

KINGMAN FIELD OFFICE SCOPING FORM

Proposal: Renewal Pacific Wind ROW Type II Wind Test Facility AZA 035336

NEPA Document Number: DOI-BLM-AZ-C010-2014-0021-CX

Document Location: Lands/RenewableEnergyProjects/Pacific Wind/AZA-35336_Renewal/2014-0021-CX_DolanSprWind

Land Description: T. 26-28 N., R. 17-18 W. 29,441 acres

Applicant: Pacific Wind Development LLC

Authorization: Type II Wind ROW

INVOLVEMENT: Indicate in the left column which disciplines need to provide information into the EA.

Needed Input (X)	Discipline	Signature
	Lands	
	Minerals	
X	Range	/s/ Celeste Mimnaugh 04/09/2014
	Wild Horse and Burro	
X	General Recreation	/s/ Matthew Driscoll 04/09/2104
X	Cultural and Paleontological Resources	/s/ Timothy Watkins 05/19/2014
	Wilderness	
	Soils	
	Surface and Groundwater Quality/Water Rights	
	Air Quality	
X	Wildlife	/s/ Rebecca L. Peck 05/16/2104
X	Threatened and Endangered Plants and Animals	/s/ Rebecca L. Peck 05/16/2104
X	Migratory Birds	/s/ Rebecca L. Peck 05/16/2104
	Surface Protection	
	Hazardous Materials	
	Areas of Critical Environmental Concern	
X	Visual Resources	/s/ Matthew Driscoll 04/09/2014
	Socio-Economics/Environmental Justice	
	General Botany/Noxious Weeds	
	Energy Policy	

Writer: /s/ Maria Troche

Date: 04/09/2014

Environmental Coordinator: /s/ John Reid

Date: 05/19/2014

Field Manager: /s/ Ruben A, Sanchez

Date: 05/09/2014

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)
COMPLIANCE RECORD FOR CATEGORICAL EXCLUSIONS (CX)
U.S. Department of Interior
Bureau of Land Management**

PART I. – PROPOSED ACTION

BLM Office: Kingman Field Office

NEPA No.: C010-2014-0021-CX

Case File No.: AZA 035336

Proposed Action Title/Type: Renewal of ROW for Dolan Springs Wind

Applicant: Pacific Wind Development

Location of Proposed Action: G&SRM, T.26-28N. R. 17-18W., all public lands.

Description of Proposed Action: Pacific Wind Development LLC, Iberdrola Renewables, has requested the renewal of AZA 035336, a right-of-way (ROW) for a Type II wind project test area. The existing wind energy testing area includes approximately 29,441 acres of public land and 5 meteorological towers (met) towers to gather wind resource data. If the ROW was renewed it would continue to preclude other wind energy applications on the identified public lands. If approved the ROW would be renewed for an additional 3 years, and would include restoration and rehabilitation in the terms and conditions of the grant. Disturbance for each met tower is expected to be approximately 2.9 acres totaling 14.5 acres. A detailed description of the met tower proposal is included in the Plan of Development dated September 2010 and June 2012, also attached.

Part II. – PLAN CONFORMANCE REVIEW

This proposed action is subject to the following land use plan(s): Kingman Resource Management Plan/EIS

Decisions and page nos.: LR13a: All other minor rights-of-way would be evaluated through the environmental review process and granted or rejected on a case by case basis. Existing rights-of-way would be used when possible to minimize surface disturbance. (Page 21)

CL01: Protect the scientific information potential of sites, enhance the public use values of sites and manage sites for conservation. (Page 74)

VR01: Designate and manage visual resources according to the Visual Resource Management Classes as shown on Map 19, page 81 and Table 16, page 138.

WL02: Thirteen wildlife movement corridors and lands between mountains in southern Mohave County are proposed to ensure that biotic diversity is maintained (Map 20, Page 79).

Date plan approved/amended: March 1995

This proposed action has been reviewed for conformance with these plans (*43 CFR 1610.5-3, BLM Manual 1601.04.C.2*).

PART III. – NEPA COMPLIANCE DETERMINATION REVIEW

A. The proposed action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 11.9 [E(9): Renewals and Assignments of leases, permits, or rights-of-way where no additional rights are conveyed beyond those granted by the original authorizations. (19) Issuance of short-term (3 years or less) rights-of-way or land use authorizations for such uses as storage sites, apiary sites, and construction sites where the proposal includes rehabilitation to restore the land to its natural or original condition.;

And

B. Extraordinary Circumstances Review: In accordance with **43 CFR 46.215**, any action that is normally categorically excluded must be subjected to sufficient environmental review to determine if it meets any of the 12 Extraordinary Circumstances described. If any circumstance applies to the action or project, and existing NEPA documentation does not adequately address it, then further NEPA analysis is required.

IMPORTANT: Appropriate staff should review the circumstances listed in Part IV, comment and initial for concurrence. Rationale supporting the concurrence should be included in the appropriate block.

