Cal Maritime Siting and Project Development Report

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Chapter 1: Site Overview

The 2020 Cal Maritime Siting and Project Development team sited and simulated a wind farm design rated to 100 MW in the southeast portion of Colorado, between Vilas and Springfield in Baca County. Considerations for choosing the site included wind resources, terrain, vegetation, access to transmission and transportation, non-interference with residences, businesses, or transportation networks, and various environmental factors.

The siting location and surroundings are largely composed of grazing ranges for animals and/or farmlands. Using wind resource estimates from the US National Renewable Energy Laboratory (NREL) Wind Toolkit, the general location of the wind farm was established (Figure 1).

Figure 1 Google Maps ("Baca County, Colorado").

Using simulated industry wind resource data gathered from local meteorological masts, a high resolution layer of wind resources was created which allowed for finer placements of wind turbines. To achieve a total of 100 MW, forty 2.5 MW GE 127 turbines were used. This particular turbine was selected due to local GE wind turbine expertise for maintenance and similarities between the wind distribution and turbine operating curve. The wind farm will require a new substation and will connect at Lamar Switching Station. From the collection station to the switching station, the 115 kV Tri-State transmission lines provide a means to supply the grid at reduced loss compared to lower voltage transmission lines, as seen in Figure 2.

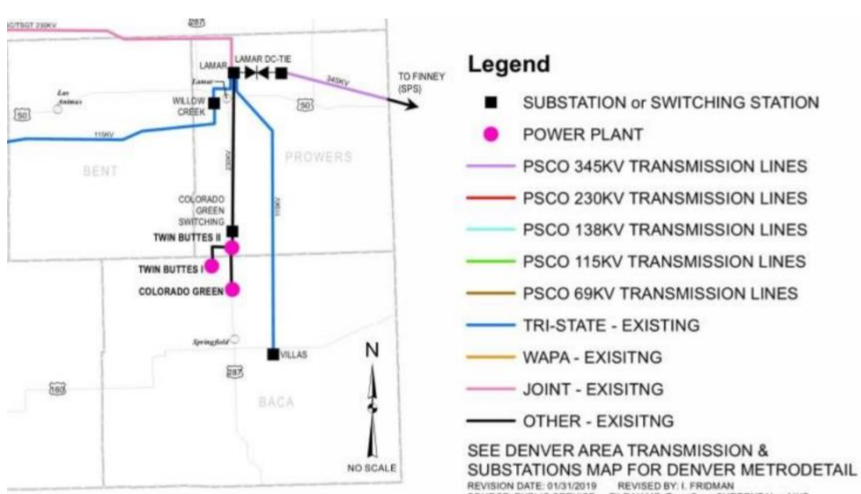

Figure 2 Adapted from "Public Service Company of Colorado Transmission Projects Status", Transmission Ownership Colorado - 2019, p. 3.

Chapter 2: Site Selection

2.1 Wind Resources

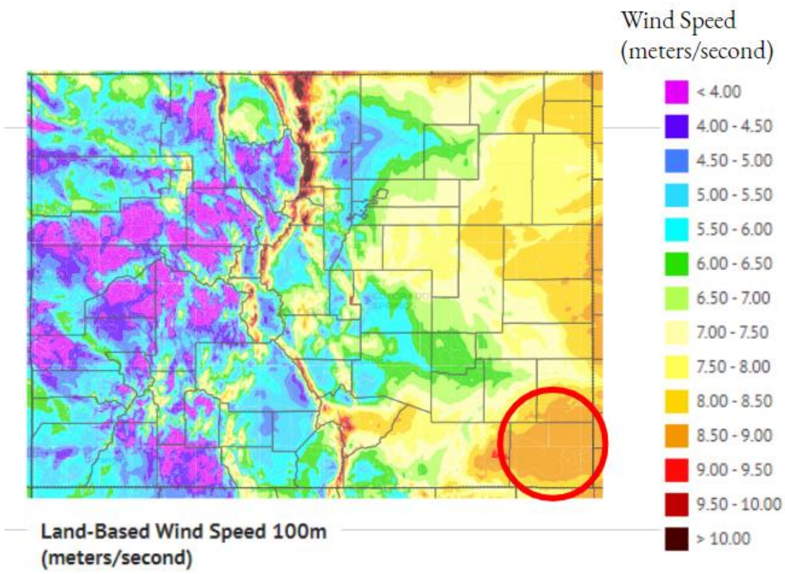

Figure 3 from NREL Wind Prospector

For the 2020 competition, the geographical region for siting the wind farm was defined as the Eastern half of Colorado. This switch to the Midwest took the siting process into unfamiliar territory and required significant research which was conducted using government resources and industry professionals before finally identifying Baca County as as a promising future wind development site. Using NREL WindProspector, Baca county had the most, per area, high wind speeds, as seen in Figure 3.

