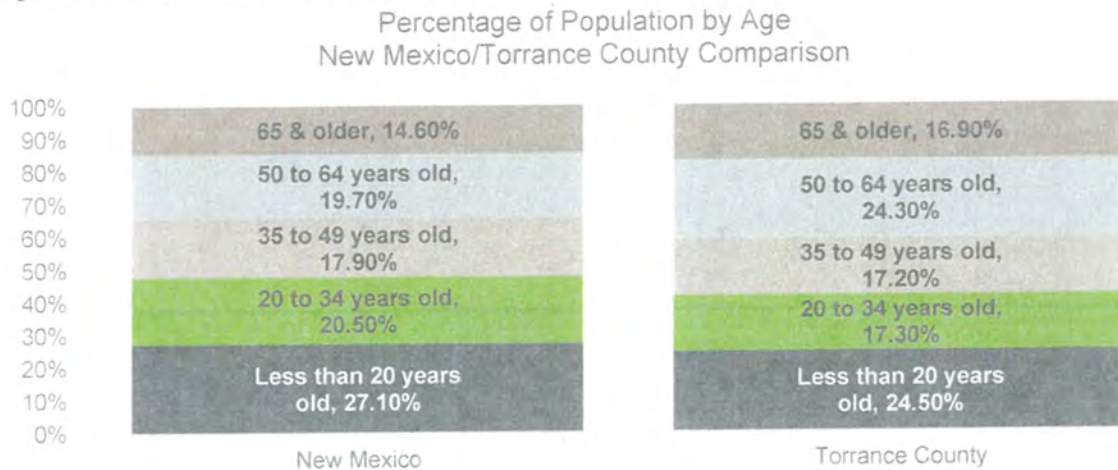
Table 24: Torrance County Population and Employment

Torrance County Population and Employment (w/ Selected Comparisons to New Mexico) ⁵⁰					
2016 Population est. 15,302 (0.73% of NM population)			2010 – 2016 Population Growth Rate -6.60% per annum		
2010 & 2014 Population by City/Village					
Estancia Moriarty	2010	2016 (est.)	Mountainair	2010	2016 (est.)
	1,655 1,910	1,584 1,786		928	866
2016 Labor Force and Employment Data –Lincoln County					
Labor Force 5,494	Employment 5,014	Unemployment 8.7%		NM Unemployment 6.2%	

Generally stated, Torrance County has a slightly older population than New Mexico as a whole, as reflected in Figure 19.

⁵⁰ Based on 2014 US Census and 2016 US Dept. of Labor, Bureau of Statistics data.

Figure 19: Torrance County Age Distribution by Cohort

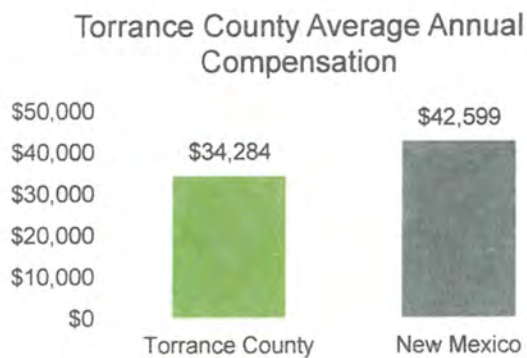


Agriculture is a significant economic sector and includes extensive fields of dry crops, corn, and pastureland. An agricultural profile is provided in Table 25.

Table 25: Torrance County Agricultural Profile

Torrance County Agricultural Profile					
2012 and 2007 Farm Demographics					
Number of Farms	2012	2007	Average Farm Size (acres)	2012	2007
	589	561		3,166	3,202
2012 Market Value of Agricultural Products Sold (millions)					
Crops		Livestock and Poultry		Total	
\$23.34		\$35.18		\$58.52	
39.9%		60.1%			
2012 Value of Sales by Commodity Group (millions)					
Grains, Dry Beans and Peas	Corn	Other Crops	Cattle and Calves	Other Livestock and Poultry	
\$9.99	\$9.44	\$3.89	\$25.50	\$9.68	

The US Bureau of Labor Statistics 2016 total wages and salaries report for covered non-farm employment in Torrance County provides an estimated average annual compensation of \$34,284 per employee. The New Mexico statewide average compensation is \$42,599 per year, reflecting that reported wages and salaries in Torrance County are approximately 80% of the state average.