Part IV. – EXTRAORDINARY CIRCUMSTANCES DOCUMENTATION

PREPARERS:

DATE:

Maria Troche	3/27/2014

PLANNING & ENVIRONMENTAL SPECIALIST

DATE

The action has been reviewed to determine if any of the extraordinary circumstances (43 CFR 46.215(a)-(l)) apply. The project would:

(a) Have significant impacts on public health or safety.

Yes	No	<p>Rationale: No, met tower guy wire supports may present a safety hazard for the public recreating in the area, however, guy wires are visually marked for sight. The locations of the met towers are not in high recreation use areas.</p> <p style="text-align: right;">Preparer's Initials <u> MET </u></p>
	X	

(b) Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.

Yes	No	<p>Rationale: No. The met towers currently authorized were located to avoid sensitive areas. A biological survey was completed on 7/20/2010 and there were no sensitive species, plant or animal, in the area.</p>
	X	
		Preparer's Initials <u> MET </u>

(c) Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102 (2) (E)].

Yes	No	<p>Rationale: No. Met tower disturbance is 2.9 acres per tower or less and access roads are less than 2 acres. There will be no further disturbance if the authorization is renewed.</p>
	X	
		Preparer's Initials <u> MET </u>

(d) Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.

Yes	No	<p>Rationale: No, it is not expected that existing met towers will have significant effects or unique or unknown environmental risks and there will be no further effects if the authorization is renewed.</p>
	X	
		Preparer's Initials <u> MET </u>

(e) Establish a precedent for future action or represent a decision in principal about future actions with potentially significant environmental effects.

Yes	No	<p>Rationale: No. The BLM Wind Energy Policy states met tower installation and testing does not establish a right to development and a separate application is required.</p>
	X	
		Preparer's Initials <u> MET </u>

(f) Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.		
Yes	No <input checked="" type="checkbox"/>	Rationale: No, the met towers do not have a direct relationship to other actions with cumulatively significant effects Preparer's Initials <u> MET </u>
(g) Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau.		
Yes	No <input checked="" type="checkbox"/>	Rationale: No. There aren't any National Register listed or eligible properties in the vicinity of the met towers. Preparer's Initials <u> MET </u>
(h) Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.		
Yes	No <input checked="" type="checkbox"/>	Rationale: No. There is "No Affect" to critical habitat or to any T&E species or its habitat within the project or action areas. There is no habitat for any listed species with the exception that the project area is located within the designated non-essential experimental population (10 J of the Endangered Species Act) area of the California condor. The nonessential experimental population status applies to condors only when they are within the experimental population area. Outside of this area condors are considered endangered. See attached Biological Evaluation dated 4-21-2014. Preparer's Initials <u> MET </u>
(i) Violate a Federal law, or a State, local or tribal law or requirement imposed for the protection of the environment.		
Yes	No <input checked="" type="checkbox"/>	Rationale: No. Renewal of ROW would not violate any laws. Preparer's Initials <u> MET </u>
(j) Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).		

Yes	No X	<p>Rationale: No. There are no low income or minority populations in the vicinity of the met tower locations.</p> <p style="text-align: right;">Preparer's Initials <u> MET </u></p>
<p>(k) Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).</p>		
Yes	No X	<p>Rationale: No. The met tower locations will not limit access to any public land. A cultural survey conducted of the met tower locations indicated there are no cultural resources present.</p> <p style="text-align: right;">Preparer's Initials <u> MET </u></p>
<p>(l) Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).</p>		
Yes	No X	<p>Rationale: No. Stipulations are provided in the ROW grant to reduce the potential for spread of non-native invasive species.</p> <p style="text-align: right;">Preparer's Initials <u> MET </u></p>
<p>PART V. –COMPLIANCE REVIEW CONCLUSION</p> <p>I have reviewed this plan conformance and NEPA compliance record, and have determined that the proposed project is in conformance with the approved land use plan and that no further environmental analysis is required.</p> <p>MITIGATION MEASURES/OTHER REMARKS:</p> <p style="text-align: center;">/s/ Ruben A Sanchez Field Manager</p> <p style="text-align: right;">05/19/2104</p> <p>APPROVING OFFICIAL: _____ DATE: _____</p> <p>TITLE: _____</p>		

Note: The signed conclusion on this compliance record is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. A separate decision to implement the action should be prepared in accordance with program specific guidance.

Decision: Based on a review of the project described above and field office staff recommendations, I have determined that the project is in conformance with the land use plan and is categorically excluded from further environmental analysis. It is my decision to approve the action as proposed, with the following stipulations

Approved By: /s/ Ruben A. Sanchez **Date:** 05/19/2014

Ruben A. Sanchez

Field Manager, Kingman Field Office

Exhibits:

1. Draft Grant
2. Terms and Conditions
3. POD – Original (Sept 2010)
4. POD – Amendment (June 2012)

AZA 035336
Exhibit A
July 1, 2014
Project Area Legal Descriptions

T. 27 N., R. 16 W.,

sec. 7, lots 1-4, E¹/₂, E¹/₂W¹/₂,
sec. 18, lots 1-4, E¹/₂, E¹/₂W¹/₂,
sec. 19, lots 1-4, E¹/₂, E¹/₂W¹/₂,