2.2 Weather Hazard

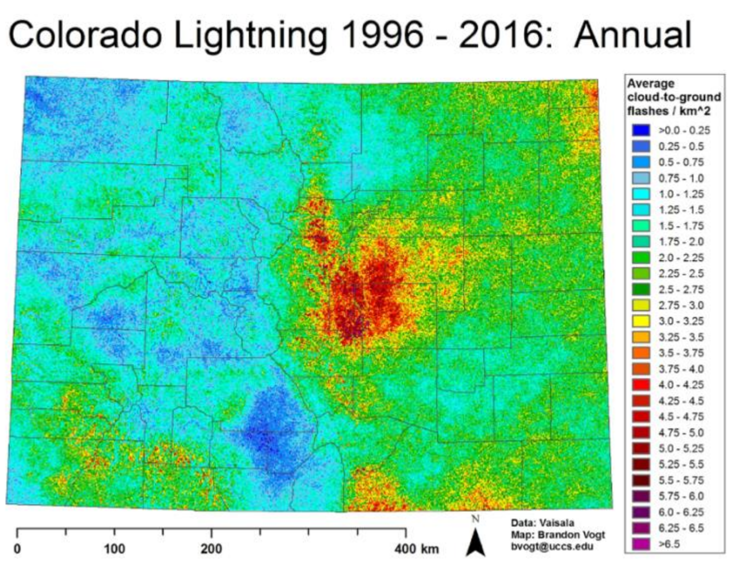

Figure 4 NWS Pueblo Lightning Page - CG Flash Density Maps.

Research regarding weather hazard density with a focus on lightning was conducted to understand the weather risks associated with Baca County. Higher weather risks potentially increase projected maintenance costs and influence the lifespan of the wind farm and insurance costs. Looking at the annual cloud-to-ground flashes per km^2, as shown in Figure 4, the average is well under 2.75-2.5 flashes annually.

2.3 Geotechnical Report

After confirming the wind resource availability and the weather hazard density, an examination of land was conducted for consideration of constructability. Baca County consists largely of flat grasslands for agriculture with minimal forestry. The large open space reduces any possible conflicts with human habitation. Subsequent geological research was conducted using the Soil Survey of Baca County, Colorado published by the US Department of Agriculture Soil Conservation Service and Forest Service. The report states the most important properties for engineers are the “permeability to water, shear strength, compaction characteristics, drainage, shrink-swell characteristics, dispersion, grain size, plasticity, depth of productive soil, and reaction,” (USDA Soil Survey, 1973). The soil series type identified in Baca County consists primarily of the Otero series (OTERO, 2020). This soil is considered to be coarse-loamy and has a neutral to moderately alkaline reaction. Typically the soil is utilized for rangeland and both dry and irrigated cropland. The vegetation tends to be tall and short grass related to the yuccas and sand sage family. The soil is also classified to be well or somewhat excessively drained, further increasing confidence in construction feasibility.

2.4 Economical Demand

After identifying the feasibility and resources available at Baca County, the financial demand was also considered. Baca County’s population has a significant rate of unemployment. By siting a wind farm in Baca County, jobs can be opened towards the communities of Springfield and Vilas as an economic incentive. Then, the average costs of energy in $/MWh of Baca County and other potential sites were researched and compared.

Table 1 Comparison of Commercial and Industrial Cost in Baca and Neighboring Counties

Counties	Commercial Costs ($/MWh)	Industrial Costs ($/MWh)
Baca	154.44	115.03
Cheyenne	133.10	102.1
Kit Carson	85.87	113.87
Las Animas	123.78	73.02

Using data from NREL WindProspector, the commercial cost of energy was identified as $154.44/MWh and the industrial cost of energy was identified to be $115.03/MWh. Compared to local counties, the cost of energy for Baca is significantly higher, suggesting a strong business incentive to site and sell energy in Baca. After identifying Baca County as the most promising of the options available, we consulted with industry experts familiar with the area, who confirmed our selection.

Chapter 3: Balance of Plant Considerations

3.1 Turbine Selection

The turbine selected was the General Electric 2.5 MW -127, which has been the choice in previous year’s competitions. This turbine is commonly used in land-based wind farms, so it is a well understood and broadly supported power generation platform, for which wind farm developers can count on finding service and maintenance.

