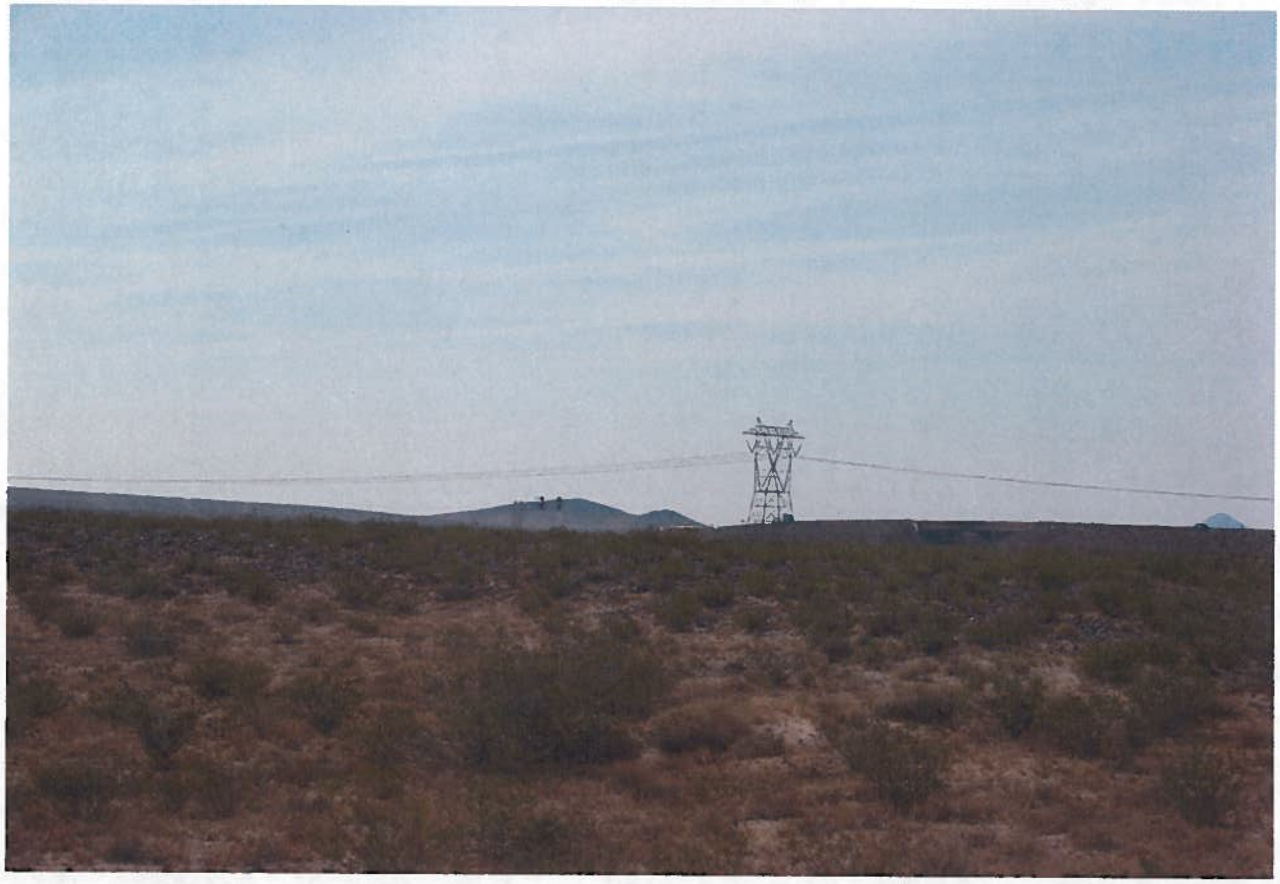

5/11/2010

OAK CREEK ENERGY SYSTEMS INC

UPDATED REVISED PLAN OF DEVELOPMENT THE CASTLE MOUNTAIN WIND ASSESSMENT PROJECT NVN#82729

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Acronyms and Abbreviations

ACEC	Area of Critical Environmental Concern
ACT	The Energy Act of 2005
BLM	U.S. Bureau of Land Management
BMP	Best Management Practice
BP	Beginning Point
CFR	Code of Federal Regulations
CIP	Cement in Place
CMP	Corrugated Metal Pipe
CX	Categorical Exclusion (NEPA)
DRI	Desert Research Institute
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
EA	Environmental Assessment (NEPA)
EO	Executive Order
FAA	Federal Aviation Administration
FLPMA	Federal Land Policy and Management Act of 1976, as amended
FPEIS	Final Programmatic Environmental Impact Statement
FONSI	Finding of No Significant Impacts
IM	Instruction Memorandum
LVFM	Las Vegas Field Manager
LVFO	Las Vegas Field Office
MPH	Miles per Hour
NEPA	National Environmental Policy Act of 1969, as amended
NREL	National Renewable Energy Laboratory
NVE	Nevada Energy
OHV	Off Highway Vehicle
OCES	Oak Creek Energy Systems, Inc
OSHA	Occupational Safety and Health Administration
PEIS	Programmatic Environmental Impact Statement
PL	Public Law
POD	Plan of Development
PROJECT	Castle Mountain Wind Assessment Project
RCRA	Resource Conservation and Recovery Act
RMP	Resource Management Plan
ROD	Record of Decision
ROW	right-of-way
RT	Rough Terrain
RS	Revised Statutes
SO	Secretarial Order
SODAR	Sonic Detection and Ranging
WECC	Western Electricity Coordinating Council

EXECUTIVE SUMMARY

Oak Creek Energy Systems, Inc (OCES) filed on August 6, 2006 filed for a wind assessment right-of-way with the Las Vegas Field Office (LVFO) of the Bureau of Land Management (BLM). This application was filed in accordance with Title V of the Federal Lands Policy and Management Act of 1976, as amended (FLPMA) for a Type II Right-of-Way (ROW) Grant.

This Grant was approved on February 25, 2009 which provided the right to construct operate and maintain a year-round wind monitoring facility in the McCullough Mountain Range within the Clark County area near Searchlight, Nevada.

The temporary Grant was for a three year period authorizing the installation of nine meteorological towers up to 60 meters in height throughout the project area. The approved locations met specific site specific criteria as approved by BLM within the Environmental Assessment (EA) which was completed in August of 2008. On February 25, 2009, the BLM selected Alternative C of the EA and finalized their determination by the signing the Finding of No Significant Impacts in accordance with the requirements set forth in the National Environmental Policy Act of 1969, as amended.

The ROW Grant was issued pursuant to the appropriate federal regulations within Title 43 Code of Federal Regulations (CFR) 2800, et al. The Grant was issued to measure ambient weather conditions and evaluate the performance of the wind should a wind turbine development project be pursued by OCES.

The purpose of this specific POD is to: 1) outline the history of the project; and 2) define the process and procedure used in the placement for installing of the approved met towers at new locations.

The data collected from these tall towers will provide the future bankable data requirement for the Type III POD and Project by verifying MESO map data in the area at or near hub height.

SECTION 1
PURPOSE AND NEED FOR THE PROJECT

REVISED PLAN OF DEVELOPMENT
THE CASTLE MOUNTAIN WIND ASSESSMENT PROJECT
NVN#82729

SECTION 1
PURPOSE AND NEED FOR THE PROJECT

Wind Policies, Energy Laws and Secretarial Orders

The first call to action in this decade took place on May 18, 2001, with the President George W. Bush issuing Executive Order (EO) 13212 which was more commonly referred to as the National Energy Policy. This Policy stated: "federal agencies should take appropriate action, to the extent consistent with application law, to expedite Projects to increase the production, transmission or conservation of energy."

This EO was followed by the BLM issuing a first in a series of wind energy policy documents. BLM's first Wind Energy Policy was known as the "Interim Wind Energy Development Policy" Instruction Memorandum (IM) No. 2003-020 dated October 16, 2002. This IM clearly states: "The President's National Energy Policy encourages the development of renewable energy resources, including wind energy, as part of an overall strategy to develop a diverse portfolio of domestic energy supplies for our future."

This was followed by the passage of landmark legislation on Energy, the Energy Act of 2005. Our national agenda priority was defined under Section 21, which states: "It is the sense of the Congress that the Secretary of the Interior should, before the end of the 10-year period beginning on the date of enactment of this Act, seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity." This was a clear mandate for development of renewable energy on the public lands.

In response to the Energy Act of 2005, on December 15, 2005, the BLM signed the record of decision (ROD) on the Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States (FPEIS). The FPEIS evaluated the potential impacts associated with the proposed action to develop a Wind Energy Development Program, including the adoption of policies and best management practices (BMPs) and the amendment of 52 BLM land use plans to address wind energy development. As of July 1, 2009, there was less than 1000 MW of renewable energy generation capacity for electricity on the public lands within the 11 western states. This does not meet the mandated thresholds of Section 21 of the Energy Act of 2005. The majority of the current production on Public Lands was authorized since the mid-1980s and virtually no real progress has been made since the passage of the Act and the beginning of our National Energy Crisis.

The BLM's Wind Energy Policy was updated on December 19, 2008, as IM 2009-043. This Policy solidifies the BLM Policies toward Wind Energy Development on Public Lands from

which this POD is developed. As stated within the Wind Energy Policy of the IM Categorical Exclusion (CX) for short-term right-of-way authorizations can be used. The BLM's Policy and discussion with the PEIS look at the reasonableness of expediting the permitting process for low impact ROW's rather than full evaluations on every activity which causes major delays in the processing of applications. BLM should consider the use of CX's where practicable.

On March 11, 2009, Secretary Salazar issued Secretarial Order (SO) 3285 which was the first comprehensive order by President Obama's Administration that establishes the development of renewable energy as a priority for the Department of the Interior. This order identifies the public lands as a resource that possess substantial renewable resources that will help meet our Nation's future energy needs while also providing significant benefits to our environment and the economy. It further identifies that increased production of renewable energy will create jobs, provide cleaner, more sustainable alternatives to traditional energy resources, and enhance the energy security of the United States by adding to the domestic energy supply.

SO 3285 established the following Policy: "Encouraging the production, development and delivery of renewable energy is one of the Department's highest priorities. Agencies and bureaus within the Department will work collaboratively with each other, and with other Federal agencies, departments, states, local communities and private landowners to encourage the timely and responsible development of renewable energy and associated transmission while protecting and enhancing the Nation's water, wildlife, and other natural resources."

Renewable energy, including wind generation, is expected to provide a larger component of the electrical supply in the future. Continued increased consumption requires development of new generation facilities to satisfy demand, as substantiated by the following sources:

- The Energy Information Administration, a statistical agency of the U.S. Department of Energy (DOE), states in the Annual Energy Outlook 2008 with Projections to 2030 (June 2008) that total electricity demand is Projected to grow by 1.1 percent per year from 2004 through 2030. Renewable sources of electricity are expected to grow at a higher rate of 2.2 percent annually, which represents an increase of over 270 billion kilowatt-hours (kWh) by 2030. Wind energy alone is anticipated to provide 124 billion kWh of electricity by 2030, compared to 26 billion kWh in 2006 (DOE 2008).

- The Western Electricity Coordinating Council (WECC) forecasts electricity demand in the western United States. In the 10-Year Coordinated Plan Summary 2006-2015 (July 2006), the WECC states that capacity margins are declining and, from 2006 through 2015, annual energy use is Projected to increase 2.2 percent (2.0 percent annual compound growth rate) (WECC 2006).

- Further substantiation of the need for energy development is provided through the Western Governors' Association goal of developing 30,000 megawatts (MW) of clean energy by 2015 from traditional and renewable energy sources and by the Energy Policy Act of 2005, which encourages the development of renewable energy resources, including wind energy, as part of an overall strategy to develop a diverse portfolio of domestic energy supplies for the future.

1.1 PROJECT HISTORY

On August 6, 2006, OCES filed an application for a Type II wind Assessment ROW Grant with the BLM in the LVFO. A Type II application and grant is for "a wind energy site testing and monitoring right-of-way grant for a larger site testing and monitoring project area, with a term of three years that may be renewed consistent with 43 CFR 2807.22 and the provisions of the IM beyond the initial term of the grant." After two years, the environmental assessment as required pursuant to NEPA was completed on August 6, 2008.

On December 19, 2008, the LVFO officially determined to release the EA to the public for scoping. The scoping period ended in February 2009 resulting in the selection of Alternative C of the EA, FONSI and the ROW Grant issued on February 25, 2009.

Alternative C of the EA allowed for nine of the twelve proposed met tower sites evaluated having up to 60M tilt-up towers installed on them except for the site identified as Met Tower NV-11 which was eliminated completely from the installation of any met towers due to resources found on and around the site.

Immediately following the release of the ROW Grant NVN-82729, the Holder OCES installed five of the nine authorized met towers; however due to the late release date of the ROW with both wind season and a March 15th installation deadline before nesting studies would be required, OCES opted to install two 20-meter towers and three 30-meter towers in order to expedite the collection of data.

In August 2009, the BLM and OCES met in the field to show BLM staff the current met towers and discuss the potential of moving two of the currently approved met tower sites that had not yet been installed. BLM staff observed results of the low to no impact approach OCES had used to install the previous met towers and appeared to be pleased with both the methodology and application of the installations.

On August 6, 2009, OCES filed an amendment application to move two met towers to alternate locations now commonly referred to as Alt NV06 and Alt NV07. These were proposed to replace the original NV6 and NV7. Initially, OCES planned to only use the 60M Advanced Mast

Tilt Up towers at both of these sites as identified in the Initial Plan of Development which was submitted at the time of application (Attachment 1); however, as the proposed met tower areas and our data collection needs were further evaluated it was determined that other met tower and data collection options deserved consideration.

The met tower site Alt-NV6 is located immediately adjacent to a designated route/ road and in between two washes. Given the geographical challenges posed in this area, OCES would like to have the option of using a standalone tower system instead of a guyed tower system if we are unable to orient the tower and guy anchor point in a manner that allows us to use a guyed tower without having a concern for the guy anchors becoming unearthed due to water flow in the area or interference with other uses occurring. A standalone tower system maybe equally if not better suited for the area. The footprint is significantly smaller overall. The tower site itself only utilizes a small compact area with the installed fence around also utilizing the smallest practicable configuration necessary to prevent anyone from gaining climbing access to the tower itself.

The met tower site Alt NV07 is located farther off the general path and will require a onetime authorization to during installation period to use a road that was recently closed within the ACEC. OCES was originally planning on using the 60M tilt up met tower at this site but, when they learned that the Desert Research Institute (DRI)'s effort to install a 120M tall met tower nearby had failed, , OCES saw an opportunity to partner with the DRI and DRI was interested in doing so. After contacting DRI, OCES learned that DRI would like to study the wind resource in the same general area that Alt NV07 is planned to be placed. However, DRI's data collection need require data collection up to a level of 120 meters above ground level. Thus, we would like the opportunity to cooperate with DRI and install such a tower at Alt NV07 site.

This partnership would allow DRI to obtain important information they need for a grant they have received from the Department of Energy, National Research Energy Laboratory as directed by the President for wind energy development. This tower also meets OCES's eventual needs for hub height data which will help our turbine selection process and will contribute towards providing bankable estimates for potential development under a Type III grant.