T. 27 N., R. 17 W.,

sec. 2, lots 1-4, S¹/₂N¹/₂, S¹/₂,
sec. 3, lots 1-4, S¹/₂N¹/₂, SE¹/₄,
sec. 4, lots 1-4, S¹/₂N¹/₂, S¹/₂,
sec. 6, lots 1-7, S¹/₂NE¹/₄, SE¹/₄NW¹/₄, E¹/₂SW¹/₄, SE¹/₄,
sec. 7, lots 1-4, E¹/₂, E¹/₂W¹/₂,
sec. 8, all,
sec. 9, all,
sec. 10, all,
sec. 11, all,
sec. 12, all,
sec. 14, all,
sec. 15, NW¹/₄, N¹/₂SW¹/₄,
sec. 16, all,
sec. 18, lots 1-4, E¹/₂, E¹/₂W¹/₂,
sec. 20, all,
sec. 22, all,
sec. 24, all,
sec. 27, all,
sec. 28, all,
sec. 30, lots 1-4, E¹/₂, E¹/₂W¹/₂,

T. 27 N., R. 18 W.,

sec. 2, lots 1-4, S¹/₂N¹/₂, S¹/₂,
sec. 12, all,
sec. 14, all,
sec. 24, all,
sec. 26, all,
sec. 34, all,
sec. 36, all.

T. 28 N., R. 17 W.,

**sec. 6, lots 8 to 14, inclusive, S¹/₂NE¹/₄, SE¹/₄NW¹/₄, E¹/₂SW¹/₄, S¹/₂E¹/₂,
sec. 8, all,
sec. 16, all,
sec. 18, lots 1-4, E¹/₂, E¹/₂W¹/₂,
sec. 20, all,
sec. 28, all,
sec. 30, lots 1-4, E¹/₂, E¹/₂W¹/₂,
sec. 32, all,
sec. 34, all.**

T. 28 N., R. 18 W.,

**sec. 2, lots 1 to 4, inclusive, S¹/₂N¹/₂, S¹/₂,
sec. 12, all,
sec. 10, all.
sec. 14, all,
sec. 24, all,
sec. 26, all,
sec. 36, all.**

T. 29 N., R. 18 W.,

sec. 36, all.

TOTAL PROJECT AREA: 29,441.00 ACRES

Lat/Long of Existing MET towers:

Tower 1: 35.7449 -114.134367

Tower 2: 35.747633 -114.08675

Tower 3: 35.805017 -114.119733

Tower 4: 35.718033 -114.166383

Tower 5: 35.847703 -114.168537

AZA 035336
EXHIBIT B
Terms and Conditions
July 1, 2014

1. The Holder shall conduct all activities associated with the maintenance, operation, and termination of the right-of-way (ROW) within the authorized limits of the right-of-way.
2. This ROW is subject to the original Plan of Development (POD), and the amended POD, both included as Exhibit C, dated July 1, 2014.
3. A copy of the ROW grant including Exhibits A (legal land descriptions), B (terms & conditions), and C (plans of development) shall be on the project area and available to persons during maintenance, operation, and decommissioning activities.
4. Mitigation to prevent the spread of invasive non-native species will include the following:
 - a. The holder shall wash and remove all vegetative material and soil before transporting equipment to the site. This includes trucks, trailers and all other machinery.
 - b. The holder shall be responsible for monitoring and treatment of noxious weed infestations that may occur after ROW issuance. If infestations are found, the Kingman Field Office (KFO) shall be notified immediately. The method of treatment for any infestation must be approved by the KFO.
5. The Holder shall schedule a meeting with the BLM Authorized Officer (AO) prior to the deconstruction of meteorological (MET) towers. The holder will not proceed with any decommissioning activities until all meeting requirements have been met and the AO provides a signed Notice to Proceed.
6. After MET towers are removed, and sites have been restored, the Holder shall notify the Arizona Game and Fish Department (AGFD) and the BLM within 15 days. The Holder shall make similar notification to the U. S. Department of Defense, Civil Air Patrol or other aviation regulatory agencies, if required by them.
7. In accordance with Federal regulations in 43 CFR 2803.6-3, any proposed transfer of any right or interest in the ROW grant shall be filed with the BLM AO. An application for assignment shall be accompanied by a showing of qualifications of the Assignee. The assignment shall be supported by a stipulation that the Assignee agrees to comply with and be bound by the terms and conditions of the grant to be assigned. No assignment shall be recognized unless and until it is approved in writing by the Authorized Officer.
8. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the Holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.). With regard to

any toxic substances that are used, generated by or stored on the ROW or facilities authorized under this ROW grant see 40 CFR 761.1-761.193. Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117, shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

9. A bond, acceptable to the authorized officer, has been furnished by the holder prior to original issuance of the ROW and upon issuance of the amendment. The amount of this bond is \$2,000.00 per met tower, \$10,000.00 total. This bond will be retained and in effect until removal of facilities and restoration of their respective sites has been accepted by the BLM AO.