We inspected whether or not increasing the power output of the individual turbines would be useful in our project, but based on our analysis of the per annum wind speed in the Baca County region, the capacity factor for the 2.8 MW turbines would have gone down, compared to the 2.5 MW turbines, and our target customer is at the utility level, for whom stable and affordable power is key. Combined with the aforementioned large installation base of the 2.5 MW, the choice for the GE 2.5 MW was clear.

Table 2 Specifications of Two GE Wind Turbines Considered for this Project, adapted from Openwind Turbine Types

	GE 2.8MW - 127	GE 2.5MW - 127
Rated Capacity (kW)	2,820	2,520
Cut-In Speed	3 m/s	3 m/s
Cut-Out Speed	30 m/s	30 m/s
Rotor Diameter	127 m	127 m
Hub Height	90 m	89 m
IEC Class	IIb	IIb

3.2 Roads

A network of access roads is needed to support the functions of wind farm construction and daily operations. The roads need to support heavy loads of construction material for a brief duration, so the roads will be made up of layered crushed rocks and gravel. The roads will be 4.5 meters wide (WE Energies) to accommodate construction accessibility.

3.3 Foundation

A wind turbine foundation needs to support wind turbine loading in the axial and transverse direction. Costs typically vary effectively from local soil conditions, applicable engineering codes, and needed load-bearing capacities.

3.4 Transmission

Proper electrical transmission systems need to be installed to effectively maximize the usable electricity generated from the wind farm. Each GE 2.5 MW turbine is equipped with individual transformers, reducing electrical losses to the collection substation. The collection system routes turbine groups into a single point of connection and will step up the voltage, allowing for further effectiveness when being transmitted to the Lamar Switching Station and ultimately the electrical grid.

3.5 Wind Resource and Turbine Monitoring

Monitoring the wind resources is possible through meteorological towers and the performance of wind turbines through SCADA (Supervisory Control and Data Acquisition). This provides more realistic data for financial projections and awareness of the wind farm health. SCADA computers communicate typically through fiber-optics to control individual wind turbine functionality, such as controlling reactive power or limit power output. Incorporating met towers to SCADA systems provides powerful performance forecasting and wind farm performance indicators.

3.6 Optimization: Selection of Other GE Wind Turbines

The team began an initial analysis to select the optimum GE wind turbine for the sited location. A more detailed analysis was begun but not completed, so there was no feasible argument for selecting the GE 2.8 MW turbine over the GE 2.5 MW turbine. During this analysis process through Openwind, all wind turbines were sited at the exact same location, leading to two different rated powers. Due to unfinished analysis, further considerations on selecting a wind turbine incorporating lifespan and other financial possibilities were not considered.

Table 3 Openwind Performance of Turbine Comparison

Openwind Performance of GE 2.8 and GE 2.5 Turbines (40 Turbines)				
Turbine Type	Total Rated Power	Capacity Factor (%)	Annual Net Energy Output	Array Efficiency (%)
GE 2.8MW - 127	112 MW	53.44%	528.45 GWh	93.29 %
GE 2.5MW - 127	100 MW	56.69%	500.94 GWh	94.86 %