In addition, there is also the possibility of obtaining data at even higher elevations using a technology known as Sodar. This technology which utilizes a ground mounted device that is about 4 feet tall and can fit in the back of a pickup truck, can be installed in conjunction with met tower in order to get data at a level as much as 2 to 3 times the height of the tower. OCES will be requesting the ability to install a Sodar unit adjacent to the road within surveyed area but about 200-300 feet away from the tower locations. This distance from the installed met towers is needed to eliminate acoustical interference with the Sodar signal or sound wave recovery. Therefore, the Sodar unit would be contained within a 10' x 10' or smaller fenced area and

would only be installed part of the time the tower was in the area - it is likely that the Sodar unit would be moved to a new location every 3-4 months.

1.2 PROJECT LOCATION

An amended application was filed by OCES on August 6, 2009 with LVFO to move two of the approved nine met towers to alternative site locations.

Prior to filing the amended application a field examination was conducted by OCES and it was determined that where both met towers 6 and 7 were approved failed to meet the needs of OCES for wind collection data during the next phase of data collection. Therefore, it was determined by OCES that these two met tower sites would require re-location.

All Met Towers have been surveyed for both biological and cultural resources including access points from the road to a starting center point for each tower location within the project boundary are commonly located within the State of Nevada, Clark County and within the Mount Diablo Base Meridian:

The **original** met towers sites are located within:

Met tower 6:

T. 27S. R 61E, Section 34, NE1/4NW1/4; 35.560288 -115.138463

Met tower 7:

T. 28S. R 61E, Section 14, NE1/4SW1/4; 35.507571 -115.128182

The **alternate** met tower sites are within:

Alt NV06 had a 375' radius from the center longitude and latitude point given below:

T. 28S. R.61E. Section 03, SE1/4SW1/4; 35.55321217 -115.142092

Alt NV07 had a 500' radius from the center longitude and latitude point given below:

T. 28S. R.62E. Section 18, SW1/4SE1/4; 35.50444485 -115.092526

1.3 Road Access

1.3.1 Met Tower Alt NV06

(Construction and Monitoring Access)

Access to the new site referred to as Met Tower Alt NV06 (Alt NV06) within SE1/4SW1/4, Section 03, T. 28S. R.61E would begin from a common intersecting point approximately 14.6 miles from Searchlight, Nevada along Highway 164 at a point where the highway and a dirt road intersect.

This road intersection with Highway 164 is further described with a sharp 40° reverse angle back to the northeast near the center point of Section 21, T. 28S. R.61E. Once on this 10 foot wide well maintained electric power line road which was approved by BLM for Boulder Canyon Electric in 1942. Continuing along this road in a northeasterly direction through Sections 16, 15, into the NE1/4 of Section10 for approximately 2.4 miles, thence, turning northwesterly continuing along said road for approximately 1.10 miles to the location where the met tower will be installed on the northeast side of the road.

The primary access to this site will be a well maintained dirt road which is a right-of-way (NVCC-20959) approved in perpetuity since 1942 to Southern California Edison for a 200 foot wide transmission line and access road extending for a distance of over 51 miles. This road is well maintained and easily traveled with any equipment required to install the type of met towers requested under this amendment. In Section 10, the primary access road intersects with an additional road that is also well maintained and appears to have been a service road for the right-of-way along with several other secondary rights-of-ways paralleling NVCC-20959 through the area which include, NVN-066156 and NVCC-18586.

1.3.2 Met Tower Alt NV07

Primary Access (Installation and Construction Only)

Primary installation access to the new site referred to as Met Tower Alt NV07 (Alt NV07) within SW1/4SE1/4, Section 18, T. 28S. R.62E would begin from a common intersecting point approximately 8.8 miles from Searchlight, Nevada along Highway 164 at a point where the highway and a dirt road intersect. This location point is within the SW1/4NE1/4 of Section 17, T. 28S. R. 62E at a point in the road where a wide point in the shoulder of the road exists that would allow for staging the installation process or setting up a vehicle car pooling process if need be, which will be the beginning point (BP) of this description.

From the BP of this description, proceeding south within the South Piute Valley ACEC along a 12ft wide designated road number A68M for approximately 150 feet; thence, turning south-southeasterly continuing along said road approximately 600'; thence, turning 60° south-southwesterly approximately .2 miles; thence, turning south continuing along said road for approximately .4 miles to a point on the Section the common Section line between Sections 17 and 20; thence, turning west onto a non-designated road within the ACEC and continuing along

said road for approximately 0.58 miles at which point the road exits the Area of Critical Environmental Concern (ACEC); continuing west outside of the ACEC for approximately 1.1 additional miles to a point within Section that has been cleared for installation of met towers.

Approximate Road Length within ACEC .58 miles x 12' wide

From the BP of this description, proceeding south along a 12 foot wide designated road number A68M for approximately 150 feet; thence, turning south-southeasterly continuing along said road approximately 800'; thence, turning 60° south-southwesterly approximately .2 miles; thence, turning south continuing along said road for approximately .4 miles to a point on the Section the common Section line between Sections 17 and 20; thence, turning dew west onto a non-designated road within the ACEC and continuing along said road for approximately .58 miles at which point the road is outside of the Area of Critical Environmental Concern (ACEC); continuing west outside of the ACEC for approximately 1.09 additional miles to a point within Section that has been cleared for installation of met towers.

Approximate Road Length within ACEC .58 miles x 12' wide
Approximate Road Length outside ACEC 1.090 miles x 12' wide

Secondary Access (Monitoring and Decommissioning)

Secondary access is needed for the purposes of monitoring the site operations and decommissions the installation at the conclusion of wind monitoring and assessment operations. This access will not be required to come through any roads that are associated with the ACEC roads due their minimal requirements.

Access to Alt NV07 (Alt 7) for these operations will begin at a common intersecting point approximately 4.7 miles from Searchlight, Nevada along Highway 164 at a point where the highway and a dirt road intersect. This location point is within the NE1/4NE1/4 of Section 18, T. 28S. R. 62E which will be the beginning point (BP) of this description; from the BP of this description, proceeding southeast along a 10 foot wide road for approximately 50 feet; thence, turning west continuing along said road approximately 1.0 miles to the common boundary between Section 18, T. 28S. R. 62E and Section 13 T. 28S R. 61E; thence, turning south-southwesterly approximately 1 mile following the road along the contours; thence, turning southeasterly and continuing along said road for approximately .6 miles to an intersecting road; thence, turning east continuing to a point within Section 18, T. 28S., R 62E., where the proposed met tower location is planned.

1.4 Project Vicinity

This Project is located in the Clark County, Nevada within the McCullough Mountain Range. The Wind Assessment Project (Project) itself is entirely on the public lands and managed by the Bureau of Land Management.

The Project lies in the vicinity of the following communities:

Community	Direction
Las Vegas, NV	North/Northwest
Searchlight,NV	East
Jean, NV	North
Primm, NV	North
Nipton, CA	West
Needles, CA	South

1.5 Work Areas

Within the requested area that has been cleared both biologically and archeologically, OCES requests work facility staging areas within the cleared zones for the set up, erection, anchoring, operation and maintenance of both Met towers Alt NV 06 and Alt NV 07 respectively. The work areas would be kept primarily within the access road; however, at times, e.g. during the anchoring, guy wire attachment, fence line installation, etc., staging would need to be closer to the work location to minimize the ground activities within the given area. Vehicle parking will be staged on existing roads or turnouts where practicable to allow for installation vehicles to safely access the area. All work areas will be picked up and vehicle tracks will be raked out after the work is completed. OCES will avoid Joshua Trees and other biologically sensitive plant species that were identified within the biological report and determined by BLM to be avoided. This will be accomplished with flagging and marking off areas that should not be disturbed.

1.6 SOILS, GEOLOGY AND MINING

The soils in Eldorado Valley are very deep, medium-textured saline and alkaline soils in the lowland areas; shallow, gravelly coarse-textured soils over the alluvial fans; and discontinuous, rocky gravelly coarse-textured soils in the mountain areas (BLM, 1992). These soils support the type of met towers planned to be installed in the both areas.

The general geology of Eldorado Valley includes a number of geologic units. The rocks and valley-fill deposits may be categorized into five types: (1) alluvial deposits, (2) older gravels, (3) volcanic, (4) granite, and (5) metamorphic.

Eldorado Valley contains portions of three mining districts: the Searchlight District, the Eldorado Canyon District, and the Alunite (Railroad Pass) District. Although production has been limited since the early 1950s, interest in these areas continues. The Searchlight District has been the most active, having produced millions of dollars worth of gold, silver, copper, and lead since 1897.

It is uncertain based on BLM's mining claim recordation if any indirect impacts, if any, exist to mining claims by moving these met towers to the alternate locations. It appears based on field

examination that no ongoing operations will be impacted or interrupted and at best a met tower crew may cross over a mining claim to access the met tower for maintenance and to read the data held in the data recorder of the anemometer. Pursuant to both the ROW regulations and the mining regulations, an authorization under 43 CFR 2800 is allowed to cross over an unpatented mining claim as long as the access route is not in direct conflict with ongoing mining operations.

SECTION 2
PROPOSED ACTIVITIES

2.1 POD FOCUS

The Project is currently authorized to complete assessment on 34,456.34 acres. At the time of the submittal of the POD, the Type II ROW Grant NVN#82729 which was authorized on February 25, 2009 was never properly annotated to the official public land records and is not on the MTP. However, this does not diminish the authority of the Grant.

This POD is currently limited to the installation of two (2) of the approved meteorological towers. The locations and access of these towers as discussed in Section 2 of this POD are new locations from the originally approved locations; however, this document focuses on installation of the tall tower installation with the option to install Sodar on these site locations.

2.2 TOWER SYSTEMS

This Section will discuss the type of towers, installation methods and the decommissioning of the site up conclusion of use.

In addition to the appropriate data gathering, collection, storage and transmitting equipment, the towers will be equipped with anti perching devices on horizontal surfaces to minimize perching and nesting by birds and with BLM-approved guy wire markers at sufficient spacing to ensure visibility.

Depending on the particular type of tower installed, appropriate fencing will be installed, to protect the tower, to surround the guy wire points or to surround the entire met tower infrastructure as necessary by the BLM.

The following tasks are expected for meteorological tower installation:

- install foundations by excavating, placing rebar, placing forms, pouring concrete
- install guys' wires and anchors
- install grounding equipment
- erect meteorological tower

1. Three types of towers are being considered for this project:

    a) 60 meter Advance Mast Systems tilt-up guy wired met tower;
    b) 60 meter SSV-190 self supporting met tower; and
    c) 120 meter 45 to 65G Rohn met tower.

2. Two towers will require concrete foundations, one tower will not require concrete foundations; however, depending on soil stability in the guy anchors may need to be reinforced with concrete to insure the tower doesn't not fail and fall to the ground by losing a

guy wire or anchor. Both Alt NV06 and Alt NV07 could use the 60 meter guy-wired tilt up design met tower; however, at the site Alt NV06 the 60 meter self supporting tower may be a better option and for Alt NV07, OCES is contemplating the use of tower up to 120 meter in height for better data collection as part of the partnership with the Desert Research Institute (DRI).

2.3 TOWER INSTALLATION

1) If a 60-meter guy wired mast is used, the current plans are to install the 1200 series tilt-up guy mast from Advanced Mast Systems, Inc or its equivalent. This tower is made of rugged high strength steel construction which comes in 3m (10') sections weighing only 62 lbs. each. This strong and lightweight feature allows for easier transportation in tough, remote and hard to reach locations while providing a great combination of easy assembly, erection, and dismantling. For greater protection against weather elements while providing a head start toward visual resource management all parts are hot dipped and galvanized after fabrication providing minimal structural deflection in the distance. This incredibly stable platform for Meteorological instruments through the 4-Leg design means no concrete is required for many types of soil conditions.

2) If a 60-meter self supporting met tower is used, the current plans are to install a Rohn SSV-190 model or its equivalent. At the selected location, in a tight configuration, three holes approximately 4' x 4' x 20' will be dug with a backhoe.

   The material removed from each hole will be reserved and stockpiled in the immediate area of the work being completed. Once the holes are completed to the tower specifications, a 3'or 4' D x 15' L corrugated metal pipe (CMP) or rebar cage will be placed into each hole and leveled. This will be placed 24" below grade. Upon completion of installation, the legs of the tower will be recessed below the surface of the ground; no cement pad will be showing after the construction phase is complete.

   After the CMP's are properly set and the bolt patterns for each leg are assembled and set into each hole, the bottom section of the tower set into place with the 35-ton Boom Truck and held in place while each of the legs are secured to the upper bolts and properly leveled. A slurry cement mix of 2000 lb concrete mix is then poured around the outer casing of the each CMP and onto the bottom 18" of the screw bolt pattern within the CMP's holding the tower in place for the main concrete pour. The Boom Truck continues to hold the lower section in place until the concrete has firmed up enough to not move once the Boom has been released.

   Once this concrete has set up, (typically less than an hour) the primary concrete is placed into the center of each individual CMP. This is accomplished with high strength 5000 lb concrete mix of up to 7 cubic yards per CMP. The concrete will be required to set up for three days before the finished assembly will take place on the tower. During that time, the assembly of the tower sections will be completed and staged in the adjacent road or work area. Once the concrete has properly set up, the tower sections are each lifted into place with the 35-ton Boom Truck. At the time of this assembly, the tower is prepared to

be operational with the installation of the anemometers, weather vane, grounding rods, temperature sensors, data logger, and potentially telecommunication device and solar panel for self-sustaining power.

All site mitigations will be found in the mitigations section of this POD.

3) This tower would be used only at Site Alt NV07 and is being contemplated as part of the overall partnership with the DRI (If up to a 120-meter Rohn met tower is used, it is not determined which model would be used based on the market availability; however, the Rohn 45G, 55G or 65G are being considered. These towers are very similar in design. They are all three guy towers but due to their height require a cement footer and cast-in-place (CIP) cement anchors to secure the tower to the ground during high winds and other weather conditions.

The site for Alt NV07, at the center of the tower base a 6'D x 4'L x 4'W footer hole will be dug with a backhoe/excavator. The material removed from the hole will be reserved and stockpiled in the immediate area of the work being completed. A rebar cage will be placed into the footer hole and leveled two feet below grade making the concrete cage area 4'D x 4'L x 4'W. This will have the concrete base plate set up with pier pins that will be embedded into the concrete at the time of pouring. Prior to concrete being poured, all CIP's will be prepared.

The CIP anchors will be located at the 100' and 288' point on all three 120° angles from the base plate for a total of 6 (six) anchor points. The CIP's will have a channel trench 6'D x 2'W, the material removed from the hole will be reserved and stockpiled in the immediate area of the work being completed. The anchors are multi-wire anchors which are installed at a 45° angle. The guy anchor placed at the 100' point will have three guy wires tied into it using a pair of 3-hole equalizer plates and turnbuckles to distribute the load while the guy anchor points at the 288' points will tie five wires into a single point. This will require the use of a pair of 5-hole equalizer plates and turnbuckles to distribute the load.

Once all of the holes have been dug and the anchors have been set, the high strength 5000lb concrete mix will be trucked and poured. This will take approximately 7 yards of concrete will be required to set up for 3 to 5 days before the finished assembly will take place on the tower. The anchor points must be set before the stress of the tower placement begins

Any anchor set into poured concrete to hold the anchor in place then backfilled, the depth of the concrete will be of such a level that it will remain buried approximately 18 to 24 inches below grade; therefore only the metal of the anchor arm would require removal. This will be accomplished by digging down with a hand shovel around the arm, in the smallest area possible. A metal cutter will be used to cut the bar flush with the concrete. The area will be back filled and raked out, reseeded with a BLM-approved seed mix if required.