AZA 035336
EXHIBIT C
July 1, 2014
Original POD and POD for Amendment

PLAN OF DEVELOPMENT
Pacific Wind Development LLC
WIND ENERGY PROJECT METEOROLOGICAL TOWER DEVELOPMENT
AZA-35336
August 2010

1. Purpose and Need for Right-of-Way

The Applicant, Pacific Wind Development LLC (Pacific Wind), has applied for a project area right-of-way (ROW) consisting of 26,887.95 acres in the Dolan Springs Area of Mohave County, Arizona. The application is for a wind site testing and monitoring ROW for 4 meteorological (met) towers to collect wind data to determine if the area is appropriate for the development of a wind energy site. Pacific Wind would collect wind speed, wind direction, and temperature data. These meteorological towers may also be used for the purpose of micro-siting of wind turbines on the wind energy project as a whole. This Application is consistent with the BLM's comprehensive Wind Energy Development Program to support wind energy development on public lands. Wind energy serves the national interest in energy independence and the potential role that renewable energy, in particular wind energy, can play in providing clean, non-fossil fuel based energy.

Pacific Wind requests permission to install the towers in the fall or winter months of 2010, and it would take up to four weeks to complete. The towers are expected to be in place for a minimum of one year, but may remain in service until the expiration (3 year term) of the proposed ROW or additional term as permitted by the BLM.

2. Location

The met towers would be located on public land identified and as shown on topographic maps in Exhibit 1. The met tower configuration is shown on Exhibit 2.

3. Design Factors

- a. The ROW requested is for a radius of 200' consisting of 2.9 acres per tower. This is the total area that may experience surface disturbance. The majority of disturbance would be around a 9 square foot area where the tower base is located and approximately a 1 square foot area where each of the supporting guy wires are anchored. The tower structures are made of galvanized steel tubing, gray in color with a wind loading of 112 miles per hour. Each tower has 4 sets of guy wires, each set connecting 7 wires to 4 guy anchors. At each tower location, the base, outer guy wire, and tower tip at lay down have been flagged. Off-road access routes, as required, are also flagged.
- b. Each tower would have an access route from the nearest county road which would, to the extent possible, follow existing 4WD tracks and/or roads. The access routes would be the wheel base of a full size pickup or SUV which is approximately 10' wide, for installation, monitoring, repair,

and decommissioning of the installed equipment. No blading or earth moving would be necessary and off-road access routes would consist of driving over the surface. The table below shows the distance of access routes to the met tower locations and acreage of disturbance. Towers would be accessed for maintenance as necessary (typically less than once a year per tower). Vehicle access to the site should only be for major maintenance, if required, and for decommissioning. Should data from the towers justify further investment in the site after 6 to 12 months, bat monitoring equipment would be installed. Data download intervals depend on the battery life and data storage capacity of the acoustical technology used, but could be as frequent as every two weeks.

PML 2 Access	52' long x 10' wide = 0.012	acres
PML 6 Access	58' long x 10' wide = 0.013	acres
PML 10 Access	326' long x 10' wide = 0.748	acres
PML 11 Access	788' long x 10' wide = 0.181	acres

Access routes would be in use until decommissioning when disturbed areas would be scarified.

- c. Information on sodar equipment would be submitted to the BLM office later on in the ROW period if the project meteorologist determines sodar data would be useful to augment the met tower data. Provided information would include the location, access routes, design specifications, dimensions etc.
- d. Soils and geology in the area are predominately sandy loams that are well drained with moderate to rapid permeability making them suitable for placement of the met towers.
- e. No, utilities, welding, concrete work, grading, permanent foundations, or road building would be required. Fencing around the guy wire anchor points and around the tower base would be done if the land is being ranched and is required by the BLM. No grading or excavation other than that required to drill guy anchors into the ground, would be required.

Maintenance and inspections would be performed as needed, which typically is not more than once per year. Vehicle access to the site should only be for major maintenance, if required, and for decommissioning.

4. Additional Components

No additional components are required.

- a. Any additional met towers that may be required would require an amendment to the issued authorization.
- b. No equipment storage areas are required.

5. Government Agencies Involved

- a. (List any State permits obtained)

None required.

- b. (List any County permits obtained)

None required

6. Construction of Facilities

- a. Describe, in detail, the sequence of construction and timing.

Prior to construction each tower location is staked, including the access route from major roads. The base plate, outer guy anchors, and tower tip at lay down assembly are staked.

Typical construction for each tower would consist of:

Day one: Transport tower and equipment to the site, install anchors, assemble tower

Day two: Install instruments and test system operation, raise tower, verify operation, and cleanup the jobsite.