Chapter 4: Site Design

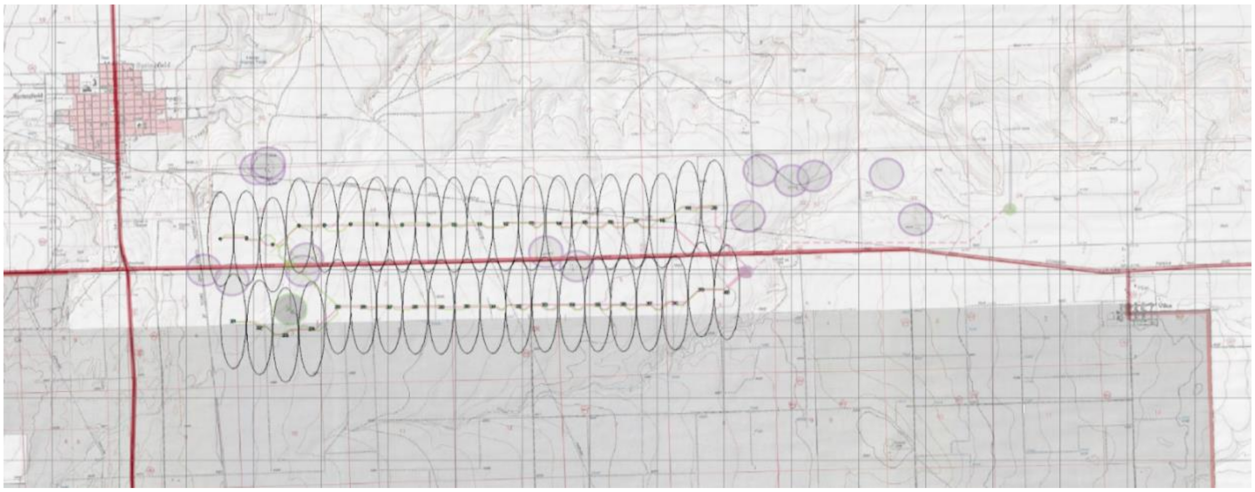

Figure 5 Adapted from Openwind (AWS Truepower, LLC Openwind Enterprise Version 01.08.00.2886p)

Chapter 5: Siting Challenges

5.1 Shadow Flicker

The site location is not proximal to substantial structures, although it straddles Highway 106 which poses concerns relating to shadow flicker. To mitigate this concern, all turbines were placed at least 300 meters from the highway. Baca County has no current ordinance specifying a minimum safe distance, but past projects have determined that 300 meters is considered a permissible proximity to residences and roads. There are known solutions for adjusting turbine rotation or terminating it when shadow flicker is calculated to be at its worst to local observers. However, given that the periods of the most intense shadow flicker (sun low on horizon) are also the periods of highest wind speeds and highest demand by our most likely customers, the local utilities, such mitigations are undesirable.

To meet the minimum requirement and to provide a gap for safety, a distance of 400 meters was used for siting the wind turbines in this farm. The shadow flicker is currently an issue for identified buildings, but a conscious effort has been made to reduce the overall probability of shadow flicker on properties. We used a rough array in two longitudinal rows of turbines approximately equally spaced, and then optimized based on the wind rose using Openwind's proprietary optimization algorithm to fine tune the placement. Using Openwind's optimizer, the array efficiency was increased by two to three percent. As aforementioned, major roads and structures were identified and marked appropriately in order to further build on the accuracy of the chosen turbine locations. Additionally, an in person visit to the physical site was undertaken to better pinpoint smaller buildings that did not necessarily show up on mapping websites. These smaller buildings were subsequently marked in Openwind, as shown in Figure 6. Power lines from the already existing wind farms to the south were located in order to avoid them.