Additionally, the US Census Bureau estimates a per capita income of \$18,300 for Torrance County, as compared with \$24,012 for the state of New Mexico,⁵¹ reflecting a similar relationship to statewide compensation data.

The 2016 Bureau of Labor Statistics annual data indicates that there is an average of 320 establishments providing employment in Torrance County, with

255 (79.69%) of those being private firms.

Table 26: Torrance County Private Employment and Wages by Sector

Torrance County Employment and Wages by Major Industry					
Sector	Average Establishments		Annual Average Employment		Annual Wages Per Employee
	Count	% of Establishments	Count	% of Employment	
NAICS 44-45 Retail trade	42	13%	504	30%	\$24,454
NAICS 62 Health care and social assistance	43	13%	363	21%	\$27,614
NAICS 92 Public administration	31	9%	229	13%	\$33,273
NAICS 23 Construction	46	14%	164	10%	\$37,952
NAICS 42 Wholesale trade	13	4%	157	9%	\$59,417
NAICS 31-33 Manufacturing	12	4%	90	5%	\$68,263

With regard to property taxes, the Torrance County 2017 millage rates are established by various authorities (i.e. County, Municipal, and School District) to meet specified revenue goals. Total county operations and debt service property tax obligations totaled over \$5.1 million in Torrance County for 2017. The total assessed property tax in Torrance County makes up 35% of the total Study Area property tax collections and its net taxable value is just 0.7% of the state wide net taxable value.

⁵¹ US Census Bureau, American Community Survey 2015

County operations and debt service represent 54% of property tax collected in the county. Other recipients of property tax revenue in Torrance county are school districts (38% of total), the state (6%), and municipalities (2%).

Figure 21: Percent of Revenue by Source, Torrance County FY16

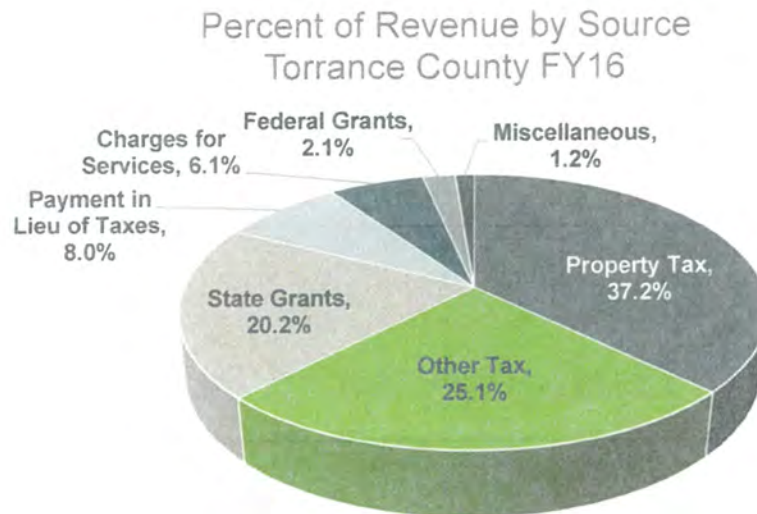
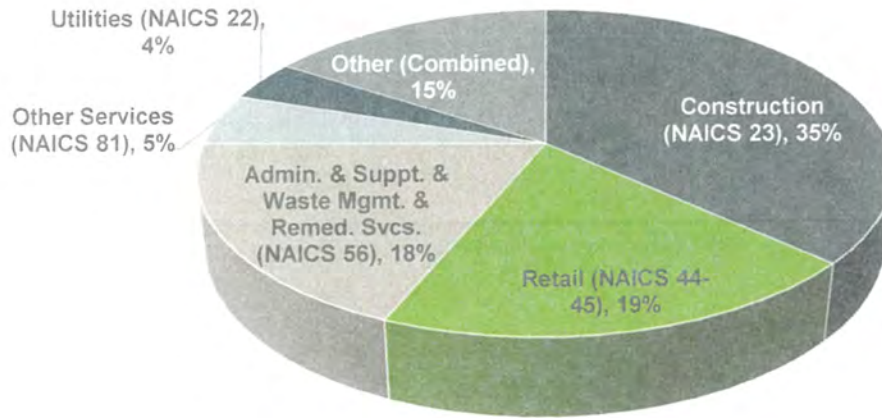


Figure 22 provides GRT data for FY17. The economic sector reporting the highest levels of taxable sales is the Construction sector, with revenues from the sales in these sectors constituting 35% of the total GRT followed by Retail Trade with 19% and Administrative and Support and Waste Management and Remediation Services with 18%. Torrance had over \$22.3 million in GRT, providing 30.7% of the total GRT collections in the Study Area.⁵²

⁵² New Mexico Taxation and Revenue Department RP80 Report.