These meteorological towers are designed specifically for wind energy resource measurements. Each tower would be up to 197 ft. The lightweight towers are made of galvanized steel tubing. The tubes slide together without bolts or clamps, and are made from a combination of 10ft, 5ft, and 0.5 ft sections. The sections are assembled horizontally on the ground and then tilted up using a ginpole and winch. No welding is necessary. The towers rest on a steel base plate approximately 9 square feet, or 3'x3' in size, and are supported with aircraft cable guy wires in four directions at each guy level. Guy wires are anchored with standard anchors. There are 28 guy wires per tower (7 per side, 4 sides) and they enter the ground approximately 167 ft., 146 ft and 125 ft from the tower base plate (see details in Exhibit 2). The tower supports a horizontal arm for mounting each group of sensors (wind speed and directional sensors), self contained data logger, and a solar panel approximately two (2) feet square. Four red Aviation balls 21" in diameter would be used on the guy wires to provide a visual indication for the public. There would be no lights on the towers. No cranes or concrete foundations are required. Each tower would consist of 3 pieces that would be assembled on site. Pulleys for Anabat or similar bat acoustical monitoring equipment would be mounted on the towers at 164 ft. to monitor bat calls. If it is determined the wind resource warrants continued monitoring after the first 6-12 months, bat monitoring equipment would be installed.

Pacific Wind would follow the BLM's Best Management Practices for Site Monitoring and Testing as outlined the Record of Decision, dated December 2005 implementing the Wind Energy Development Program as follows:

- The area disturbed by installation of meteorological towers (i.e., footprint) shall be kept to a minimum.
- Existing roads shall be used to the maximum extent feasible. If new roads are necessary, they shall be designed and constructed to the appropriate standard. (Note: new road construction is not necessary.)
- Meteorological towers shall not be located in sensitive habitats or in areas where ecological resources known to be sensitive to human activities (e.g., prairie grouse) are present. Installation of towers shall be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors.
- Meteorological towers installed for site monitoring and testing shall be inspected periodically for structural integrity.

- b. Describe the type of equipment that will be used and personnel involved. Include where equipment will come from—local or out of state--and if they will be washed to prevent spread of noxious weeds.

A crew of 2-5 people and 2-4 pick-up trucks would access the sites for tower erection. One or more of the pick-ups may have a trailer. No heavy loads are expected. Equipment would not need to be stored onsite. The total time needed for the installation of the meteorological towers should not be more than five days per tower see (a) above. No pesticides or mulching would be used on-site.

- c. Include how vegetation such as cactus, Joshua trees, yucca, will be dealt with, i.e. avoided, transplanted, salvaged and replanted, etc.

Impacts on vegetation would be avoided. Tower and guy-wire footing areas are small with little impact to land surface. To the extent practical activities would be confined to as small an area as possible around the proposed tower site during installation, subsequent monthly visits, and any repairs or maintenance visits to minimize impacts.

- d. Describe safety requirements that will be implemented during construction.

Pacific Wind would follow the safety guidelines described in NRG Systems' (tower supplier) *"Installation Manual & Specifications"*

- e. Describe how trash and construction debris will be dealt with.

All trash and construction debris would be collected and disposed of at an approved waste management location off-site.

7. Resource Values and Environmental Concerns

- a. Summarize results of the cultural survey and report.

Cultural surveys have been completed for the meteorological tower locations. No historic or prehistoric artifacts found.

In the event sub-surface cultural resource discoveries are made during any ground disturbing activities, construction activities would cease in the area of discovery and the BLM would be contacted immediately. Arrangements would then be made for a professional archaeologist to visit the site of discovery and assess the potential significance of any artifacts or features that were unearthed pursuant to 36 CFR 800.13.

If any fossils are discovered during construction, the operator shall cease construction immediately and notify the BLM Authorized Officer to determine the significance of discovery.

- b. Summarize results of biological survey and report.

A biological survey has been conducted. There are no wildlife or plant species of concern. All cacti, yuccas and Joshua trees would be avoided. The installation of the meteorological towers is not expected to have any discernable effect on the populations of fish, plant life, wildlife, or marine life, including any threatened and endangered species, or marine mammals. Meteorological towers shall not be located in sensitive habitats or in areas where ecological resources known to be sensitive to

human activities are present. Installation of towers shall be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors. If construction occurs between March and July and suitable habitat exists for migratory birds, a nest survey 200' around the project would be conducted within two weeks prior to construction and a report provided to the BLM.

- c. Identify any other conflicts that have been addressed, i.e. visual, recreation, etc.

Construction and operations of the 4 wind monitoring devices would have minimal impact to air quality, surface and ground water quality, streams, noise, or soil stability. The towers are distant from residences and are expected to create minimal visual intrusion.

8. Stabilization and Rehabilitation

- a. Identify how disturbed (compacted) areas will be dealt with, i.e. scarified to allow natural seeding to occur.

Tower and guy-wire footing areas are small with little impact to land surface. During construction and subsequent up to monthly maintenance/data collection the 200 ft. radius— surrounding the monitoring towers may be disturbed by vehicles or foot traffic.

Vehicle access to the site after installation should only be for major maintenance, if required, and for decommissioning. Tire tracks would be raked out after any vehicle access authorized by Pacific Wind during the testing and monitoring period.

9. Operation and Maintenance

- a. Describe if and how (frequency) measurements are taken.

The towers would operate continuously, providing wind characteristic data via solar-powered data loggers and cell phone-based remote data acquisition systems.