The tower will be assembled from this point in a couple different manners. The use of a rubber tire Rough Terrain Crane (RTC) would be the fastest, safest and most efficient installation of the tower. This assembly method is typically completed within several hours of being on site when a RTC is used. Assembly would be completed in stages with the lower section being bolted into place onto the foundation after the concrete has properly cured. Then each section is lifted into place and bolted down. All meteorological and data collection equipment is then bolted to the tower along with the guy wires and cables supports securing the structure before the RTC leaves the assembly area.

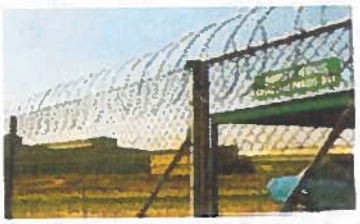
The other method is more difficult and slower by requiring a single man to climb the tower and winch the tower segments up the tower vertically and put them into place from the tower itself. This method is impacted by wind and other elements that may prevent or interrupt assembly.

Due to the type of guy wire anchors with multiple wires and load equalizer plates near the ground, the concern of wildlife injury has been raised by the BLM. In order to resolve this, OCES will wrap and secure a piece of chain link cyclone fencing along the first (6) ft of guy wires from the anchor points at ground level up the wires. This fencing will be spray painted construction safety orange. For this tower a total of (8) eight fence barrier systems will be created to protect wildlife and warn any OHV riders entering the area.

2.3.1 FENCING REQUIREMENTS FOR ALT NV06 AND ALT NV07:

MET TOWER FENCE SITES:

Due to the type of towers being installed at ALT NV06 AND ALT NV07 (self supporting)a potential for the general public to attempt to climb the tower exists; therefore, the tower itself will need be enclosed with an eight ft (8ft) chain link cyclone fence. The fence will have a coil of razor wire integrated long the upper 10 inches of the cyclone fence and extending approximately 18 inches above that as a stop gap prevention method for illegal access into the site. This fence will surround the towers' base out approximately four ft (4ft)' from the tower in all directions with a walk-through gate in order to access the tower for maintenance. This type of use of razor wire is consistent within the BLM commercial authorization within remote locations though out the eleven (11) western states. By Regulations the sign will state: Holder, Grant Number and Contact Phone.



Cyclone Fence with integrated Razor Wire Coil

SODAR FENCE SITES:

At a point within the surveyed area, along the road access side, if practical, OCES will provide an open space large enough typically 10ft by 10ft for a separate fenced area for Sodar to be placed. This will allow enough distance between the tower and the Sodar to unit free of encumbrances or shadows from the met tower. The Sodar unit can be brought in by trailer or in the back of a truck and off loaded onto two railroad ties that have been placed on the ground. By Regulations the sign will state: Holder, Grant Number and Contact Phone.

If a trailer mounted Sodar unit is available for use, the trailer will be placed on blocks and the wheels removed. The hitch will be locked and the hubs will have hub locks installed. The fence will be constructed of temporary fencing materials to make the site more visible to and OHV riders in the area. If the unit is placed on railroad ties, a temporary fence will be constructed using up to eight (8) ft cyclone fencing, minimal cement posting will be used and removed and backfilled at time of decommissioning. A gate will not be installed to drive through but a walk-through gate may be installed. To access the Sodar Unit for removal, the fence material will be removed on the side closest to the road access.

2.4 Vehicles Used to Install Met Towers

- Ready Mix Concrete Delivery Trucks (3)
- 35-Ton Boom Truck (1)
- Rough Terrain Crane (1)
- Backhoe (1) /Excavator (1)
- Service/Pick-up Trucks (4)
- Winch Truck (1)
- Equipment Trailers (3)
- 4-Wheel Drive SUV (3)
- Reach Fork Truck (1)

A vehicle-mounted backhoe would typically be used to excavate holes for placement of the tower structures within each tower structure work area. Any holes left temporarily open or unguarded will be surrounded with high-visibility plastic mesh.

Where concrete is required, the concrete chutes will be washed in a depression created over the freshly poured concrete within the met tower work area. After the chute has been washed into the hole, the excavated soil will be replaced in the same order it was removed, thereby salvaging the seed bank.

Foundations and trenches shall be backfilled with originally excavated material as much as possible. Excess excavation materials shall be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.

Ready Mix Concrete Delivery Trucks (3): The concrete Ready Mix Trucks will either delivery full loads or short loads depending on the terrain capabilities. A full (7) seven to (10) ten yard truck will allow between (2) two to (3) three trucks for a pour at each site location. However, the potential exists that up to (5) five trucks may be called to deliver based on terrain and time of year of installation in the desert.
35-Ton Boom Truck (1): This vehicle will be used on Alt NV06 for the installation of a 60-meter self supporting met tower (a Rohn SSV-190 model or its equivalent). This piece of equipment will work based on the size of the 35-ton Boom Truck, the terrain, the road and the Met Tower being installed.
See SECTION 2.3 TOWER INSTALLATION, Subsection 2 of the POD for further information.

Rough Terrain Crane (1): This will be driven into Alt NV07 within the first two days of site preparation. Then it will remain on site to assist in the lifting of heavy parts until the site is fully prepared for placing the Met Tower onto the foundation. Once the Met Tower is placed onto the foundation and secured, the RTC will be taken out of the site via the BLM designated and non-designated routes of travel used to access the tower to Hwy 164 for removal from the area.

Backhoe (1) /Excavator (1): Will be used at both Sites Alt NV 06 and NV07 and will be onsite during all installation processes.

Service/Pick-up Trucks (4): These are all the vehicles that will be used to carry in equipment to the site. It is anticipated that each truck could have up 2 to 3 trips per day for 3 or 4 days.

Winch Truck (1): This truck will be used on the day of the lift

Equipment Trailers (3): Bring in Met tower supplies for construction

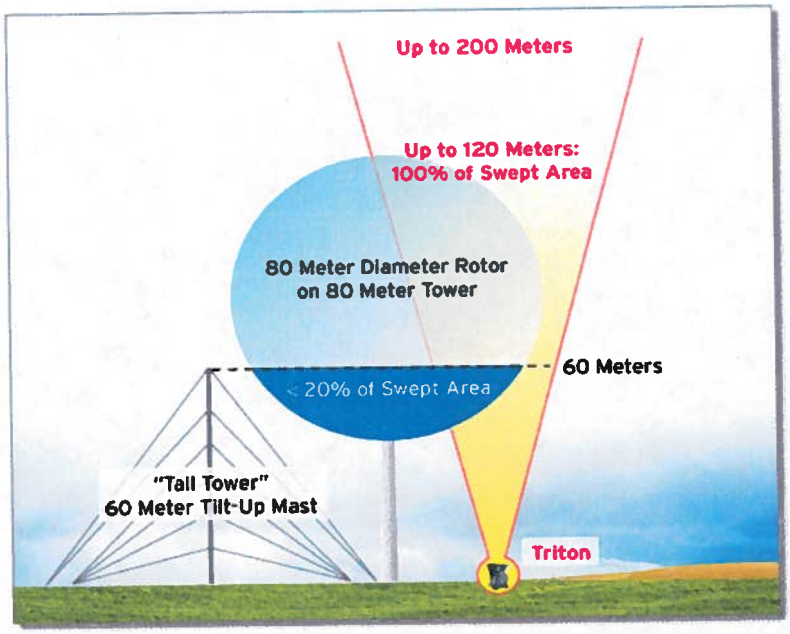
4-Wheel Drive SUV (3): These are all the vehicles that will be used to carry in men and equipment to the site. It is anticipated that each truck could have up to 2 to 3 trips per day for 3 or 4 days.

Reach Fork Truck (1): This vehicle is used to lift equipment such as tower pieces into place in the field. The Reach Fork Truck has the ability to extend its arm out approximately 51 feet and lift parts of the towers up for assembly to the workman.

2.5 SODAR

The use of Sonic Detection and Ranging (Sodar) to gather data about wind from remote collection sites is becoming a more common practice; however, the lenders are still not totally convinced that Sodar data is reliable enough to be "bankable" without supporting data from met towers.

The Sodar works by sending out acoustic pulses in the form beeps or shots it then listens for the return signal. The return signal provides data about the wind speed, direction and turbulence. This signal gathers the data from varying elevations ranging from 30 to 200 meters. At the full 200 meter data retrieval setting, the Sodar would be able to collect 100% of the wind characteristic data for the wind turbines swept area of up to 120 meters.



Sodar

2.6 Traffic Management

OCES will comply with all current ROW stipulations in place for roads:

All Project related vehicles will not travel over 25 mph will be established unless otherwise posted. The speed limit on public motorways will be as posted.

When two vehicles are traveling in the same direction, the rear vehicle may not pass the front vehicle until the front vehicle has stopped and moved to a wide enough point in the road to pass.

Seat belts are required any time a vehicle is in motion.

2.7 Aviation Lighting

The FAA requires aircraft warning markings on all structures taller than 200 feet. The Rohn 45G-65G tower series will require lighting according to FAA Advisory Circular AC70/7460-1K, Obstruction Marking and Lighting.

2.7.1 POLES, TOWERS & SIMILAR SKELETAL STRUCTURES

Structures that are constructed on either a temporary or permanent basis and affixed to ground may become a flight safety issue and under the jurisdiction of the Federal Aviation Administration (FAA) and governed under regulatory guidelines for both height and lighting restrictions and requirements.

Subsection 53 of FAA Advisory Circular AC70/7460-1K instructs that certain tower heights meet certain lighting requirements. Any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet (61m) above ground level (AGL) or exceeds any obstruction standard contained in 14 CFR subpart 77, should normally be marked and/or lighted. Recommendations on marking and/or lighting structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.

Proposed Met Tower Alt NV07 will have a maximum height of 399ft. According to FAA guidelines outlined by 14 CFR subpart 77 and stated in Circular AC70/7460 proposed structures over the height of 200' must file a Notice of Proposed Construction (Form # 7460-1) with the FAA. The FAA assigned OCES' permit request case number (for met Alt NV07) ASN 2010-WTW-7928-OE. This case is in accepted status as of the date of this document (May 5, 2010). Status of the met tower can be accomplished by logging into https://oeaa.faa.gov and using the above case number.

Searchlight Airstrip is approximately 11 miles east of proposed met tower Alt NV07 and well out of any departure or approach paths for aircraft. According to FAA guidelines subpart B section 77.13 any structure within 20,000 feet of an airport or airstrip must file with the FAA for permission to build?

Pending the FAA recommendations Oak Creek Energy will light proposed met tower Alt NV07 with one L-864 Aviation Red Obstruction Light which is composed of an Omni-directional beacon with 2,000 candelas on the highest point of the structure which will be at 399ft. The FAA may recommend one additional L-864 at a height of 199' for nighttime along with painting the tower alternate 30ft bands of aviation orange and white. OCES is proposing to have the structure painted and lights installed before the tower is erected per FAA recommendations.

Proposed met tower Alt NV06 is below 200' AGL in height and over 14 miles away (which is well over 20,000 feet) from Searchlight Airstrip thus it is unnecessary to file with the FAA for permission to construct.

Mounting Intermediate Levels: The number of light levels is determined by the height of the structure, including all appurtenances, and is detailed in Appendix 1. The number of lights on each level is determined by the shape and height of the structure. These lights should be mounted so as to ensure an unobstructed view of at least one light by a pilot.

1. Steady Burning Lights (L-810)

(a)Structures 350 Feet (107m) AGL or Less. Two or more steady burning (L-810) lights should be installed on diagonally or diametrically opposite positions.

(b) Structures Exceeding 350 Feet (107m) AGL. Install steady burning (L-810) lights on each outside corner of each level.

2. Flashing Beacons (L-864)

(a) Structures 350 Feet (107m) AGL or Less. These structures do not require flashing (L-864) beacons at intermediate levels.

(b) Structure Exceeding 350 Feet (107m) AGL. At intermediate levels, two beacons (L-864) should be mounted outside at diagonally opposite positions of intermediate levels.

A photovoltaic panel coupled with two 12 volt batteries, power inverter and a charge controller will supply the lighting system with 54 watts of energy for nighttime use. The solar panel will be mounted on a frame approximately 20' above ground level facing an easterly direction with power cables running in galvanized conduit to the base of the tower. The batteries and power inverter will be stored in a locking steel plate box at the base of the met tower. The 12 volt batteries will be sealed, spill proof AGM made by Optima. These batteries have a shelf life of three (3) years and will be recycled when they are no longer able to supply 12 volts to the power inverter.

The FAA may also recommend marking and/or lighting a structure that does not exceed 200 feet (61m) AGL (14 CFR part 77 standards). Subsection 53 of FAA Advisory Circular AC70/7460-1K provides additional guidance regarding certain tower heights and lighting requirements. FAA Form 7460-1 must be filed with the FAA for structures over 200 ft.

2.8 Tortoise Mitigation

Each Sub-Contractor will receive a briefing and be required to sign a confirmation document that of their understanding of the briefing on the desert tortoises as required by Number 20 of the Right-of-Way Grant NVN#82729.

Perch deterrents would be installed on the lateral anemometer arms to prevent raptors and other birds from gaining perch in tortoise habitat areas.

The Desert Tortoise is an Endangered Species within the United States. Caution must be taken not to harass, hurt or disturb the tortoise. **If harassment, injury or death occurs, a fine up to $50,000 and imprisonment of up to one (1) year may result.** Always beware of tortoises in the roads, under parked vehicles or entering a site you may be using. The area of disturbance shall be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Work area boundaries shall be delimited with flagging or other marking to minimize surface disturbance associated with vehicle straying.

All trash and food items shall be promptly contained within closed, raven-proof containers. These containers shall be regularly removed from the project site to reduce the attractiveness of

the area to ravens and other tortoise predators. To the extent that is possible, ground disturbing activities associated with the proposed action should be scheduled during a time of year when the temperatures are cooler and desert tortoises are more likely to remain in their burrows, generally between November 1st of one year and March 1st of the following spring. Should a tortoise wander into the work area, all activity must stop. The LVFM shall be notified within 24 hours that a tortoise did enter the site.

Upon locating a dead or injured tortoise, the Holder is to notify the LVFM immediately. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death, if known and other pertinent information. Any dead tortoises encountered must be left in place and BLM notified. No relocation of live or dead tortoises around the project site is permitted under Federal law.

Workers shall inspect for tortoises under all vehicles prior to moving them. If a tortoise is present, the worker shall carefully move the vehicle only when necessary and when the tortoise would not be injured by moving the vehicle or shall wait for the tortoise to move out from under the vehicle.

Pets should be restrained either by enclosure in a kennel or by chaining to a point within the project site.

2.9 Guy-Wire Markers

A strong concern for guy-wired towering is not seeing the guy-wires and being injured as a result of the stretched wires. This is for both human and avian safety concerns. To minimize the potential from injury due to the guy wires, an 16 to 20 inch orange or red ball could be installed on the guy wires in the center section of each wire.