Figure 22: Torrance County GRT by Sector

FY17 Torrance County GRT by Sector



The prominence of the Administrative and Support and Waste Management and Remediation Services sector in taxable gross receipts terms reflects the presence of the Torrance County Detention Facility, a large privately run prison facility, and the county's largest employer. The detention facility officially closed its doors on October 20, 2017. Barring a significant development, the closure of the detention center will drastically curtail employment and other economic activities in Torrance County.

Technical Appendix

TA-1 2017 Study Area Property Tax Obligations, by Recipient

	Guadalupe		Lincoln		Torrance		Study Area Total	
	Property Tax Obligation	% of County Total	Property Tax Obligation	% of County Total	Property Tax Obligation	% of County Total	Property Tax Obligation	% of County Total
Total State	\$ 208,610.09	5%	\$ 1,679,689.19	6%	\$ 556,870.61	6%	\$ 2,445,169.88	6%
County Operations and Debt Service	\$ 1,728,676.64	41%	\$ 7,703,402.37	26%	\$ 5,100,645.59	54%	\$ 14,532,724.60	34%
Special Mill Levy (County)	\$ -	0%	\$ 3,396,430.34	11%	\$ -	0%	\$ 3,396,430.34	8%
Total Municipal	\$ 298,880.17	7%	\$ 3,968,317.37	13%	\$ 171,521.98	2%	\$ 4,438,719.52	10%
Total School District	\$ 1,062,814.06	25%	\$ 8,334,408.88	28%	\$ 3,633,767.08	38%	\$ 13,030,990.02	30%
Guadalupe County Hospital	\$ 651,906.52	15%	\$ -	0%	\$ -	0%	\$ 651,906.52	2%
Luna Community College	\$ 297,069.86	7%	\$ -	0%	\$ -	0%	\$ 297,069.86	1%
Lincoln County Medical Center	\$ -	0%	\$ 2,470,131.16	8%	\$ -	0%	\$ 2,470,131.16	6%
Rural Clinics	\$ -	0%	\$ 741,039.35	3%	\$ -	0%	\$ 741,039.35	2%
ENMU Ruidoso Instr Center (1)	\$ -	0%	\$ 1,250,511.07	4%	\$ -	0%	\$ 1,250,511.07	3%
Total	\$ 4,247,957.34	100%	\$ 29,543,929.72	100%	\$ 9,462,805.26	100%	\$ 43,254,692.32	100%

Source: 2017 Property Tax Certificates filed with New Mexico DCA



STATE OF NEW MEXICO GUADALUPE COUNTY
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES – GOVERNMENTAL FUNDS
FOR THE YEAR ENDED JUNE 30, 2017

See Independent Auditors' Report and Notes to Financial Statements

14

	General Fund	County Road Fund	Capital Projects	Nonmajor Governmental Funds	Total
REVENUES:					
Property Taxes	\$ 1,715,254	\$ -	\$ -	\$ -	\$ 1,715,254
Gross Receipts Taxes	-	-	153,221	195,620	348,841
Gas and Motor Vehicle Taxes	14,442	487,425	-	-	501,867
Federal Operating Grants	-	-	499,000	36,817	535,817
Federal Capital Grants	-	-	-	17,656	17,656
State Operating Grants	558,724	10,069	749,469	652,370	1,970,632
State Capital Grants	-	345,349	-	-	345,349
Payments in Lieu of Taxes	160,224	-	-	136,568	296,792
Charges for Services	272,108	-	383,095	536,197	1,191,400
Investment Income	3,616	-	-	-	3,616
Special Assessments	-	-	42,393	-	42,393
Special Assessments - Interest	-	-	-	-	-
Miscellaneous Revenue	36,703	-	-	301,458	338,161
Proceeds from Sale of Equipment	-	-	-	-	-
TOTAL REVENUES	2,761,071	842,843	1,827,178	1,876,086	7,307,778
EXPENDITURES					
Current					
General Government	1,541,036	-	-	210,141	1,751,177
Public Safety	507,580	-	-	827,263	1,334,843
Public Works	168,815	529,076	479,814	-	1,177,705
Culture and Recreation	-	-	-	85,500	85,500
Health and Welfare	-	-	-	688,775	688,775
Capital Outlay	44,068	20,294	723,960	81,884	870,206
Debt Service Principal	-	-	107,550	91,640	199,190
Debt Service Interest	-	-	6,799	50,291	57,090
TOTAL EXPENDITURES	2,261,499	549,370	1,318,123	2,035,494	6,164,486
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	499,572	293,473	509,055	(158,808)	1,143,292
OTHER FINANCING SOURCES (USES)					
Transfers In	209,802	-	408,355	563,392	1,181,549
Transfers Out	(376,768)	(181,000)	(345,152)	(278,629)	(1,181,549)
TOTAL OTHER FINANCING SOURCES (USES)	(166,966)	(181,000)	63,203	284,763	-
CHANGE IN FUND BALANCE	332,606	112,473	572,258	125,955	1,143,292
FUND BALANCE, BEGINNING	2,071,380	199,318	601,100	813,599	3,685,397
FUND BALANCE, ENDING	\$ 2,403,986	\$ 311,791	\$ 1,173,358	\$ 939,554	\$ 4,828,689