10. Termination and Restoration

Ninety days prior to termination of the ROW, Holder shall contact the Authorized Officer to arrange a joint inspection of the ROW. This inspection would be held to agree to an acceptable termination and rehabilitation plan. This plan would consist of removal of all improvements and scarifying the disturbed areas. It may include, but is not limited to, removal of facilities, drainage structures, or surfacing material, recontouring, topsoiling or seeding. The AO must approve the plan in writing prior to Holder's commencement of any termination actions.

PLAN OF DEVELOPMENT
Pacific Wind Development LLC
WIND ENERGY PROJECT METEOROLOGICAL TOWER DEVELOPMENT
AZA-35336 Amendment #1
June 20, 2012

10. Purpose and Need for Right-of-Way

The Applicant, Pacific Wind Development LLC (Pacific Wind), has applied for an amendment to its project area right-of-way (ROW) for an additional 2,553.05 acres in the Dolan Springs Area of Mohave County, Arizona, as described in the application executed on May 25, 2012. The application is for a wind site testing and monitoring ROW including one meteorological (met) tower proposed to be constructed in the northeastern portion of section 2, T. 28 N., R. 18 W., G&SRM., as shown on Attachment B, to collect wind data to determine if the area is appropriate for the development of a wind energy site. Pacific Wind would collect wind speed, wind direction, and temperature data. This meteorological tower may also be used for the purpose of micro-siting of wind turbines on the wind energy project as a whole. This Application is consistent with the BLM's comprehensive Wind Energy Development Program to support wind energy development on public lands. Wind energy serves the national interest in energy independence and the potential role that renewable energy, in particular wind energy, can play in providing clean, non-fossil fuel based energy.

Pacific Wind requests permission to install the tower upon the BLM's approval, and it would take up to four weeks to complete. The tower is expected to be in place for a minimum of one year, but may remain in service until the expiration of Right-of-Way AZA 35336 or additional term as permitted by the BLM.

11. Location

The met tower would be located on public land identified and as shown on topographic maps in Attachment 2.

12. Design Factors

- a. The ROW requested for the met tower is for a radius of 200' consisting of 2.9 acres. This is the total area that may experience surface disturbance. The majority of disturbance would be around a 9 square foot area where the tower base is located and approximately a 1 square foot area where each of the supporting guy wires are anchored. The tower structures are made of galvanized steel tubing, 197' tall, gray in color with a wind loading of 112 miles per hour. The tower has 4 sets of guy wires, each set connecting 7 wires to 4 guy anchors. At the tower location, the base, outer guy wire, and tower tip at lay down have been flagged. Off-road access routes, as required, are also flagged.
- b. The tower would have an access route from the nearest county road which would, to the extent possible, follow existing 4WD tracks and/or roads. The access routes would be the wheel base of a full size pickup or SUV which is approximately 10' wide, for installation, monitoring, repair, and decommissioning of the installed equipment. No blading or earth moving would be necessary and off-road access routes would consist of driving over the surface. The towers would be accessed for maintenance as necessary (typically less than once a year per tower). Vehicle access to the site should only be for major maintenance, if required, and for decommissioning. Should data from the towers justify further investment in the site after 6 to 12 months, bat

monitoring equipment would be installed. Data download intervals depend on the battery life and data storage capacity of the acoustical technology used, but could be as frequent as every two weeks.

Access routes would be in use until decommissioning when disturbed areas would be scarified.

- c. Information on sodar equipment would be submitted to the BLM office later on in the ROW period if the project meteorologist determines sodar data would be useful to augment the met tower data. Provided information would include the location, access routes, design specifications, dimensions etc.
- d. Soils and geology in the area are predominately sandy loams that are well drained with moderate to rapid permeability making them suitable for placement of the met towers.
- e. No, utilities, welding, concrete work, grading, permanent foundations, or road building would be required. Fencing around the guy wire anchor points and around the tower base would be done if the land is being ranched and is required by the BLM. No grading or excavation other than that required to drill guy anchors into the ground, would be required.

Maintenance and inspections would be performed as needed, which typically is not more than once per year. Vehicle access to the site should only be for major maintenance, if required, and for decommissioning.

13. Additional Components

No additional components are required.

- c. Any additional met towers that may be required would require an amendment to the issued authorization.
- d. No equipment storage areas are required.

14. Government Agencies Involved

- c. (List any State permits obtained)
None required.
- d. (List any County permits obtained)
As required.

15. Construction of Facilities

- f. Describe, in detail, the sequence of construction and timing.

Prior to construction the tower location is staked, including the access route from major roads. The base plate, outer guy anchors, and tower tip at lay down assembly are staked.

Typical construction for the tower would consist of:

Day one: Transport tower and equipment to the site, install anchors, assemble tower

Day two: Install instruments and test system operation, raise tower, verify operation, and cleanup the jobsite.