At a point approximately 30 feet down from the top the mast, a single orange or red ball could be placed on each of the guy wires and again in the same configuration approximately 15 feet from the ground a similar orange ball will be placed on each of the guy wires. The upper ball will assist in preventing very low fly helicopters, military or private planes from clipping the towers and wires while the lower balls will alert off highway vehicle riders that the wires exist and may be in their pathway.

According to literature on avian division from guy wires, power lines and other similar obstructions, the orange or red ball affixed to guy wires suffice for bird division. Additional bird diverters would potentially cause undue weight on the guy wires causing them to them sag or be strained in high winds; however should the BLM prefer an alternative to this type of diversion devise OCES will be willing to resolve the matter

2.10 Proposed Mitigation Measures

Efforts shall be taken to minimize impacts to vegetation during all phases of activities within the right-of-way. This includes pre-disturbance surveys to identify vegetation suitable for salvage and to ensure that protected or sensitive plant species are properly protected.

Topsoil will be stockpiled and utilized in post construction reclamation efforts.

Weed Control measures will be utilized on all disturbed areas within the ROW and the temporary work areas.

Efforts shall be taken to preserve surface and subsurface cultural and paleontological resources that may be encountered:

> Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the OCES, or any person working on his behalf, on public or Federal land shall be immediately reported to the LVFO. OCES shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the LVFO. An evaluation of the discovery will be made by the LVFO to determine appropriate actions to prevent the loss of significant cultural or scientific values.

Efforts shall be taken to minimize impacts to wildlife during all phases of the project.

Efforts shall be taken to avoid impacts to migratory bird's nests during the appropriate breeding season. The following measures describe the most effective measures to avoid impacts:

> To prevent undue harm, habitat-altering projects or portions of projects should be scheduled outside bird breeding season. In upland desert habitats and ephemeral washes containing upland species, the season generally occurs between March 15th and July 30th.
>
> If a project that may alter any breeding habitat has to occur during the breeding season, then a qualified biologist must survey the area for nests prior to the commencement of construction activities. This shall include burrowing and ground nesting species in addition to those nesting in vegetation.
>
> If any active nests are found the area must be avoided until the young birds fledge.

Should hazardous materials be spilled or deposited within the ROW areas by OCES, its agents, or a third party responsible to OCES, the LVFO's Authorized Officer shall be notified immediately. Any clean up or reporting requirements shall be completed in compliance with all applicable State and Federal laws and regulations.

OCES will be in compliance with Federal and State air and water quality laws.

OCES during construction will keep dust on both roads and installation down. This will be accomplished through implementation of speed limits not to exceed 25 miles per hour and spacing the vehicles apart by a distance of 100 yards when on dirt roads. If excessive dust is still

occurring the speed limit will be reduced to 20 mph. During construction, the backhoe or excavator will use techniques in the operation of the equipment to minimize the amount of the dust from moving the earth. Since the overall footprint of the project is less than a quarter acre combined the Clark County Air Quality thresholds will not be met; however, OCES plans to mitigate dust regardless of this disturbance threshold.

Each tower site will have a sign with the Right-of-Way Grant Number, NVN#82729, and the Corporation Name: Oak Creek Energy Systems, Inc along with a Contact Number, TBD. This will be placed at a visible location on the fence in case of an emergency.

2.11 Tower Maintenance and Management

The towers are planned to be on a remote data acquisition system with an every other monthly schedule for tower safety and maintenance check. In the event a tower's remote signal is lost OCES would come out to determine the reason for the lost signal.

If the tower was down, OCES would conduct an initial investigation to determine if the tower was vandalized, if it was, the BLM would be notified along with the Clark County Sheriff's Department. After the investigation was concluded, OCES would carefully clean up the site and reinstall the met tower with stronger safeguards in place to prevent a similar incident for happening in the future.

Both sites barring no unforeseen problems will most likely not be driven to more than 8 times per year with a standard four wheel drive vehicle unless with BLM or on a special trip to examine site for filing the SF-299 and POD under the Type III application.

2.12 Notice of Decommissioning

On February 25, 2009, BLM issued OCES a three year Type II wind assessment ROW Grant which is currently set for expiration on December 31, 2011. The Holder will notify the LVFO at a minimum 60 days prior to this date, or earlier, of its intent to remove the met towers or will file the proper documentation to move to a Type III full development scenario:

SECTION 2
PROPOSED ACTIVITIES

REVISED PLAN OF DEVELOPMENT
THE CASTLE MOUNTAIN WIND ASSESSMENT PROJECT
NVN#82729

SECTION 3
Supplemental Information

REVISED PLAN OF DEVELOPMENT
THE CASTLE MOUNTAIN WIND ASSESSMENT PROJECT
NVN#82729

SECTION 3
SUPPLEMENTAL INFORMATION

3.1 BOOM TRUCKS AND RT CRANE FOR TOWER INSTALLATION

3.1.1 Boom Truck Option:

The Manitex 35124 is a 35 Ton Boom Truck. It is ideal for transporting tower parts to the sites and assisting in the pre-assembly of parts on the ground. It also has a pick height of just less than 200'and is appropriately designed to lift tower materials such as meteorological tower sections into place as identified in this POD. The Manitex is street legal at 8' in standard road width but in the lifting position extends its stabilizing legs or "Outriggers" to ~19' for some lifts or up to the full 22' for others. The outriggers are then lowered onto a series of railroad ties or other cribbing temporarily laid on top of the native soil allowing for safe support of the crane during the lifting operation with minimal impact to the area once the operation is complete and the cribbing has been removed. This sort of boom truck is ideally suited to lift the 60M SSV tower in as few as 3 picks (pieces) or the bottom 60-80 meters of the taller loads such as the Rohn 45-65G series towers in 2-3 picks.

More detailed information on this equipment is attached in Product Brochures in Appendix B.

3.1.2 Rough Terrain Crane Option:

The above TEREX 90 Ton rough terrain crane with a 260' pick height is an example of the type of crane that would be used in the event that safe access for the 35 Ton Boom truck was a problem at a site being used for the installation of the 60M SSV tower or if it is needed to install some or all of the taller Rohn 45G-65G 110M tower.

The 90 Ton RT crane must be brought to area of the site on a trailer as a "wide load". It would be offloaded just off Highway 164 and driven to the site. This crane needs a 12' road width when it is being mobilized on its own tires to the site location.

When it is in position for lifting, it extends its stabilizing legs or "Outriggers" to ~18' for some lifts or up to the full 22' for others. The outriggers are then lowered onto a series of railroad ties or other cribbing temporarily laid on top of the native soil allowing for safe support of the crane during the lifting operation with minimal impact to the area once the operation is complete and the cribbing has been removed. This sort of boom truck is ideally suited to lift the 60M SSV tower in as few as 3 picks (pieces) or the bottom 60-80 meters of the taller loads such as the Rohn 45-65G series towers in 2-3 picks.

More detailed information on this equipment is attached in Product Brochures in Appendix B.

3.1.3 Tower Mounted Vertical Gin Pole Lift Option:

Another option that may be used for installing part or all a met tower is the tower-mounted gin-pole method. Under this option, after some portion of the bottom of the met tower has been installed by a crane or "tilt-up" method, a vertical gin-pole with a pulley on top of it is clamped to the side of the uppermost section of the tower.

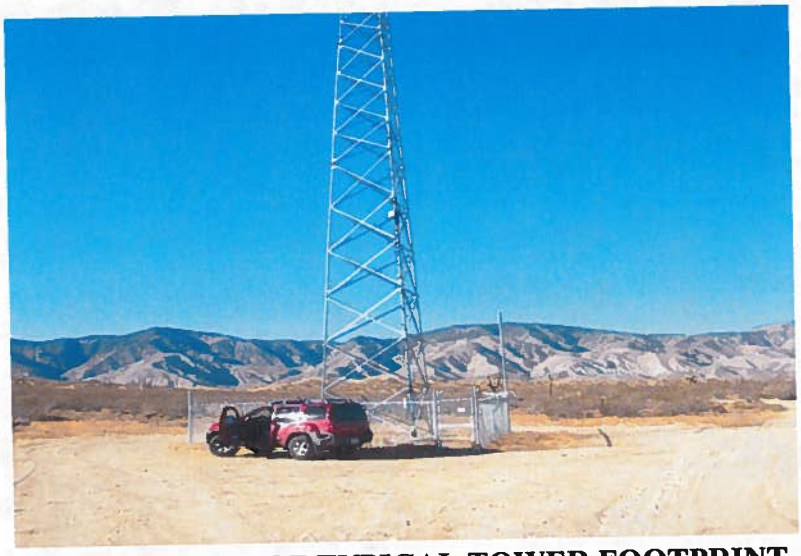
A rope runs through the pulley on top of the gin pole with both ends able to reach to the ground. One end of the rope is attached to a tower section on the ground and successive sections are lifted into place using that rope by personnel stationed on the ground. After the section has been lifted by ground personnel to the top of the tower, the person on the tower guides the tower section into place on the top of the tower that has already been installed and bolts it into place. At certain intervals, the same device is used to lift guy wires (if used on that tower) into place so that the person on the tower can attach them to the tower. The pole is light weight enough to be moved up the tower by the tower person so the operation can be repeated with additional tower sections and guy wires (if used).

3.1.4 Tilt-up Tower Method using 90 Degree Side Mounted Gin Pole Option:

Another popular option for installing complete met towers up to 60M in height is the tower-mounted 90 degree gin-pole method. The benefit of this method is that it can be used in locations where crane access is difficult as long as you can get an appropriate winch into place to pull the tower up. [In the case of 60M towers, the winch is usually truck mounted though, in specific situations; a winch can be carried to the location and secure using temporary anchors.] The Advance Mast Systems 60 Meter guyed tower utilizes this side-mounted gin pole method for installation and a full description of this method can be found in the Advanced Mast System Manual Installation Manual contained in the Product Brochures in Appendix B of this document.

3.2 MET TOWER FOOTPRINTS

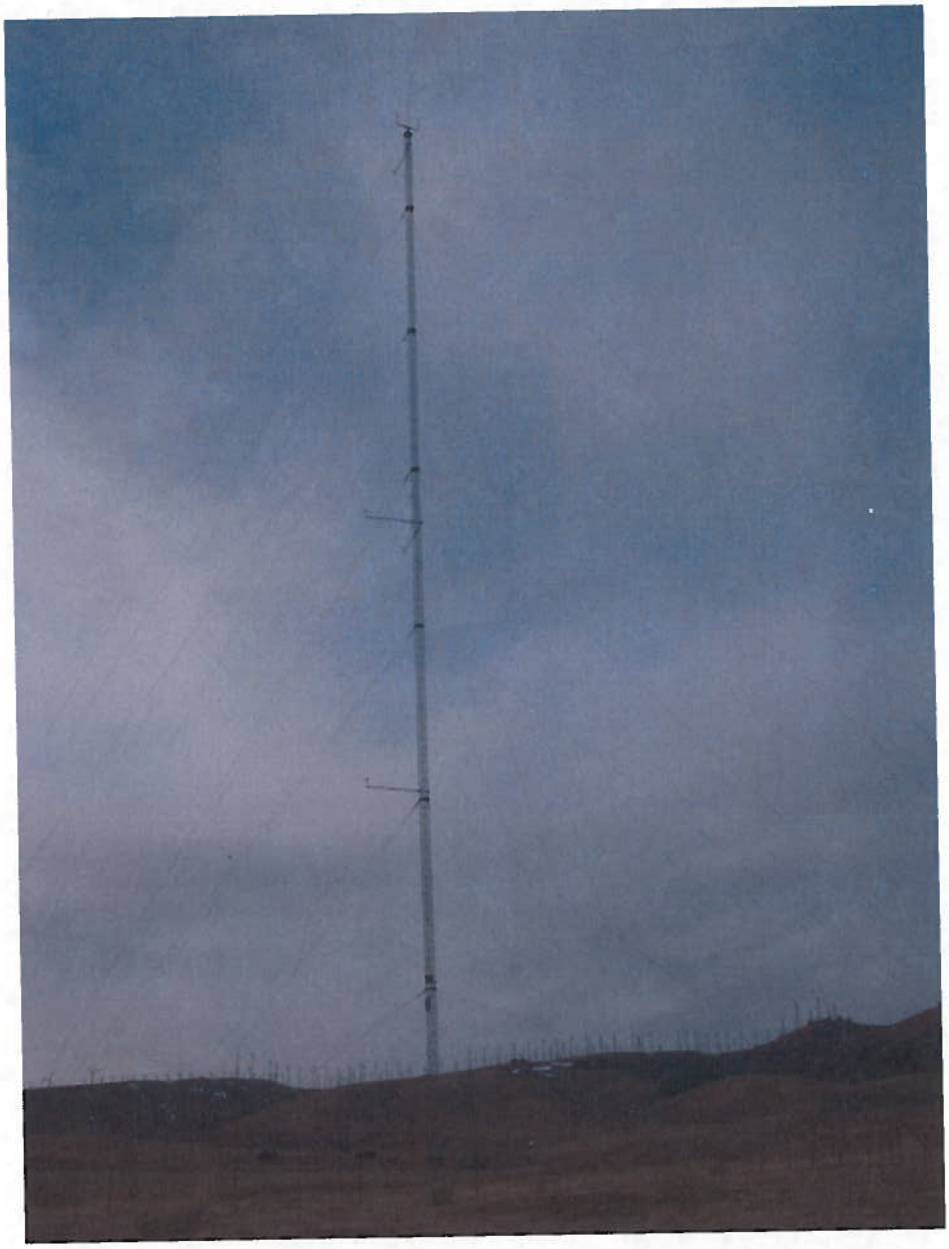
TYPICAL STAND ALONE 60 M SSV METEORLOGICAL TOWER WITH FENCING
*note this fenced area is larger than required for the proposed Castle Mtn. met tower operations



SECOND VIEW OF TYPICAL TOWER FOOTPRINT

The fence in this situation is larger than what is required by OCES operations and the tower may utilize a 3 or 4 leg design that could result in a somewhat tighter or wider spread at the base depending on manufacturer specifications for the met tower; however this tower photo gives great perspective on the overall size of the footprint and how small the footprint would be.

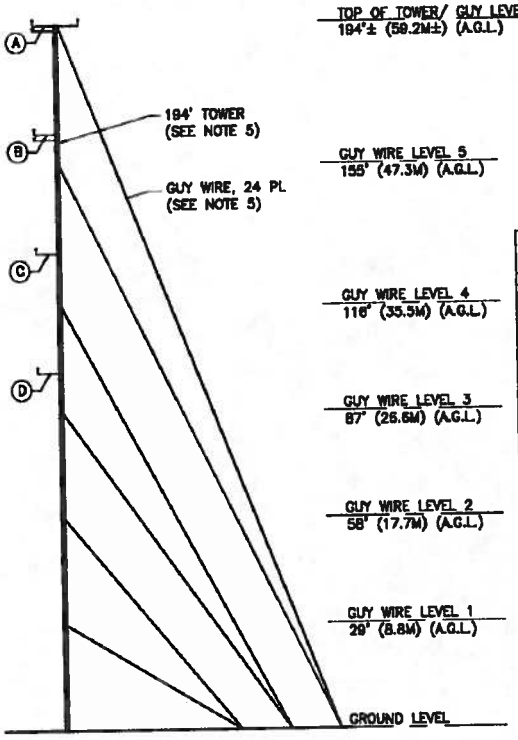
The 60M Advanced Mast Systems tower has guy wires at 90 degree intervals and has anchors at 3 radius distances. The entire tower can be fenced as in the below picture or the 4 groups of 3 guy-anchors can be fenced individually and the tower base also can be fence to prevent unauthorized access. In any case, the guy anchors will be protected from the risk of wildlife getting "tangled up" in the guy wires near the guy anchors. The fencing will also be constructed in a manner to insure that anyone walking or even riding around the guy wires (which would not be legal in the area of the proposed towers) would not become tangled in or snagged by the guy wires.