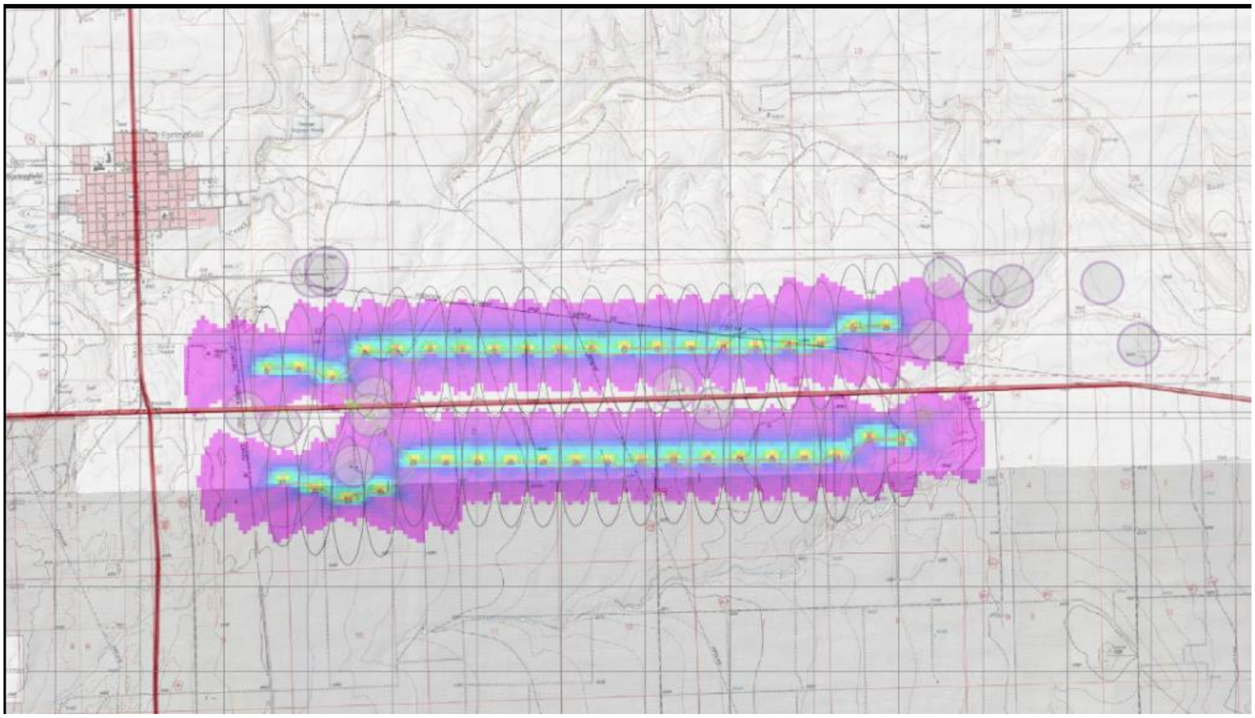

Figure 6 Adapted from Openwind (AWS Truepower, LLC Openwind Enterprise Version 01.08.00.2886p)

5.2 Military and Airspace

There is a significant US military presence in Colorado and the states neighboring Baca County, the south eastern-most county in Colorado. While no military bases are within fifty miles of our selected site, there are Military Training Routes (MTR) crisscrossing the state. It is critical to recognize this shared airspace and take mitigation steps to implement all accommodations possible to ensure the safety of our defense partners because there is a possibility of the wind turbines affecting the operation of radar from the air base. Appropriate lighting is planned to be installed on the turbine structures to warn all aircraft of their physical location and proximity. Because of these mitigation steps, and our site's distance from military bases and air force bases in particular, we believe that our Obstruction Evaluation request to the Federal Aviation Authority would be cleared without issue and be forwarded to the Military Aviation and Installation Assurance Siting Clearinghouse for review and subsequent approval.

5.3 State and Local Policy

In 2018, the Colorado Public Utilities Commission approved Xcel Energy's Colorado Energy Plan for 100 percent renewable energy by 2040. The Colorado Energy Plan aims to reach 55 percent renewable energy by 2026, reducing carbon emissions by approximately 60 percent from 2005 levels (Xcel Energy, 2018). The overarching goals of the state plan are to modernize public utilities, increase green jobs, promote energy efficiency, incentivize zero emission vehicles, and provide transition support. The installation of a new wind farm in Baca County aligns with state goals by increasing the use of wind power and reducing carbon and greenhouse gas emissions while keeping energy costs low for Coloradans.

The 2015 Colorado State Wildlife Action Plan (SWAP) outlines vulnerable species and habitats throughout Colorado as a resource for state and local organizations to address primary threats and possible conservation actions. The guiding principles of the SWAP include encouraging and supporting conservation actions, managing healthy habitats and ecosystems, creating a flexible plan that can incorporate new research findings and successful management innovations, acknowledging the role of private landowners and local stakeholders, and maintaining an atmosphere of cooperation (SWAP, 2015). This provides a framework for our approach to habitat monitoring and mitigation.

5.4 Environmental Considerations

A few of the federally endangered species in Colorado that may be impacted by the construction of a wind farm include the black-footed ferret, gray wolf, grizzly bear, lynx, jumping mouse, Gunnison sage-grouse, least tern, Mexican spotted owl, piping plover, southwestern willow flycatcher, and the whooping crane. Additionally, raptors are of high concern because of their nesting, migration, and hunting habits throughout the region. Native raptors include the golden eagle, ferruginous hawk, red-tailed hawk, Swainson's hawk, prairie falcon, and burrowing owl. Protection of species will be coordinated through pre-construction and post-construction surveys as well as cooperation with local conservation organizations.

The Baca County Conservation District was organized under the Colorado Soil Conservation Act of 1937, covers 1,657,635 acres of land in Baca County, Colorado, and works with local landowners to enhance conservation, wildlife, and water quality. Other notable organizations include the Baca National Wildlife Refuge, Friends of the San Luis Valley Refuges, National Wildlife Refuge System, all of which provide protection for native species in addition to resources and support for sustainable development and conservation (FWS, 2020).

5.5 Environmental Mitigation

The most important mitigation strategies that will be implemented at our wind farm include the protection of any cultural and paleontological resources, which will include a pre-construction site survey and comprehensive protocol in the event of the discovery of any artifacts. Additionally, we will be minimizing vehicle and equipment emissions and noise, including dust suppression so as not to disturb nearby habitats and air quality. We will also minimize surface disturbance during construction by avoiding areas of high erosion potential. Construction will not be conducted within 500 feet of ephemeral surface waters or the nesting sites of any endangered species.