The meteorological tower is designed specifically for wind energy resource measurements. The tower would be up to 197 ft. and is made of galvanized steel tubing. The tubes slide together without bolts or clamps, and are made from a combination of 10ft, 5ft, and 0.5 ft sections. The sections are assembled horizontally on the ground and then tilted up using a gin pole and winch. No welding is necessary. The tower rests on a steel base plate approximately 9 square feet, or 3'x3' in size, and is supported with aircraft cable guy wires in four directions at each guy level. Guy wires are anchored with standard anchors. There are 28 guy wires per tower (7 per side, 4 sides) and they enter the ground approximately 167 ft., 146 ft and 125 ft from the tower base plate (see details in Exhibit 2). The tower supports a horizontal arm for mounting each group of sensors (wind speed and directional sensors), self contained data logger, and a solar panel approximately two (2) feet square. Four red Aviation balls 21" in diameter would be used on the guy wires to provide a visual indication for the public. There would be no lights on the tower. No cranes or concrete foundations are required. The tower would consist of 3 pieces that would be assembled on site. Pulleys for Anabat or similar bat acoustical monitoring equipment would be mounted on the tower at 164 ft. to monitor bat calls. If it is determined the wind resource warrants continued monitoring after the first 6-12 months, bat monitoring equipment would be installed.

Pacific Wind would follow the BLM's Best Management Practices for Site Monitoring and Testing as outlined the Record of Decision, dated December 2005 implementing the Wind Energy Development Program as follows:

- The area disturbed by installation of the meteorological tower (i.e., footprint) shall be kept to a minimum.
 - Existing roads shall be used to the maximum extent feasible.
 - Meteorological towers shall not be located in sensitive habitats or in areas where ecological resources known to be sensitive to human activities (e.g., prairie grouse) are present. Installation of towers shall be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors.
 - Meteorological towers installed for site monitoring and testing shall be inspected periodically for structural integrity.
- g. Describe the type of equipment that will be used and personnel involved. Include where equipment will come from—local or out of state--and if they will be washed to prevent spread of noxious weeds.

A crew of 2-5 people and 2-4 pick-up trucks would access the sites for tower erection. One or more of the pick-ups may have a trailer. No heavy loads are expected. Equipment would not need to be stored onsite. The total time needed for the installation of the meteorological tower should not be more than five days (see (a) above). No pesticides or mulching would be used on-site.

- h. Include how vegetation such as cactus, Joshua trees, yucca, will be dealt with, i.e. avoided, transplanted, salvaged and replanted, etc.

Impacts on vegetation would be avoided. Tower and guy-wire footing areas are small with little impact to land surface. To the extent practical activities would be confined to as small an area as

possible around the proposed tower site during installation, subsequent monthly visits, and any repairs or maintenance visits to minimize impacts.

- i. Describe safety requirements that will be implemented during construction.

Pacific Wind would follow the safety guidelines described in NRG Systems' (tower supplier) "*Installation Manual & Specifications*"

- j. Describe how trash and construction debris will be dealt with.

All trash and construction debris would be collected and disposed of at an approved waste management location off-site.

16. Resource Values and Environmental Concerns

- d. Summarize results of the cultural survey and report.

Cultural surveys have been completed for the meteorological tower location. No historic or prehistoric artifacts were found.

In the event sub-surface cultural resource discoveries are made during any ground disturbing activities, construction activities would cease in the area of discovery and the BLM would be contacted immediately. Arrangements would then be made for a professional archaeologist to visit the site of discovery and assess the potential significance of any artifacts or features that were unearthed pursuant to 36 CFR 800.13.

If any fossils are discovered during construction, the operator shall cease construction immediately and notify the BLM Authorized Officer to determine the significance of discovery.

- e. Summarize results of biological survey and report.

A biological survey has been conducted. There are no wildlife or plant species of concern. All cacti, yuccas and Joshua trees would be avoided. The installation of the meteorological tower is not expected to have any discernable effect on the populations of fish, plant life, wildlife, or marine life, including any threatened and endangered species, or marine mammals.

Meteorological towers shall not be located in sensitive habitats or in areas where ecological resources known to be sensitive to human activities are present. Installation of towers shall be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors. If construction occurs between March and July and suitable habitat exists for migratory birds, a nest survey 200' around the project would be conducted within two weeks prior to construction and a report provided to the BLM.

- f. Identify any other conflicts that have been addressed, i.e. visual, recreation, etc.

Construction and operations of the wind monitoring device would have minimal impact to air quality, surface and ground water quality, streams, noise, or soil stability. The tower is distant from residences and is expected to create minimal visual intrusion.

17. Stabilization and Rehabilitation

- b. Identify how disturbed (compacted) areas will be dealt with, i.e. scarified to allow natural seeding to occur.

Tower and guy-wire footing areas are small with little impact to land surface. During construction and subsequent up to monthly maintenance/data collection, the 200 ft. radius surrounding the monitoring tower may be disturbed by vehicles or foot traffic.

Vehicle access to the site after installation should only be for major maintenance, if required, and for decommissioning. Tire tracks would be raked out after any vehicle access authorized by Pacific Wind during the testing and monitoring period.