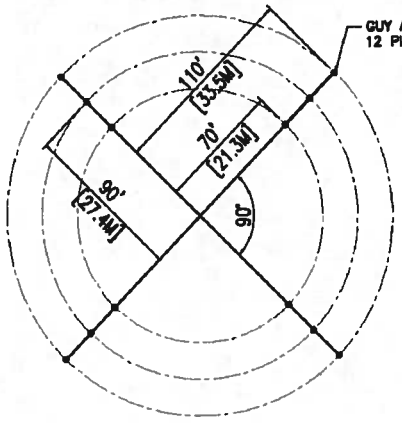
Typical Advance Mast Systems 60M Tower Installation near Tehachapi CA

3.3 MET TOWER DIAGRAMS

60 Meter Guy Wire Tower



ELEVATION



PLAN

NOTES

ANCHOR RADIUS IS FROM CENTER OF MAST BASE TO INTERSECTION OF ANCHOR ROD WITH GROUND.

MAST DESIGN AND GUY CHORD LENGTHS SHOWN ARE BASED ON LEVEL GROUND.

DO NOT INSTALL MASTS WITHIN FALLING DISTANCE OF ELECTRICAL OR TELEPHONE LINES.

INSTALL WARNING PLATES (ACWS) IN A HIGHLY VISIBLE LOCATION.

MAST MUST BE GROUNDED IN ACCORDANCE WITH ALL LOCAL AND NATIONAL CODES.

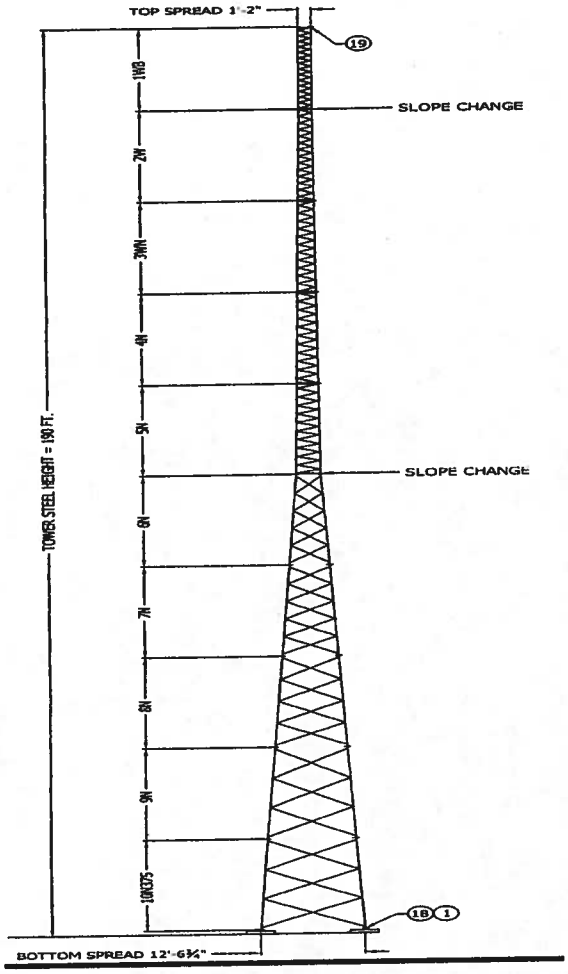
DESIGN CRITERIA

1. TOWER DESIGN CONFORMS TO "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES" – TIA/EIA-222 REVISION F.
2. DESIGN WIND SPEEDS (FASTEST-MILE WIND SPEED MEASURED AT 33' A.G.L.):
   - 100 MPH (ESCALATES TO 129 MPH AT 60 M) WITH NO ICE.
   - 73 MPH (ESCALATES TO 94 MPH AT 60 M) WITH 1/4" CLEAR, 56 PCF RADIAL ICE.
   - 56 MPH (ESCALATES TO 63 MPH AT 60 M) WITH 1/2" CLEAR, 56 PCF RADIAL ICE.
3. DISCRETE APPURTENANCES:
   - (A) (2) #40 ANEMOMETERS WITH (2) 1½" O.D.x84" BOOMS AT 194'± A.G.L.+ (1) #200P WIND VANE WITH (1) 1½" O.D.x84" BOOM AT 193'± A.G.L.
   - (B) (1) #40 ANEMOMETER WITH (1) 1½" O.D.X84" BOOM AT 164'± A.G.L. + (1) #200P WIND VANE WITH (1) 1½"O.D.x84" BOOM AT 163'± A.G.L.
   - (C) (1) #40 ANEMOMETER WITH (1) 1½"O.D.X84" BOOM AT 131'± A.G.L.
   - (D) (1) #40 ANEMOMETER WITH (1) 1½"O.D.X84" BOOM AT 98'± A.G.L.
4. LINEAR APPURTENANCES:
   (7) 0.14"ø CABLES.
   (1) ⅜"ø SAFETY CLIMB CABLE (DESIGN OF SAFETY CABLE AND ATTACHMENTS, AND CERTIFICATION OF STRUCTURAL ADEQUACY OF TOWER FROM SAID CABLE AND ATTACHMENTS BY OTHERS)
5. TOWER PROPERTIES:
   TOWER MAST: 1.25"ø, 16 Ga. TUBING, ASTM A572-50.
   LACING: 3/8"ø SOLID ROD, ASTM A36.
   GUY WIRE: 1/4" GALV. WIRE, ULTIMATE BREAKING STRENGTH = 6.7 KIPS.
   GUY WIRE UNSTRESSED LENGTH:
   - GUY WIRE LEVEL 1: 75' – GUY WIRE LEVEL 4: 147'
   - GUY WIRE LEVEL 2: 91' – GUY WIRE LEVEL 5: 191'
   - GUY WIRE LEVEL 3: 125' – GUY WIRE LEVEL 6: 223'
6. MAXIMUM SUPPORT REACTIONS:
   BASE:
   – DOWN THRUST: 25.94 KIPS – SHEAR: 1.16 KIPS
   GUY ANCHOR AT 70' RADIUS:
   – UPLIFT: 1.03 KIPS – SHEAR: 1.75 KIPS
   GUY ANCHOR AT 90' RADIUS:
   – UPLIFT: 2.77 KIPS – SHEAR: 2.56 KIPS
   GUY ANCHOR AT 110' RADIUS:
   – UPLIFT: 5.03 KIPS – SHEAR: 3.54 KIPS

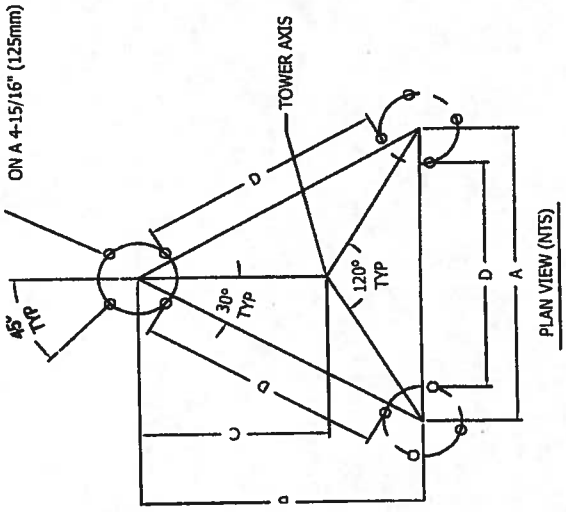
60M METEOROLOGICAL MAST

FOR: ADVANCED MAST SYSTEM, INC.	BERGMAN & ASSOCIATES INC. HAVERHILL, MA 01832 TEL.: (978) 372-1125	DWG. NO.	1288
		DATE:	11 JUL 2006
	DRAWN BY: H. NGUYEN	SCALE:	N.T.S.
REV. 4d 22 APR 2009	CHECKED BY P. BERGMAN	SHEET:	1 OF 1

Stand Alone 60 Meter Towers



SSV-190 Stand Alone with Tri-Angle Leg Foundation Pattern



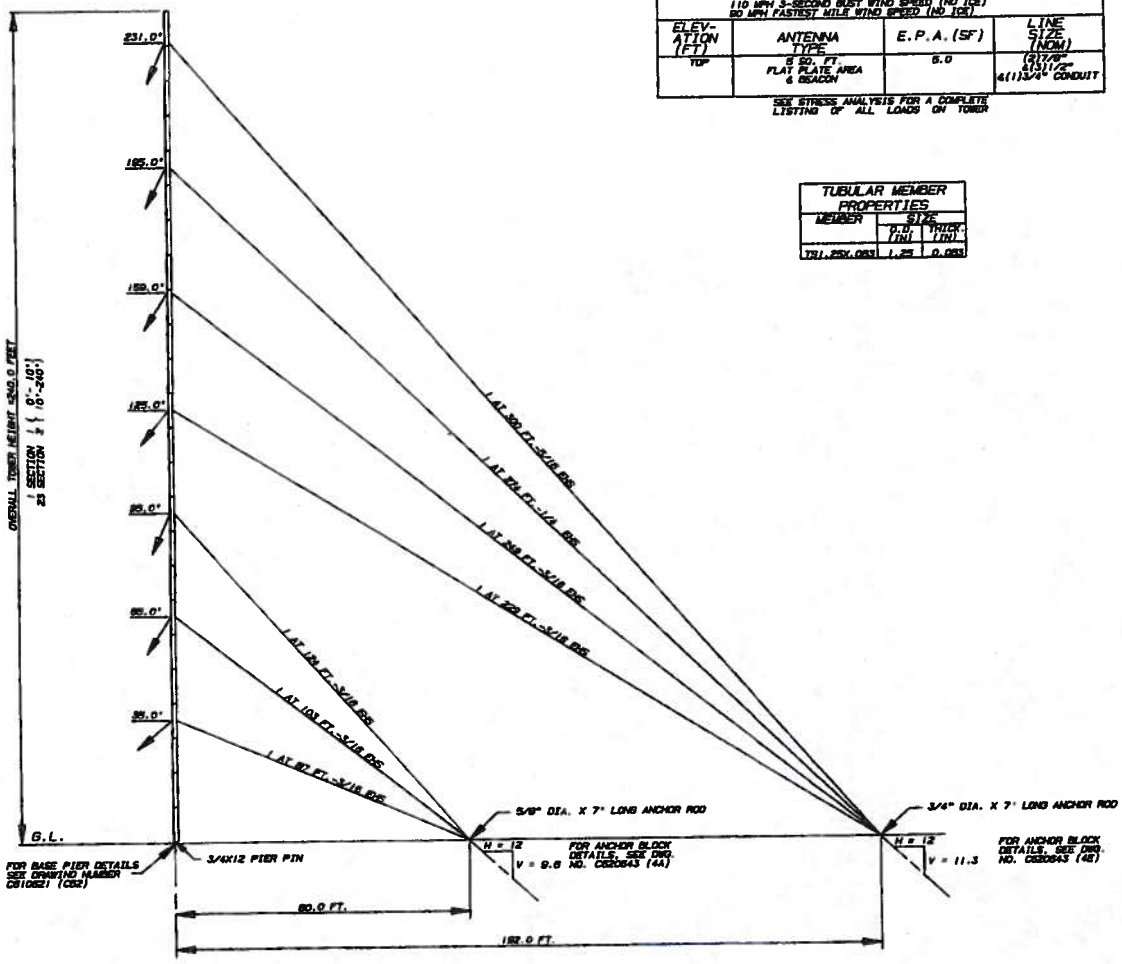
A	B	C	D
12'-6 3/4" (3.829M)	10'-10 9/16" (3.316M)	7'-3 1/32" (2.211M)	12'-2" (3.708M)

ROHN 45G-65G TOWER 110 METER GUY WIRE TOWER

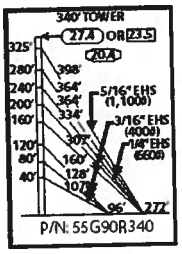
TOWER DESIGN LOADING			
DESIGN WIND LOAD PER 2003 IBC USING ANSI/TIA/EIA-222-F-1996 IN ACCORDANCE WITH SECTION 3108.4 110 MPH 3-SECOND GUST WIND SPEED (NO ICE) 90 MPH FASTEST MILE WIND SPEED (NO ICE)			
ELEV-ATION (FT)	ANTENNA TYPE	E.P.A. (SF)	LINE SIZE (NOM)
TOP	6 SQ. FT. FLAT PLATE AREA & BEACON	6.0	(2)7/8" & (3)1/2" & (1)3/4" CONDUIT

SEE STRESS ANALYSIS FOR A COMPLETE LISTING OF ALL LOADS ON TOWER

TUBULAR MEMBER PROPERTIES		
MEMBER	SIZE O.D. (IN)	THICK. (IN)
TP1.25X.083	1.25	0.083



ELEVATION VIEW



TOWER PARTS INCLUDED	55G	BPC55G	APL55G	GA55GD	BASE	INNER ANCHOR	OUTER ANCHOR
	34	1	1	8	CB2G	AB2	AB3
GUY WIRE & CONNECTION INCLUDED	3/16EHS	1/4EHS	142265	BG2142	BG2146		5/16THH
	5725'	5725'	1350'	42	6		42
	7/16THH	3/8TBE&E	1/2TBE&J	5/8TBE&J	TBSAFETY		
	6	9	12	3	6		
ANCHORS & GROUNDING INCLUDED	GAC303	GAC3455TOP	AGK1GGX	BGK2GGX	CPC.5/.75		
	3	3	2	3	6		

340' ROHN 55G
All parts shown in table are included when ordering Part No: 55G90R340

Serial Number: NVN-82729

Proposed Action: On February 25, 2009, a Type II right-of-way (ROW) Grant NVN-82729 was issued, by the Las Vegas Field Office of the BLM, approving the installation of nine (9) meteorological towers (met towers) for wind testing and data collection. This Proposed Action is a request to amend the existing ROW Grant by relocating and installing two of the approved but not installed met towers at alternative site locations within the boundaries of the current authorization and for the same intended purpose as originally granted on February 25, 2009 to gather wind and weather data on the public lands.

Location: West of Searchlight and north of Crescent Peak, Clark County, NV.

Applicant: Oak Creek Energy Systems, Inc. (OCES)

Background: In August 2006, OCES submitted to BLM a Type II Wind Energy ROW application (SF-299) for approximately 34,500 acres of public lands. This application proposed a comprehensive wind resource monitoring and testing process if approved pursuant to Title V of the Federal Lands Policy Management Act of 1976 and Title 43 Code of Federal Regulations (CFR) 2800, et., seq.

The original proposal provided within the application filed by OCES, strategically sited and installed met towers of various sizes up to 60 meters (which is equal to 199 feet) in height, to collect data for a period of three (3) years. The met towers would be placed in twelve (12) locations throughout the approximate 34,500 acre area with the intent to capture the best potential wind data based on best available mapping resources. The sites selected were cleared for ground resources and impacts. BLM completed all the National Environmental Policy Act (NEPA) compliance requirements documented in NEPA LV EA document # 2007-249 signed February 25, 2009.