On-site mitigation will include avian strike data collection and a raptor mitigation plan. The site will be canvassed on a weekly basis for bird carcasses in order to keep track of fatalities. For a minimum of three years post-construction, there will be yearly impact reports published and sent to the state and federal departments of fish and wildlife in order to determine if the turbines generate disproportionately high levels of avian strikes. Offsite mitigation consists of purchasing or acquiring a replacement mitigation habitat that accounts for a ratio of 1:1 of the total rotor swept area of each turbine. If the site proves to cause disproportionately high numbers of avian fatalities in the years post-construction, deterrence options include sonar, radar, and UV light. Lastly, a Stormwater Pollution Prevention Plan will be developed in accordance with local and state laws to identify any site conditions that may cause water pollution and the subsequent plan for the prevention and mitigation of such damage.

Chapter 6: Project Funding

In order to find the range of funding opportunities available in the wind energy industry, we conducted a financial analysis to obtain information about available incentives and produce an accurate gauge of potential results. Our analysis centered around tax credits, tax incentives and government loans in order to help generate capital to fund the project through its operations. The information in this report was obtained from Baca County Economic Development, South East Colorado Enterprise Development, WINDExchange, and the Community Development Block Grant Program.

6.1 Regional Incentives

The financial analysis operates on the premise that we are a prospective single developer seeking tax incentives in order to help support our wind farm. Colorado offers no statewide tax incentives, so the implementation and monitoring of credits is the responsibility of individual counties. One of the credits/incentives in Baca County is the Rural Jump-Start Program, which is aimed at bringing new businesses into rural Colorado. Businesses are drawn with incentives such as exemption from state and local income, sale, usage, or personal property tax fees. We are optimistic that our project would qualify for the Rural Jump-Start Program given that the proposed location will be situated on a rural parcel of land between Springfield and Vilas.

Baca County also implements the Job Growth Incentive Tax Credit (JGITC) which is meant to combat brain drain that is affecting Baca County and the rest of rural America. This provides an income tax credit of up to 50%. Baca is a part of the Southeast Colorado Enhanced Enterprise Zone. Because our wind farm will be located inside of this zone, we will be eligible for a 3% investment tax credit as well as local government tax incentives.

In December 2019, Congress approved extensions of the Production Tax Credit (PTC) and investment tax credit (ITC). The PTC provides a tax credit of $0.01-0.02 per kilowatt-hour for the first ten years of electricity generation for utility-scale wind (Windexchange). If construction is begun by December 31st, 2020, a business can qualify for either the federal business energy investment tax credit, which is tied to the total value of the facility or the federal renewable electricity production tax credit, which is tied to the energy produced over a 10 year period.

6.2 Government Loans

The South East Colorado Enterprise Development (SECED) offers the business loan fund (BLF) for businesses starting an operation within one of five counties "Baca" that are legally allowed to operate in Colorado and have the idea of profit in mind. Due to the fact that our wind farm will be located near Vilas, we will be able to take advantage of the BLF and get a business loan. We have decided not to take advantage of the $250,000 loan, as we believe that it is not impactful enough to justify its use. However, if we were to make use of it, we would utilize the funds primarily for community development.

6.3 Carbon Offsets

Most carbon offsets sell for considerably low prices, especially for those sold on the secondary market, which is composed of sales among intermediaries or from intermediaries to end buyers. In 2016, over 17.3 MtCO2 e of offsets sold for $1.0/tCO2 e. Prices of offsets remain highly variable mainly depending on location and project type. More than half of all offsets come from Asia, but buyers place more value on offsets from North America. In 2016, renewables and forestry/land use were the two most traded offset categories by volume with renewables being 18.3 mtco2e. Renewables offsets are sold at an average of $1.4/tCO2 e.

For the purposes of our project, we assumed a rate of about $900,000 based on the market rate for carbon offsets in California. According to the Colorado Carbon Fund, funding and compensation for carbon credits is gravitating towards the precedent being set by the Californian government (Colorado Carbon Fund). Without this funding, our projected payoff period increases from year 9 to year 10, with an additional $956,895.88 being accrued in interest payments.