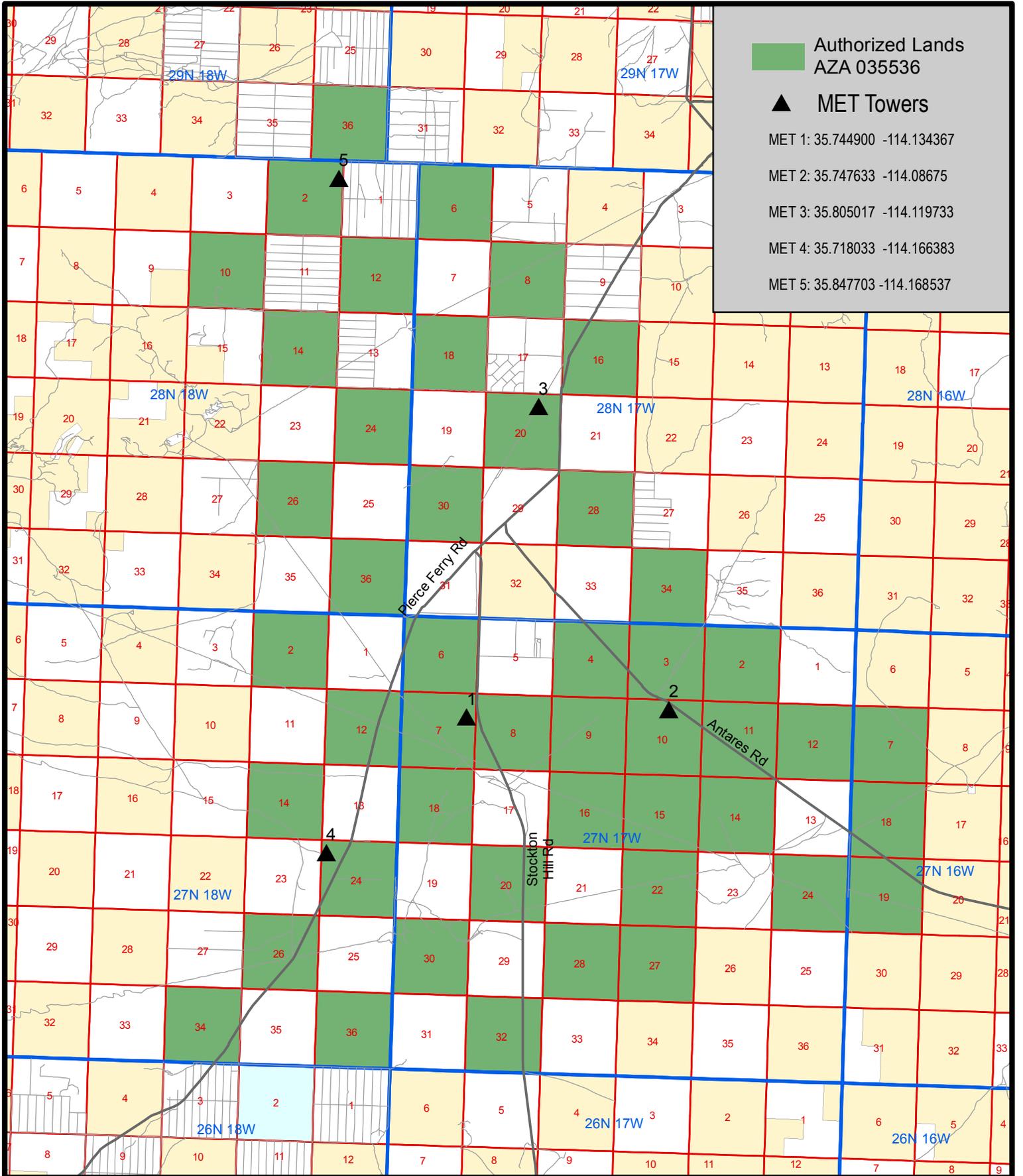
18. Operation and Maintenance

- a. Describe if and how (frequency) measurements are taken.

The towers would operate continuously, providing wind characteristic data via solar-powered data loggers and cell phone-based remote data acquisition systems.

10. Termination and Restoration

Ninety days prior to termination of the ROW, Holder shall contact the Authorized Officer to arrange a joint inspection of the ROW. This inspection would be held to agree to an acceptable termination and rehabilitation plan. This plan would consist of removal of all improvements and scarifying the disturbed areas. It may include, but is not limited to, removal of facilities, drainage structures, or surfacing material, recontouring, topsoiling or seeding. The AO must approve the plan in writing prior to Holder's commencement of any termination actions.



Authorized Lands
AZA 035536

▲ MET Towers

MET 1: 35.744900 -114.134367

MET 2: 35.747633 -114.08675

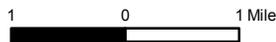
MET 3: 35.805017 -114.119733

MET 4: 35.718033 -114.166383

MET 5: 35.847703 -114.168537



No Warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



Wind Test Project AZA 035336 Acreage and MET Locations

Exhibit D
July, 1, 2014

Map Created by: M Troche