The NEPA LV EA document # 2007-249 analyzed three alternatives, including the No Action Alternative. BLM approved a total of nine (9) met towers on February 25, 2009 with terms and conditions. OCES installed 5 met towers in March 2009 in accordance with the ROW Grant stipulations. Data collected in the 1st few months indicated further data collection was needed. In August 2009, OCES submitted an amendment to the ROW Grant proposing to relocate two (2) of the previously–approved (but not yet installed) met tower sites to a more accessible and a gentler terrain site. The proposed "alternative sites" were surveyed by BLM-approved biologists and archaeologists to assure the absence of sensitive resources. These surveys were completed in December 2009 and submitted to BLM in January 2009.

This EA will address the proposed amendment to the Grant and alternate sites by deleting the original sites as approved and known as met towers NV06 and NV07. From this point forward, this document will refer to the "new" or "alternative" sites as Alt NV06 and Alt NV07. For the purpose of clarity, please note that approval of this ROW amendment would not allow the installation of wind turbines and is limited to wind resource assessment activities.

Chapter 1

1-0 Introduction/Background

In 2006, Oak Creek Energy Systems Inc initially applied for twelve (12) met tower locations. These met towers were to range in height from 20M (20 meters or 66 feet) to 60M (60 meters or 199 feet) in height.

Alternative C, presented in NEPA LV 2007-049, was chosen by the Las Vegas Filed Manager.

The selection of Alternative C deleted one (1) of the twelve (12) met tower locations - due to the presence of cultural resources concerns. The deleted met tower location is NV011 and can be found in Figure 1. This left eleven (11) approved locations for met towers to be built. However, the selection of Alternative C also limited the total number of met towers to be installed under this grant to nine (9) but left it to the discretion of the OCES to determine which nine (9) out of the approved eleven (11) locations best meets the project objectives.

In March 2009, five (5) of the nine (9) approved met towers were installed utilizing 20M to 30M (30 meters or 99 feet in height) NRG tilt-up type towers. Four (4) met towers were left to be built for a future date, on the remaining six (6) possible approved locations.

In August 2009, OCES filed an amendment application to move two (2) sites of the six (6) remaining approved sites to alternate locations. This proposal is to allow two (2) (NV06 and NV07) of those six (6) possible locations be relocated (to Alt NV06 and Alt NV07), would allow for better access to these locations utilizing existing roads. These location changes are essential for properly assessing the wind in the area, allowing better access to the two alternate locations during construction by better utilizing the existing roads network, and minimizing the area of disturbance within each of the installation areas.

1-1 Purpose of and Need for Action

The purpose and need for the Agency's action stems from its administrative responsibility for managing public resources and the requirement to meet regulatory and legislative mandates outlined by Section 211 of the National Energy Policy Act of 2005 which mandated the development of 10,000 MW of electricity from renewable and alternative energy resources, including wind energy resources by 2015. The Initial Plan of Development (POD) which was filed with the amended application and further supplemented on February 22, 2010, by the Revised POD, gives substantial additional background on this topic.

The purpose of this EA is to document the interdisciplinary process, analysis of the proposed action and reasonable alternatives (see Chapter 2) and provide the basis for a decision regarding the amendment to the existing authorized ROW Grant (NVN-82729).

1-2 Conformance with Applicable Land Use Plans

The Proposed Action and Alternatives are consistent with the Las Vegas Resource Management Plan and Amendments. The project is outside the Eldorado/Piute Valley Area of Critical Environmental Concern (ACEC).

1-3 Laws and Regulations Governing the Action

The Federal Land Policy and Management Act of 1976 (as amended) Public Law 94-579 (43 USC 1781 Sec. 601), governs the management of public lands. The BLM develops land use plans to guide activities, stewardship goals, and overall management direction. In addition to the aforementioned impacts of FLPMA, this law also provides the governing authority for issuing ROW grants. Lands and realty regulations at 43 CFR 2800 addresses wind energy exploration and development on BLM-administered lands through right-of-way grants in accordance with the terms and conditions of the BLM's National Policy contained in Instruction Memorandum IM No. 2009-043, dated December 19, 2008.

Any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet (61m) above ground level (AGL) or exceeds any obstruction standard contained in 14 CFR subpart 77, should normally be marked and/or lighted. However, an FAA aeronautical study may reveal that the absence of marking and/or lighting will not impair aviation safety. Conversely, the object may present such an extraordinary hazard potential that higher standards may be recommended for increased conspicuity to ensure safety to air navigation. Normally outside commercial lighting is not considered sufficient reason to omit recommended marking and/or lighting. Recommendations on marking and/or lighting structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design. The FAA may also recommend marking and/or lighting a structure that does not exceed 200 feet (61m) AGL (14 CFR subpart 77 standards). Subsection 53 of FAA Advisory Circular AC70/7460-1K provides additional guidance regarding certain tower heights and lighting requirements. The FAA Form 7460-1 must be filed with the FAA for all structures over 200 ft. to determine if the tower is allowed and lighting is required.

1-4 Scope of Analysis

This document evaluates the potential impacts associated with a proposed amendment of an approved ROW Grant (NVN-82729) to conduct wind assessment studies, as described in the Feb 22, 2010 Revised Plan of Development (POD) and Chapter 2 of this document. It also assesses potential impacts associated with reasonable alternatives to the applicant's Proposed Action.

Chapter 2

2-0 Background to Framing Alternatives

BLM approved installation of nine (9) met towers out of twelve (12) surveyed met tower locations in February 2009. Only one met tower site (NV011) was denied due to the potential presence of cultural resources (See Figure 1 for location of Met NV011 and Table 1 for coordinates). In the NEPA decision document (NEPA LV 2007-049), BLM, by selecting Alternative C, limited the total number sites that could be installed under the ROW Grant to nine (9) of the eleven (11) approved sites.

The Agency gave discretion to the OCES, the Grant Holder, to select nine (9) sites from the eleven (11) approved site locations that are most accessible. This approach was designed to balance the Applicant's need for collection of the necessary wind data under the ROW Grant (NVN-82729) - while meeting the criteria of the Agency by minimizing impacts on the public lands.

In March 2009, five (5) met towers were installed (at NV03, NV05, NV08, NV10 and NV12). See Figure 1 for the location of the installed towers. These were a combination of 20M and 30M tower systems. OCES determined these sites to be the most accessible locations that would meet the initial wind resource assessment needs for OCES. It should also be noted that by using these shorter and smaller footprint 20M and 30M towers, OCES limited the impact at the first five (5) met tower locations to a level that is well below that which was allowed under the terms and conditions of ROW Grant NVN-82729 which allowed 60M towers at all locations.

This left OCES with the flexibility to target the installation of the remaining four (4) met towers from the six (6) approved locations identified within the ROW Grant NV01, NV02, NV04, NV06, NV07 and NV09 for future met tower installation.

The Proposed Action and Alternatives herein are framed around relocating two (2) met tower sites out of the six (6) remaining approved locations. Currently sites identified within both the ROW Grant and the EA as NV06 and NV07 are to be relocated and to be renamed. The alternative sites that have been chosen and the location names are both reflective and representative of each other. The alternate sites are referred to herein as Alt NV06 and Alt NV07 respectively. Under the proposed decision, both sites would be approved for 60M Meter towers, either tilt-up or self supporting; however, at Alt NV-07 we would be allowed to install a taller up to 120M (120 meter or 395 foot in height) met tower while leaving it up to the applicant to select two (2) of the remaining four (4) locations to install additional towers under NEPA LV 2007-049.

In addition to the met tower, the proposed action would allow for the installation of one small (~6ft wide by ~6ft deep by 4ft tall) Sonic Detection and Ranging (Sodar) Sodar Unit within 10 ft x 10 ft by 8ft high fenced areas at each of Alt NV-06 and Alt NV-07 with the same razor wire construction component. The Sodar units would be used to compliment the met tower at that location by gathering wind data at levels from 40 meters (131 feet) to 200 meters (650 feet) above ground level in conjunction with a nearby met tower.

Table 2-Alternatives Analyzed in this EA

Proposed Action	Delete two existing approved met locations NV06 and NV07. Replace NV06 and NV07 at "alternate" locations completely within areas that have been surveyed under this EA and those relocated tower locations will be referred to as Alt-NV06 and Alt-NV07 respectively. Alt-NV07 may utilize a tower that is up to 120M tall of Guyed design or up to 60M tall self-supporting design tower. Alt-NV06 may utilize a tower up to a 60M that is either of guyed or self-supporting tower design. Near both Alt NV06 and Alt NV07 locations (and within the surveyed area) a 10ft x 10ft area may be fenced and used for a Sodar wind measuring unit. These locations will be referred to as Sodar #1 and Sodar #2. Equipment and materials needed to install Alt NV07 will be brought to the site part way via use of a designated route through the ACEC, part way via the existing moderately used but closed road through the ACEC, and part way through an existing road outside of the ACEC as described in detail below. It should be noted that, in addition to Alt NV06 and Alt NV07, two (2) of the remaining four (4) tower locations, approved under NEPA LV 2007-049, could still be installed under the terms of the original ROW Grant NVN-82729 dated February 25, 2009. This would allow for the originally authorized total of nine (9) met towers to be installed under this ROW grant.
Alternative A	**Limited Tower Number**: Same as Proposed Action but with no additional met towers to be allowed for installation beyond Alt NV06 and Alt NV07 leaving a reduced total of seven (7) met towers allowed to be installed under this ROW grant.
Alternative B	**Limited Tower Height**: Same as Proposed Action while keeping the met tower height at or below 60M at all towers. It should be noted that, in addition to Alt NV06 and Alt NV07, two (2) of the remaining four (4) tower locations, approved under NEPA LV 2007-049, could still be installed under the terms of the original ROW Grant NVN-82729 dated February 25, 2009. This would allow for the originally authorized total of nine (9) met towers to be installed under this ROW grant.
Alternative C	**Alternative Access:** Same as the proposed action but access to Alt NV07 for construction would not be allowed through the closed road in the ACEC. This alternative would involve minor maintenance grading of the existing alternative access roads outside the ACEC that would provide access to Alt NV07 from the north to allow for safe equipment access to the site. It should be noted that, in

	addition to Alt NV06 and Alt NV07, two (2) of the remaining four (4) tower locations, approved under NEPA LV 2007-049, could still be installed under the terms of the original ROW Grant NVN-82729 dated February 25, 2009. This would allow for the originally authorized total of nine (9) towers to be installed under this ROW grant.
Alternative D	No Change.

2-1 Proposed Action and Alternatives

2-1.1 Proposed Action

This action proposes to:

a. Delete two (2) existing approved met locations NV06 and NV07;
b. Replace NV06 and NV07 at "alternate" locations and referred to as Alt NV06 and Alt NV07; (See Figure 1 and 2) and
c. Near each alternate met location (Alt NV06 and Alt NV07) a 10ft x 10ft area, at a distance of at least one times the met tower height from the met tower, may be fenced and used for a single Sodar wind measuring unit.

   A total of two (2) Sodar units are proposed at locations described in Section 2-1.1.2 of this document.

   The exact locations are described in Plot Map 1 for Sodar #2 near Alt NV06 and in Plot Map 2 for Sodar #1 near Alt NV07, in accordance with the Revised Plan of Development (POD) dated February 22, 2010.

2-1.1.1 Project Components

The alternate met tower sites are within the ROW Grant area and were surveyed in December 2009.

At the Alt NV06 location, OCES may utilize a tower up to a 60M that is either of guyed or self-supporting tower design.

At the Alt NV07 location, OCES may utilize a tower that is up to 120M tall of Guyed design or up to 60M tall self-supporting design tower.

Near both Alt NV06 and Alt NV07 locations (and within the surveyed area) a 10' x 10' area may be fenced and used for a Sodar wind measuring unit (Sodar #1 near Alt NV07 and Sodar #2 near Alt NV06), in accordance with the Revised Plan of Development (POD) dated February 22, 2010. See sections 2-1.1.4 for more information on the proposed Sodar installation.

Equipment and materials needed to install Alt NV07 will be brought to the site via the through the ACEC, as described in detail in Section 2-1.1.5 below.

It should be noted that, in addition to Alt NV06 and Alt NV07, two of the remaining four locations approved under NEPA LV 2007-049 could still be built under the terms of the original ROW Grant (NVN-82729).

Alt NV06	Disturbed Area	Alt NV07	Disturbed Area
Guy Anchors	800 sq ft	Guy Anchors	600 sq ft
Tower Base	10 sq ft	Tower Base	10 sq ft
Sodar #2	100 sq ft	Sodar #1	100 sq ft
Access Path	400 sq ft	Access Path	2,800 sq ft
Total Disturbed Area	1,300 sq ft	Total Disturbed Area	3,500 sq ft

The total number of acres disturbed by the Proposed Action is

1,300 sq ft + 3,500 sq ft = 4,800 sq ft - this is about one tenth of an acre (0.11 acres)

Three types of towers are proposed (depending on terrain and geographic project location):

1. A 60 meter tall Advanced Mast Systems tilt-up guy wire supported tower (or equal);
2. A 60 meter tall Rohn SSVself-supporting (un-guyed) tower (or equal); and
3. 120 meter (or equivalent) Rohn 65G tower guy wire supported tower (or equal at Alt NV07 only).

2-1.1.2 Location

The met towers and Sodar locations area identified below:

Alt NV06 (60 meters in height) and Sodar #2: Section 3, T. 28S, R. 61E, MDM
Alt NV07 (120 meters in height) and Sodar #1: Section 18, T. 28S, R. 62E, MDM

Met #	UTMs	UTMs	Latitude	Longitude
Alt NV06	E 668462.1	N 3933698.5	N35.5326147	W-115.1418589
Sodar #2	E 668450.2	N 3933673.6	N35.5323927	W-115.141995
Alt NV07	E 672995.2	N 3930660.1	N35.5044528	W-115.0925317
Sodar #1	E 673039.1	N 3930562.9	N35.5035701	W-115.092067

Access to both Alt NV06 and Alt NV07 is via existing 2-track dirt roads utilized by motorized recreation and utility maintenance crews. Some portions of these roads are numbered and marked as designated BLM routes of travel.

Access to Alt NV06 is via a BLM designated routes all the way to the proposed met tower site.

See photo 3.

Access to Alt NV07 is via existing BLM roads that are described in detail in Section 2-1.1.5 of this document.

See photos 7, 8 and 9 of the proposed existing (closed) road to Alt NV07 - which is proposed to be used as is, with no improvements or maintenance required, for safe access and installation operations.

See Section 2-1.1.5 for a complete description of access to Alt NV06 and Alt NV07.

2-1.1.3 Taller Met Towers units

After collecting wind data from 5 of the approved met towers, applicant/project proponent (OCES) determined that taller towers were needed to collect "bankable" data closer to the 80M to 100M hub height of the current state-of-the-art wind turbines at representative points in the project site. The two proposed alternate met tower locations will help OCES meet this need for bankable data within the ROW grant area.