6.4 Levelized Cost of Energy

In calculating our levelized cost of energy, we determined the optimal rate to be about $22.86 per megawatt hours. This was calculated using our total operational and capital expenses, $4,597,566 per year and $134,014,534.10 respectively. These were measured against our net annual energy production at about 494,188.62 megawatt hours per year. This final value was derived from a simulated wind farm constructed in Openwind at our desired site in Baca County, CO. Additionally, our overnight capital cost, or the total capital cost divided by the total plant size (100,000kW) yields about $1,340 per kilowatt (see Table 4).

Table 4: Levelized Cost of Energy Calculations

LCOE 1 ($/MWh)	**$ 22.86**
PTC $MWh	$20.00000
Net Energy MWh	494188.6243
PPA $/MWh	$28
IRR 1	1.83%

6.5 Bankability of Financial Plan

Having taken our estimated levelized cost of energy at $22.86 per megawatt hour, our team has decided to market our energy at a price of $28 dollars per megawatt hour. This will yield an internal rate of return of about 1.83%. Though the 2018 AWEA Wind technologies report dictates a market trend towards $20 per megawatt, we feel that this price provides a margin in which our farm may take measures to protect its workforce during catastrophic economic events, like the Covid-19 epidemic (AWEA, 2018). This is also done to avert the risk of increased year-over-year operating costs due to labor, environmental hazards or otherwise.

In determining our power purchaser, we decided to work with Xcel Energy for a number of reasons. In accordance with the Colorado Energy Plan (CEP), Xcel is transitioning from coal to wind energy, and has already funded three wind farms in excess of 150MW. One of these farms is even located in Baca County, and is a target of a 2.5 billion dollar CEP investment towards independent producers of renewable energy in the region. Funding targets are measured in carbon reduction over ten year periods until 2050. Additionally, they are planning to fund projects with a projected start date of 2021, which is in line with our PTC timeframe (Xcel Energy).

In regards to financing our wind farm, we have decided to perform a 75% principle loan totaling in $104,531,336.60 at a 4% interest rate, based on information gained from comparable wind farms and the AWEA market report (AWEA, 2018). According to this same report, our end-construction year of 2021 qualifies us for a $20 production tax credit (PTC) per megawatt hour, totaling at $4,507,000.25 yearly for a decade after construction (AWEA, 2018). Without this PTC, the time in which our project would break even is increased to year 12, with our IRR decreasing from 1.83% to -5.43% at $28 dollars per megawatt hour. Using this method, our loan will be fully paid off in the ninth year of operation while accruing $18,213,976 in total interest over time. Due to a lack of equity investment, we have decided to depreciate our assets over 15 years as per IRS Publication 946, which would result in a sum of $23,275,269.92 (IRS). This is in contrast to our expected cost of $33,073,252.96 in tax if we were to depreciate our assets over a five year period.

6.6 Risks and Impact to Financial Plan

The primary risk in our financial plan is bank insolvency due to economic reasons, which would cut the majority of our funding via principle loan. In this scenario, our wind farm would seek funding from a blend of traditional equity partnerships and loan agencies involved in capital funding. This would likely result in a higher interest rate, and by extension a lower internal rate of return (IRR).

Additionally, there is also the chance of the production tax credit being adjusted or shortened by state legislature. Without this PTC, the time in which our project would break even is increased to year 12, with our IRR decreasing from 1.83% to -5.43% at $28 dollars per megawatt hour. In a scenario where the PTC is removed, we would likely vie for the 3% investment tax credit (ITC) available to our wind farm. Without support from governmental grant provisions, our breakeven point would be increased to year ten under a total $4,020,436.02 over a 10 year period.

Chapter 7: Breakdown of Capital Expenditures

As is the case for all wind farms, initial capital expenditures are the largest hurdle to overcome when considering solvency over a long period of time. In order to deliver the most accurate and contemporary information possible, our capital expenditures are primarily comprised of both values derived from OpenWind and research done in our desired siting location.

CapEx Items	
Road Cost	$5,542,470.00
Total Turbine Cost	$ 99,000,000.00
site access, staging	$ 3,727,245.69
engineering management	$ 1,464,275.09
Total Cable cost	$ 11,466,106.00
Installation, assembly	$ 3,327,897.93
Cost per foundation	$ 112,952.04
Total Foundation	$ 4,518,081.60
Developer fee %	5%
Total Developer fee	$ 6,026,332.88
Land Lease	$ 406,400.00
Total Capital Cost	$ 129,046,076.31
Total Amount Financed	$ 134,014,534.10