STATE OF NEW MEXICO

Lincoln County

Statement of Revenues, Expenditures, and Changes in Fund Balances Governmental Funds
For the Year Ended June 30, 2016

	General Fund	Road	Corrections	Lincoln County Medical Center	Lincoln County Medical Center Lease Fund	Disaster Relief	Other Governmental Funds	Total
<i>Revenues</i>								
Taxes								
Property	\$ 10,778,761	\$ -	\$ -	\$ 2,337,334	\$ -	\$ -	\$ 733,222	\$ 13,849,317
Gross receipts	322,462	-	-	-	-	-	1,453,820	1,776,282
Gasoline and motor vehicle taxes	45,031	412,640	-	-	-	-	195,184	652,855
Other	-	-	-	-	-	-	49,264	49,264
Intergovernmental:								
Federal operating grants	12,632	135,527	-	-	-	236,862	370,046	755,067
Federal capital grants	-	-	-	-	-	-	388,394	388,394
State operating grants	43,889	248,823	93,560	-	-	52,982	1,512,789	1,952,043
State capital grants	-	324,813	-	1,938	-	-	281,528	608,279
Payment in lieu of taxes	1,878,813	-	-	-	-	-	-	1,878,813
Charges for services	194,221	1,968	831,996	458,333	641,667	-	1,535,040	3,663,225
Investment income	55,852	-	-	6,079	2,279	-	10,383	74,593
Special assessment	-	-	-	-	-	-	121,554	121,554
Special assessment - interest	-	-	-	-	-	-	42,531	42,531
Miscellaneous	34,888	20,186	5,564	-	-	79,430	81,383	221,451
Total revenue	13,366,549	1,143,957	931,120	2,803,684	643,946	369,274	6,775,138	26,033,668
<i>Expenditures</i>								
Current								
General Government	3,931,683	-	-	-	-	55,599	624,289	4,611,571
Public safety	2,679,304	-	2,929,928	-	-	-	811,002	6,420,234
Public works	-	2,433,107	-	-	-	-	150,734	2,583,841
Culture and recreation	-	-	-	-	-	-	34,760	34,760
Health and welfare	-	-	-	1,895,600	138,421	-	3,638,668	5,672,689
Capital outlay	90,264	-	-	-	80,000	-	2,161,356	2,331,620
Debt service:								
Principal	-	-	-	-	-	-	442,788	442,788
Interest	-	-	-	-	-	-	159,036	159,036
Total expenditures	6,701,251	2,433,107	2,929,928	1,895,600	218,421	55,599	8,022,633	22,256,539
Excess (deficiency) of revenues over expenditures	6,665,298	(1,289,150)	(1,998,808)	908,084	425,525	313,675	(1,247,495)	3,777,129
<i>Other financing sources (uses)</i>								
Proceeds from sale of equipment	-	-	-	-	-	-	-	-
Transfers in	-	1,785,612	2,258,030	-	2,600,000	-	4,539	4,539
Transfers (out)	(5,964,810)	-	-	(2,600,000)	-	-	2,983,634	9,627,276
Total other financing sources (uses)	(5,964,810)	1,785,612	2,258,030	(2,600,000)	2,600,000	-	(1,062,466)	(9,627,276)
Net change in fund balances	700,488	496,462	259,222	(1,691,916)	3,025,525	313,675	678,212	3,781,668
Fund balances - beginning of year:	8,318,021	345,421	246,277	3,101,876	-	341,946	4,939,046	17,292,587
Fund balances - end of year	\$ 9,018,509	\$ 841,883	\$ 505,499	\$ 1,409,960	\$ 3,025,525	\$ 655,621	\$ 5,617,258	\$ 21,074,255