In the summer 2009, the Desert Research Institute (DRI) approached OCES and proposed a joint wind data collection program on public lands within OCES' existing ROW Grant (NVN-82729). After coordination with the DRI and BLM, OCES revised their application and proposed to relocate approved met tower NV07 to Alt NV07 and increase the height of the met tower on Alt NV07 from 60M to 120M. This will provide the ability to test and collect wind data from various heights above the surface and better determine the wind resource capacity at higher levels.

Proposed Met Tower Alt NV-07 will have a maximum height of 399ft. According to FAA guidelines outlined by 14CFR subpart 77 (and stated in Circular AC70/7460) proposed structures over the height of 200ft must file a Notice of Proposed Construction (Form # 7460-1) with the FAA.

OCES filed the Notice of Proposed Construction for Alt NV07and the FAA assigned OCES' permit request case number ASN 2010-WTW-7928-OE. This case is in accepted status as of the date of this document (May 5, 2010). Status of the met tower can be accomplished by logging into https://oeaa.faa.gov and using the above case number.

Searchlight Airstrip is approximately 11 miles east of proposed met tower Alt NV-07 and well out of any departure or approach paths for aircraft. According to FAA guidelines Subpart B, Section 77.13, any structure within 20,000 feet of an airport or airstrip must file with the FAA for permission to build. The location for Alt NV07 is ~~an~~ more than 38,000 feet beyond the FAA departure and approach paths at Searchlight Airport, minimizing the FAA's concern over the location of the tower and this potential hazard in relation to a hazard.

Pending the FAA recommendations Oak Creek Energy will light proposed met tower Alt NV-07 with one L-864 Aviation Red Obstruction Light which is composed of an Omni-directional beacon with 2,000 candelas on the highest point of the structure which will be at 399'. The FAA may recommend one additional L-864 at a height of 199' for nighttime along with painting the tower alternate 30' bands of aviation orange and white. OCES is proposing to have the structure painted and lights installed before the tower is erected per FAA recommendations.

A photovoltaic panel coupled with two 12 volt batteries, power inverter and a charge controller will supply the lighting system with 54 watts of energy for nighttime use. The solar panel will be mounted on a frame approximately 20' above ground level facing an easterly direction with power cables running in galvanized conduit to the base of the tower. The batteries and power inverter will be stored in a locking steel plate box at the base of the met tower. The 12 volt batteries will be sealed, spill proof AGM made by Optima. These batteries have a shelf life of 3 years and will be recycled when they are no longer able to supply 12 volts to the power inverter.

A combination of a white/orange paint scheme and nighttime flashing red lighting is proposed to comply with the FAA for Alt NV07. The lighting will be powered by an acceptable solar system with battery backup. Controls and solar panels will be mounted near the base of the tower. Batteries will be located in a box at the base of the tower.

Proposed met tower Alt NV-06 is below 200' AGL in height and over 14 miles away (which is well over 20,000 feet) from Searchlight Airstrip thus it is unnecessary to file with the FAA for permission to construct.

2-1.1.4 Sodar Units

The use of Sonic Detection and Ranging (Sodar) to gather wind data and validate and compliment wind data collected from met towers has become more viable in recent years. Sodar uses acoustic pulses to measures wave signals above the site to measure atmospheric data. Sodar units are quite expensive though (at over $50K per unit) and the data, up until now, has not been considered to be "bankable". Thus, Sodar still must still be used in conjunction with met towers.

One of our goals of this amendment is to be able to demonstrate that Sodar can be used in many cases to collect bankable data up to 200 meters above ground level by pairing Sodar units with Alt NV06 and Alt NV07. By collecting concurrent data from the met tower and the Sodar unit, it can be demonstrated that, in the future, using the lower impacting Sodar units in conjunction with the existing shorter towers, is viable for additional high quality and, perhaps, "bankable" level data collection.

Each Sodar unit will occupy a 10ft X 10ft fenced area and will be located at least 1 times the tower height from the nearby met tower and within 20ft of the access road. These units will be

situated within the biological and cultural surveyed areas as can be seen on Plot Plan #1 and Plot Plan #2.

The installation program is outlined below and is described in more detail in the Revised February 22, 2010 Plan of Development (POD).

Site specific met site plot plans, for Alt NV06 and Alt NV07 (Figures 2 and 3), depicts the actual footprint of a guyed and a self-supporting (non-guyed) met tower. Since no road building is proposed, the only disturbance will be as a result of the overland distance travel (less than 100ft for Alt NV06 and less than 300ft Alt NV06) by equipment to the proposed met site.

2-1.1.5 Access

All trucks and other installation equipment will utilize the same routes as the 4 X 4 pickup trucks. These existing public land roads are depicted on Figures 1, 2 and 3.

It is the intent of the Holder to utilize only the roads described in the Proposed Action section for the EA for ingress and egress for all the construction equipment. This will be based on the approval granted by the BLM. OCES has requested two primary access routes one for Alt NV06 and one for Alt NV07. These are both capable of handling the type of equipment planned for this installation with minimal impacts to the public lands.

Alt NV06

Access to the new site referred to as Met Tower Alt NV06 (Alt NV06) within SE1/4SW1/4, Section 03, T. 28S. R.61E would begin from a common intersecting point approximately 14.6 miles from Searchlight, Nevada along Highway 164 at a point where the highway and a dirt road intersect.

This road intersection with Highway 164 is further described with a sharp 40° reverse angle back to the northeast near the center point of Section 21, T. 28S. R.61E. Once on this 10 foot wide well maintained electric power line road which was approved by BLM for the Boulder Canyon Electric in 1942. Continuing along this road in a northeasterly direction through Sections 16, 15, into the NE1/4 of Section10 for approximately 2.4 miles, thence, turning northwesterly continuing along said road for approximately 1.10 miles to the location where the met tower will be installed on the northeast side of the road.

The primary access to this site will be a well maintained dirt road which is a ROW (NVCC-20959) approved in perpetuity since 1942 for a 200 ft wide transmission line and access road extending for a distance of over 51 miles. This road is well maintained and easily traveled with any equipment required to install the type of met towers requested under this amendment. In Section 10, the primary access road intersects with an additional road that is also well maintained and appears to have been a service road for the right-of-way along with several other secondary

ROW paralleling NVCC-20959 through the area which includes NVN-066156 and NVCC-18586.

Alt NV07

Primary Access (Installation and Construction Only)

Primary installation access to the new site referred to as Met Tower Alt NV07 (Alt NV07) within SW1/4SE1/4, Section 18, T. 28S. R.62E would begin from a common intersecting point approximately 8.8 miles from Searchlight, Nevada along Highway 164 at a point where the highway and a dirt road intersect. This location point is within the SW1/4NE1/4 of Section 17, T. 28S. R. 62E at a point in the road where a wide point in the shoulder of the road exists that would allow for staging the installation process or setting up a vehicle car pooling process if need be, which will be the beginning point (BP) of this description. See Figure 4.

From the BP of this description, proceeding south within the South Piute Valley ACEC along a 12ft wide designated road number A68M for approximately 150 feet; thence, turning south-southeasterly continuing along said road approximately 600'; thence, turning 60° south-southwesterly approximately .2 miles; thence, turning south continuing along said road for approximately 0.4 miles to a point on the Section the common Section line between Sections 17 and 20; thence, turning west onto a non-designated road within the ACEC and continuing along said road for approximately 0.58 miles at which point the road exits the Area of Critical Environmental Concern (ACEC); continuing west outside of the ACEC for approximately 1.1 additional miles to a point within Section that has been cleared for installation of met towers.

Approximate Road Length within ACEC .58 miles x 12' wide

Approximate Road Length outside ACEC 1.090 miles x 12' wide

Upon completion of construction, portions of the .58 mile long closed access road to Alt NV07 (which extends from the designated route within the ACEC to the point at which that road exits the ACEC) would be reclaimed by roughing/ripping the western and eastern end of the closed road for 500' from either end of that closed segment of road. This would be done utilizing a tooth-ripper attached to a bulldozer. This "roughing" and "ripping" technique would make the road rough enough to make it clear that the road is closed, to discourage usage of the road by off-road motorized activities, and would allow natural re-vegetation to occur. In addition, rock barriers and/or signage could be constructed at either end of the closed segment of road if BLM so desires.

Alternative Access to Alt NV07

Secondary Access (Monitoring and Decommissioning)

Secondary access is needed for the purposes of monitoring the site operations and decommissioning the installation at the conclusion of wind monitoring and assessment operations.

Figure 4 displays primary and alternate access to Alt NV07. This access is needed during installation and post installation operations.

Access to Alt NV07 for these operations will begin at a common intersecting point approximately 9.6 miles from Searchlight, Nevada along Highway 164 at a point where the highway and a dirt road intersect. This location point is within the NE1/4NE1/4 of Section 18, T. 28S, R 62E which will be the beginning point (BP) of this description; from the BP of this description, proceeding southeast along a 10 foot wide road for approximately 50 feet; thence, turning west continuing along said road approximately 1.0 miles to the common boundary between Section 18, T. 28S, R. 62E and Section 13 T. 28S, R. 61E; thence, turning south-southwesterly approximately 1 mile following the road along the contours; thence, turning southeasterly and continuing along said road for approximately 0.6 miles to an intersecting road; thence, turning east continuing approximately 0 .4 miles to a point within Section 18, T. 28S, R. 62E., where the proposed met tower location is planned.

2-1.1.6 Installation

2-1.1.6.1 – Tower Types

60-Meter Guyed Advanced Mast Systems Tilt-Up Tower

Oak Creek uses the 60M Advanced Mast System temporary four-legged lattice guyed meteorological towers on most job sites due to their stability in high wind and inclement weather conditions. Regardless of the height of the tower, the basic installation process is the same. A descriptive power point presentation has been provided with the POD giving a visual concept of the tower installation process.

Using the Advanced Mast System 60-Meter (60M) Tower as the descriptive model for the purposes of this POD, the 60M Tower kit includes all components and fasteners required to assemble the Mast. The lightweight design, sturdy galvanized steel tube construction, and guy wire locations make the Mast Towers both reliable in extreme weather conditions but portable for easy transportation to remote sites. See Photos 11 and 12.

The Mast uses four sets of three guy points to be guyed in four directions at 90-degree increments at ~ 70', 90' and 110' from each face of the lattice structure. The 60M Mast has six guy level points at 9M vertical spacing which provides for greater stability after installation. Two guy wires attach to each of the 12 guy anchor points. The Mast is tilted up from the ground to a vertical position using a 12M gin pole and six sets of lifting wires. The installation kit includes a lower hinged base plate, upper hinged base plate, pre-measured guy wires on spools, screw-in or cement-in anchors, and all necessary hardware to complete the installation.

It is expected that this type of tower will be used at Alt NV06 and the total disturbed area is expected to be ~1,300 square feet at that location. See Plot Map 1.

120M Guyed Met Tower

The Rohn 65G 120M guyed tower is similar the 60M tower described above in that it is guyed and lattice but most of the details of this tower are different. The mast is 3-sided (rather than 4-sided) and uses three sets of two guy points to be guyed in three directions at 120-degree increments with the Cement in Place (CIP) anchors located at the 100' and 288' point on all three 120° angles from the base plate for a total of 6 (six) anchor points. The 120M Mast has six guy level points at ~19M vertical spacing which provides for greater stability after installation. Three guy wires attach to each of the 6 guy anchor points which, due to the greater force on these anchors, must be attached buried concrete slabs. This tower is best installed utilizing a Rough Terrain Crane but can be installed and removed using a tower-mounted vertical gin-pole arrangement as described in the POD.

The site for Alt NV07, at the center of the tower base a 6'D x 4'L x 4'W footer hole will be dug with a backhoe/excavator. The material removed from the hole will be reserved and stockpiled in the immediate area of the work being completed. A rebar cage will be placed into the footer hole and leveled two feet below grade making the concrete cage area 4'D x 4'L x 4'W. This will have the concrete base plate set up with pier pins that will be embedded into the concrete at the time of pouring. Prior to concrete being poured, all (CIP) anchor's will be prepared.

The CIP's will have a channel trench 6'D x 2'W, the material removed from the hole will be reserved and stockpiled in the immediate area of the work being completed. The anchors are multi-wire anchors which are installed at a 45° angle. The guy anchor placed at the 100' point will have three guy wires tied into it using a pair of 3-hole equalizer plates and turnbuckles to distribute the load while the guy anchor points at the 288' points will tie five wires into a single point. This will require the use of a pair of 5-hole equalizer plates and turnbuckles to distribute the load.

Once all of the holes have been dug and the anchors have been set, the high strength 5000lb concrete mix will be trucked and poured. This will take approximately 7 yards of concrete will be required to set up for 3 to 5 days before the finished assembly will take place on the tower. The anchor points must be set before the stress of the tower placement begins

It is expected that this type of tower will be used at Alt NV07 and the total disturbed area is expected to be ~3,500 square feet at that location. See Plot Map 2.

60M Non Guyed- Met Towers

If it is determined that a self-supporting (or un-guyed) tower is the best type of met tower for a particular location, the 60M Rohn SSV or a similar un-guyed tower will be used. One advantage of this tower is that it can be installed in area where guy wires are problematic. Another advantage is that the disturbed foot print for this tower is very small. If such a tower is to be used, OCES will need to drill three or four holes and then pour cement anchors to attach the Mast to the ground for stability.

Once this concrete has set up, (typically less than an hour) the primary concrete is placed into the center of each individual CMP. This is accomplished with high strength 5000 lb concrete mix of up to 7 cubic yards per CMP. The concrete will be required to set up for three days before the finished assembly will take place on the tower. During that time, the assembly of the tower sections will be completed and staged in the adjacent road or work area. Once the concrete has properly set up, the tower sections are each lifted into place with the 35-ton Boom Truck. At the time of this assembly, the tower is prepared to be operational with the installation of the anemometers, weather vane, grounding rods, temperature sensors, data logger, and potentially telecommunication device and solar panel for self-sustaining power.

If this type of tower is used at either Alt NV06 or Alt NV07, the total disturbed area is expected to be well under 1000 square feet at that location.

2-1.1.6.2 – Equipment Types

Depending on what tower is used, different installation equipment may be required.

- The following is a list of the proposed types of equipment to safely and feasibly complete the installation project: Ready Mix Concrete Delivery Trucks (3)
- 35-Ton Boom Truck (1)
- Rough Terrain Crane (1)
- Backhoe (1) /Excavator (1)
- Service/Pick-up Trucks (4)
- Winch Truck (1)
- Equipment Trailers (3)
- 4-Wheel Drive SUV (3)
- Reach Fork Truck (1)

Ready Mix Concrete Delivery Trucks (3): The concrete Ready Mix Trucks will either delivery full loads or short loads depending on the terrain capabilities. A full (7) seven to (10) ten yard truck will allow between (2) two to (3) three trucks for a pour at each site location. However, the

potential exists that up to (5) five trucks may be called to deliver based on terrain and time of year of installation in the desert.

35-Ton Boom Truck (1): This vehicle will be used on Alt NV06 for the installation of a 60-meter self supporting met tower (a Rohn SSV-190 model or its equivalent). This piece of equipment will work based on the size of the 35-ton Boom Truck, the terrain, the road and the Met Tower being installed.

See SECTION 2.3 TOWER INSTALLATION, Subsection 2 of the POD for further information.

Rough Terrain Crane (1): This will be driven into Alt NV07 within the first two days of site preparation. Then it will remain on site to assist in the lifting of heavy parts until the site is fully prepared for placing the Met Tower onto the foundation. Once the Met Tower is placed onto the foundation and secured, the RTC will be taken out of the site via the BLM designated and non-designated routes of travel used to access the tower to Hwy 164 for removal from the area.