Table 5: Capital Expenditures

At $134,014,534.10, our considerations include total road and cabling costs, assembly and installation, siting access and staging, construction of foundations and payment for engineering management (see Table 5). These numbers were derived from our simulated siting plan in OpenWind. Additional costs considered and itemized without the aid of OpenWind were the total cost of 40 2.5 MW GE 127 turbines, fees for land development and land values. Our price estimate for each turbine at $2,475,000 is derived from a study done by Bloomberg finance that prices turbines at $990,000 for each megawatt produced (Bloomberg, 2018). The total development fee of $6,026,332.28 was derived from the NREL 2017 Wind Energy Finance Report at 5% of development related costs including cost of road, cabling, foundation and turbine construction. Finally, our land leasing estimate was based on a number of factors. Unlike the 2019 siting competition, the Baca County wind farm is sited in a region primarily comprised of farmland. After having spoken with local authorities, annual per-acre leasing rates were determined to be $1,462.50 on average. Using information from Landmark Dividend and Windustry, we used a leasing percentage of 8% and a per-turbine leasing cost of about $8,000 (Landmark, 2020). Additionally, the local property tax for non-residential properties in Baca County between Springfield and Vilas was found to be about 27%. These values taken into account, our final leasing cost is $406,400 per year.

Chapter 8: Breakdown of Operational Expenditures

Operational Costs	
O&M $/yr	$ 3,200,000.00
Insurance per turbine	$ 14,229.87
Total Insurance $/yr	$ 569,194.80
Administrative cost per turbine	$ 7,424.28
Total Admin $/yr	$ 296,971.20
Local Funding	125,000
Land Lease Payouts Annually	$406,400.00
Total Annual Operational Costs	$ 4,597,566.00

Table 6: Operational Costs

In determining our year-over-year operational costs (see Table 6), our team was required to make several informed assumptions. All values derived from reports older than five years have been adjusted accordingly for inflation. Our team determined our yearly general O&M budget at $3,200,000 based on a study by Lazard. We found this value to be fair against the budgets of comparable wind farms in the area. Our values for both insurance and administrative costs were derived from figures represented in a Windustry report, at about $14,229.87 and $7,424.28 per turbine respectively.

8.1 Weather Risks

Some weather risks to take into consideration when building a wind farm include high-intensity levels of wind, floods, hail, and lightning. To be cautious of a wind farm being struck by lightning, a protection system Class III is normally required for turbines up to 60m and Class II for the ones that are more than 60m. PV panels have been authorized to ensure that the turbines are sturdy to withstand any hail event. To avoid floods, site drainage pumps must be checked and tested regularly during the rainy season to ensure no damage occurs to any citizens around the wind farm. It is advised to design wind farms where the natural atmospheric turbulence is high to mitigate any surface-temperature impacts (Scientific American). During the cold season, wind farms may ice up and throw ice when in operation.

8.2 Insurance Costs

The first and foremost insurance needed for a wind farm is the physical-damage coverage. This coverage needs to be implemented as soon as the project begins until the very end when the wind farm is tested for success. A coverage with time delay is advised in case there is a lost power-production revenue during construction delays resulting in a loss of revenue. The insurance of the wind turbines needs to include some type of deductibles which are estimated to be at $50,000 and 20 days, or $100,000 and 30 days (Windpower Engineering Development). The deductible insurance is different from the weather risk insurance. Wind power plants and wind energy insurance provided by Solar Insure, Inc, includes most of our needed requirements.

Chapter 9: Triple Bottom Line

Last year, our team set aside $125,000 for the purpose of positively impacting one of the lowest funded school districts in the State of California. This idea was perfectly aligned with a common goal shared by many wind farms: improving the quality of life for future generations. Baca County's current economic climate is suffering from brain drain and negative job growth. We hope to develop a wind technician program for local students at Lamar Community College in Baca County with the goal of increasing interest in the wind industry by allocating $125,000 for funding contributions. This contributes to our triple bottom line goal to move the wind industry forward in providing clean zero-emission energy while also empowering Baca County through the development of a new and skilled workforce. This would also help increase the average income of residents in Baca County.

Other potential bottom-line opportunities include allocating funds to donate to the Colorado Trust Foundation which works with five of the existing non-profits in Baca County. Such foundations are dedicated to creating fair and equal opportunities for Coloradans to encourage healthy lives and the development of local health care infrastructure, while also funding community centers within southeastern Colorado.

The Wild Animal Sanctuary is located in southeastern Colorado with over 9,000 acres of land and care centers. We are deeply invested in protecting the natural environment and hope to partner with the Wild Animal Sanctuary to grow and develop this relationship as a mechanism to mitigate some of our own adverse environmental effects during the initial construction period.

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