State of New Mexico
Torrance County
Combined Statement of Revenues, Expenditures
and Changes in Fund Balances—Governmental Funds
For the Year Ended June 30, 2016

	General Fund	Road Fund	Nonmajor Funds	Total
Revenues				
Intergovernmental sources - federal	\$ -	\$ 93,379	\$ 179,236	\$ 272,615
Intergovernmental sources - state	274,000	482,857	1,827,208	2,584,065
Local and state shared taxes	754,754	679,255	1,778,817	3,212,826
Property taxes	4,326,844	-	433,561	4,760,405
Payment in lieu of taxes	358,517	-	660,250	1,018,767
Charges for services	171,576	1,528	608,135	781,239
Interest	898	177	269	1,344
Other	68,725	5,969	81,421	156,115
Total revenues	5,955,314	1,263,165	5,568,897	12,787,376
Expenditures				
Current				
General government	3,331,580	-	817,977	4,149,557
Public safety	1,285,550	9,500	3,349,947	4,644,997
Highways and streets	-	1,166,530	-	1,166,530
Health and welfare	-	-	857,470	857,470
Capital outlay	-	-	1,167,672	1,167,672
Debt service	-	-	-	-
Principal	-	-	519,271	519,271
Interest	-	-	85,838	85,838
Total expenditures	4,617,130	1,176,030	6,798,175	12,591,335
Excess (deficiency) of revenues over expenditures	1,338,184	87,135	(1,229,278)	196,041
Other Financing Sources (Uses)				
Proceeds from loan issuance	-	-	503,716	503,716
Operating transfers in	177,000	-	1,265,526	1,442,526
Operating transfers out	(1,121,882)	-	(320,644)	(1,442,526)
Total other financing sources (uses)	(944,882)	-	1,448,598	503,716
Net change in fund balances	393,302	87,135	219,320	699,757
Fund balances, beginning of year	1,672,163	501,526	3,009,266	5,182,955
Fund balances, end of year	\$ 2,065,465	\$ 588,661	\$ 3,228,586	\$ 5,882,712

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**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)**

Case No. 18-_____

**ANCHO WIND LLC, COWBOY MESA LLC, DURAN)
MESA LLC, RED CLOUD WIND LLC, TECOLOTE)
WIND LLC, VIENTO LOCO LLC,)**

JOINT APPLICANTS.)

AFFIDAVIT OF JOHN C. TYSSSELING, PH.D.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF CORONA WIND)
COMPANIES' JOINT APPLICATION FOR)
THE LOCATION OF THE CORONA WIND)
PROJECTS AND THE CORONA GEN-TIE)
SYSTEM PURSUANT TO THE PUBLIC)
UTILITY ACT, NMSA 1978, § 62-9-3)

Case No. 18-____-UT

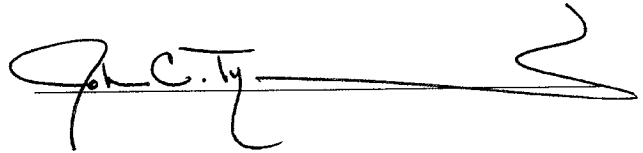
ANCHO WIND LLC, COWBOY MESA LLC,)
DURAN MESA LLC, RED CLOUD WIND)
LLC, TECOLOTE WIND LLC, VIENTO)
LOCO LLC,)

JOINT APPLICANTS)
_____)

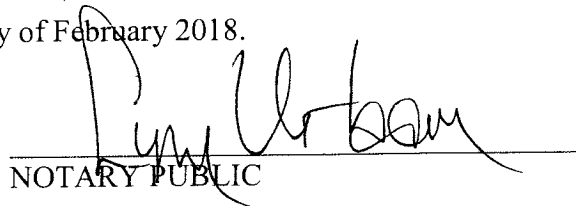
AFFIDAVIT OF JOHN C. TYSELING, PH.D.

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I have read the foregoing Direct Testimony, and it is true and accurate based on my own knowledge and belief.



SUBSCRIBED and sworn to before me this 28th day of February 2018.


NOTARY PUBLIC

June 19, 2021
My Commission Expires