Backhoe (1) /Excavator (1): Will be used at both Sites Alt NV 06 and NV07 and will be onsite during all installation processes.

Service/Pick-up Trucks (4): These are all the vehicles that will be used to carry in equipment to the site. It is anticipated that each truck could have up 2 to 3 trips per day for 3 or 4 days.

Winch Truck (1): This truck will be used on the day of the lift

Equipment Trailers (3): Bring in Met tower supplies for construction

4-Wheel Drive SUV (3): These are all the vehicles that will be used to carry in men and equipment to the site. It is anticipated that each truck could have up to 2 to 3 trips per day for 3 or 4 days.

Reach Fork Truck (1): This vehicle is used to lift equipment such as tower pieces into place in the field. The Reach Fork Truck has the ability to extend its arm out approximately 51 feet and lift parts of the towers up for assembly to the workman.

Note:

The use of a 35-Ton Boom Truck would be needed at Alt NV06 for installation. The 35-Ton Boom Truck is a piece of equipment necessary in providing lifting options with regards to access sites and transportation of equipment. This could be used instead of or in addition to a crane.

The Boom Truck would be used to move in and assemble tower sections. It would also be used to assist in the erection of these towers up to a 60M level. It would also be used to assist in the foundation installation of any SSV self-supporting towers.

Because of the timing of the pour process, multiple trucks will be required to successfully complete the operation. This is to insure that each of the legs of the tower are poured in a continual method with the right amount of high strength concrete to completion.

With both sites the trucks will be able to access the area; however based on the outsider temperature, the amount of concrete within each truck may vary and the time between each pour may change.

It is planned that a these trucks will be full loads for pouring however the terrain and safety dictates this matter and may require short loads of concrete and additional trucks to make up the total yardage of concrete.

The use of a rubber tire Rough Terrain Crane (RTC) will allow fast, safe and efficient installation of the tower. The assembly is typically completed within several hours of being on site when a RTC is used. Assembly would be completed in stages with the lower section being bolted into place onto the foundation after the concrete has properly cured. Then each section is lifted into place and bolted down. All meteorological and data collection equipment is then bolted to the tower along with the guy wires and cables supports securing the structure before the RTC leaves the assembly area.

2-1.1.6.3 - Sodar:

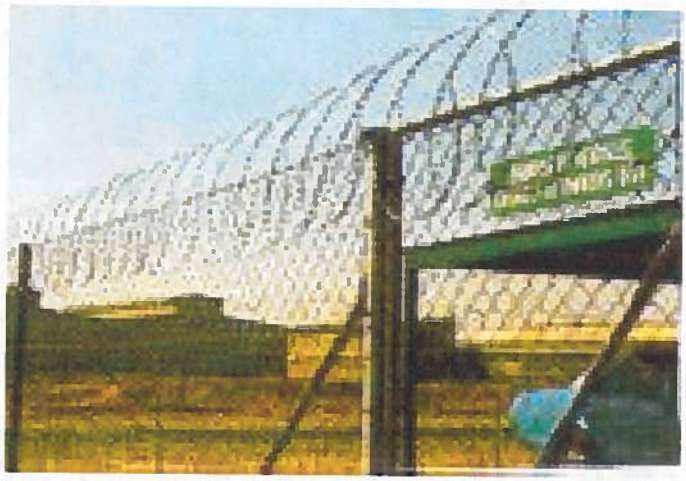
At each met tower, a 10ft x 10ft square area (within 20ft of the edge of the road and located a distance away from the met tower that is at least equal to the met tower height) will be chosen that is flat and has no sensitive biological or archeological characteristics within it. The 10ft X 10ft area will be scraped flat and clear of most vegetation. Then, a 6ft x 6ft square pedestal of concrete block, brick or railroad ties will be constructed. A 10ft by 10ft fence, as described below, will be constructed. Finally, the Sodar unit will be set onto the pedestal using by the work crew.

Each Sodar Installation will disturb approximately 100 square feet of the surveyed area.

2-1.1.6.4 - Fencing:

Regardless of which design is used, OCES will need to place an 8ft high fence around the tower base. In the case of the unguyed towers, the fence will need to have a single coil of razor wire to prevent climbing over and accessing the met tower and its equipment.

As described in both subsections 2 and 3 of Section 2.3 Tower Installation of the POD a cyclone fence will need to be installed around the base of the tower. This is to prevent access to the tower for climbing, as well as protect the tower's data logger, anemometers and other sensitive weather and scientific data gathering and storage equipment The fence will have a coil of razor wire integrated long the upper 10 inches of the cyclone fence and extending approximately 18 inches above that as a stop gap prevention method for illegal access into the site. (See picture example) This type of use of razor wire is consistent within the BLM commercial authorization within remote locations though out the eleven (11) western states. See photo below.



By Regulations the sign will state: Holder, Grant Number and Contact Phone.

The actual footprint is a square with dimensions measuring 20 ft X 20 ft = 400 sq ft area enclosed by the 8 ft chain link fence.

Razor wiring will only be designed on the top perimeter of the fence for security of the public and equipment. Final fencing standards will conform to the local BLM office requirements to cell phone and communication towers site fencing. See photos 5 and 6 for examples of what type of fencing is proposed.

2-1.1.7 Decommissioning

Under this Proposed Action, all installed equipment would be removed in accordance with the Revised Feb 22, 2010 POD. On February 25, 2009, BLM issued OCES a three year Type II wind assessment ROW Grant which is currently set for expiration on December 31, 2011. The Holder will notify the LVFO at a minimum 60 days prior to this date, or earlier, of its intent to remove the met towers or will file the proper documentation to move to a Type III full development scenario.

Decommissioning is a step-by-step deconstruction process that would involve removing and disposing of the infrastructure and appurtenant facilities associated with the Project. Many of the

activities involved with project decommissioning are similar to those performed for project construction. Fencing would first be removed. Next, Sodar units and met towers would be disassembled as required and removed from the project area. Finally, any anchors and/or foundations would be cut or demolished to at least 18 inches below natural ground level, the site area would be cleaned and raked, and the land would be restored to close to the condition it was in prior to the met tower installation.

The concrete would not be removed from the hole. In the event that an anchor is set into poured concrete to hold the anchor in place then backfilled, the depth of the concrete will be of such a level (at least 3 feet below grade) that it will remain buried and only the metal anchor arm will be removed upon removal of the tower and reclamation of the site. This will be accomplished by digging around the arm, in the smallest area possible. A metal cutter will be used to cut the bar at least 24 inches below grade or flush with the concrete. The area will be back filled using the methodology you mention above, raked out, reseeded if required.

2-1.2 Alternative A – Limited Tower Number

This alternative is similar to the Proposed Action but allowing only Alt NV06 and Alt NV07 while deleting the installation two (2) additional previously-approved (but not yet installed) met tower locations under right of way grant (NVN-82729), leaving a total of seven (7) allowed towers under the NVN-82729 ROW Grant.

Site specific met site plot plans, for Alt NV06 and Alt NV07 (Figures 2 and 3), depicts the actual footprint of a guyed and a self-supporting (non-guyed) met tower. Since no road building is proposed, the only disturbance will be as a result of the overland distance travel (less than 100ft for Alt NV06 and less than 300ft Alt NV06) by equipment to the proposed met site.

Installation procedures will follow similar techniques as outlined in Section 2-1.1.6 of this document.

Total number of acres disturbed by the proposed two met towers is less than 0.25 acres.

2-1.3 Alternative B – Limited Tower Height

Same as Proposed Action while keeping the met tower height at or below 60M on all towers.

Installation procedures will follow similar techniques as outlined in Section 2-1.1.6 of this document.

Site specific met site plot plans, for Alt NV06 and Alt NV07 (Figures 2 and 3), depicts the actual footprint of a guyed and a self-supporting (non-guyed) met tower. Since no road building is proposed, the only disturbance will be as a result of the overland distance travel (less than 100ft for Alt NV06 and less than 300ft Alt NV06) by equipment to the proposed met site.

It should be noted that, in addition to Alt NV06 and Alt NV07, two (2) of the remaining four (4) tower locations, approved under NEPA LV 2007-049, could still be installed under the terms of the original ROW Grant NVN-82729 dated February 25, 2009. This would allow for the originally authorized total of nine (9) met towers to be installed under this ROW grant.

Total number of acres disturbed by this alternative is less than 0.25 acres.

2-1.4 Alternative C – Alternative Access

Same as the proposed action but access to NV07 for construction would not be allowed through the closed portion of road in the ACEC and grading of the existing alternative access roads from the north to allow equipment access would be allowed.

Access to Alt NV07 under this alternative would be via a northern access RS 2477 road A68K in Section 14 T. 28S, R. 61E.

Installation procedures will follow similar techniques as outlined in Section 2-1.1.6 of this document.

Site specific met site plot plans, for Alt NV06 and Alt NV07 (Plot Plan 1 and Plot Plan 2), depict the actual footprint of a guyed and a self-supporting (non-guyed) met tower. Since no road building is proposed, the only disturbance other than the met tower footprint will be as a result of the overland distance travel (less than 100ft for Alt NV06 and less than 300ft Alt NV06) by equipment to the proposed met site. Such travel will be restricted and operators will be instructed to use one path to each point of the tower that equipment must visit.

It should be noted that, in addition to Alt NV06 and Alt NV07, two (2) of the remaining four (4) tower locations, approved under NEPA LV 2007-049, could still be installed under the terms of the original ROW Grant NVN-82729 dated February 25, 2009. This would allow for the originally authorized total of nine (9) met towers to be installed under this ROW grant.

Total number of acres disturbed by this alternative is less than 0.25 acres

2-1.5 Alternative D - (No Action)

Under this alternative the proposed amendment to the ROW Grant (NVN-82729) for relocation of approved met towers (NV06 and NV07) to new surveyed locations (Alt NV06 and Alt NV07), would be rejected.

In addition, the placement of two Sodar units would also be denied. Existing authorization for placement of four (4) met towers will continue, in accordance with the approved February 2009 ROW Grant (NVN-82729).

Total number of acres disturbed by this action is less than 0.25 acres (as discussed in NEPA LV EA document # 2007-249 signed February 25, 2009).

Chapter 3

3-0 Affected Environment

A complete description of the affected environment can be found in the NEPA LV EA document # 2007-249 signed February 25, 2009 which is incorporated by reference in accordance with Title 40 CFR 1502.21.

Chapter 4

4-0 Environmental Effects

The critical elements that are considered for this environmental assessment (EA) has been analyzed in NEPA LV EA document #2007-249 signed 25 February 2009.

The NEPA LV EA document (#2007-249) was completed for the initial plan of wind assessment for the twelve (12) met towers. This analysis is hereby incorporated by reference in an effort to focus on the specific issues presented by the proposed action and alternatives discussed in Chapter 2 of this document.

Measures to reduce or avoid the potential adverse environmental effects of the project have been identified through project reviews and scoping by the BLM, the project applicant and their land management consultants. Sections 2 and 3 of the February 22, 2010 Revised Plan of Development outline in a comprehensive manner the methods and means for the installation program for the guy-wired and non-guy-wired types of towers and the equipment required to conduct an environmentally-sound and safe field operations.

Two types of mitigation measures are discussed in this document:

(1) mitigation measures incorporated by project design from the (see Revised February 25, 2010 POD; and
(2) additional mitigation measures recommended by BLM staff during this review (see Section 4-7)

Note: Most of the mitigation measures, identified through the preliminary analysis process, have been voluntarily incorporated by the project applicant [Oak Creek Energy Systems (OCES)] into the Feb 22, 2010 Revised POD/Proposed Action. The effectiveness of these mitigation measures incorporated by project design is taken into account in the impact evaluation. For example, avoidance of Joshua trees, pinion/juniper trees and other vegetation has been conducted by the applicant during pre-project tower siting and site selection. Flaggings and other marking methods alert the installation crew and contractor on where to access the site and place the met tower in order to avoid damage to existing vegetation. See photos 1, 2 and 3.

The analysis contained in this EA, will be limited to the relocated sites (Alt NV06 and Alt NV07).

A circle with a 350ft radius and a circle with a 500ft radius were field surveyed for Alt NV06 and Alt NV07, respectively. Site-specific biological and cultural resources field surveys have been completed in December 2009 and indicated a negative presence of any cultural resources.

Biological reports also indicated that these sites are not within any special management habitat and the impacts of the relocated sites are within the scope of the analysis if the standard biological mitigation measures from the NEPA LV EA document #2007-249 signed February 25, 2009.

See Table 1 for a list of approved and installed met towers and Figure 1 for a geographic depiction of the installed and uninstalled towers.

4-1 Impacts Common to All Alternatives

The following is a discussion of the impacts that are common to the Proposed Action and Alternatives.

Impacts of the Castle Mountains wind assessment program (NVN-82729) have been disclosed to the public in January 2009 by making the EA for a 30-day public comment period in January 2009 in NEPA LV EA document #2007-249 signed February 25, 2009.

4-1.1 Installation

Met tower installation and operations, described in Chapter 2, are similar the operations disclosed in NEPA LV EA document #2007-249. Only the small footprint (10ft X 10ft) Sodar, and the taller tower for Alt NV07, vary slightly from the proposed operation analyzed in NEPA LV EA document #2007-249 signed February 25, 2009.

The impacts to resources addressed in this EA are within the overall scope of impacts analyzed in NEPA LV EA document #2007-249 and disclosed to the public in January 2009. The same conditions for access and installation are applicable to the August 2009 POD Amendment and will be adhered to in a similar fashion as the initial publicly-disclosed operations.

The 2/22/2010 Revised Plan of Development, outlines in clear detail the methods of operations and incorporates mitigation measures into the project design and access to limit and minimize surface disturbances.

Disturbance would be minimized and limited to that necessary for safe and efficient operation. Access routes and met tower sites will be clearly marked and flagged to assure that installation operations are limited to the surveyed areas.

Photo 4 displays the small footprint (20ft X 20ft square) that would be required if a 60M self-supporting tower was installed.

Cultural resource surveys were conducted in accordance with BLM standards in December of 2009. Any identified cultural resources will be avoided and no cultural resources will be affected by the Proposed Action or Alternatives.

The Proposed action and Alternatives analyzed in this EA are not expected to result in significant impacts. The proposed met towers and Sodar equipment will affect only a small portion of the land (less than 0.25 acres). See photo 1, 2 and 10 for measures taken to avoid vegetation and reduce footprint.

Biological resources surveys of the affected areas surveys were conducted in accordance with BLM standards in December of 2009. Any identified biological resources will be avoided and no cultural resources will be affected by the proposed action or alternatives.

Photo 1, 2 and 10 display measures taken to avoid vegetation while allowing equipment access to the site.

4-1.2 Access

For met tower Alt NV06, access to the site is from SR Hwy 164 via a BLM designated route of travel, evident by marking posts with BLM route numbers.

For met tower Alt NV07, under the Proposed Action, access is from SR Hwy 164 via a BLM designated route of travel evident by marking posts with BLM route numbers. Approximately 2 miles, of an existing road is within the Eldorado/Piute Alley ACEC, will be used to access the met site. See Figure 1. About 1 mile of this 2-mile segment is a BLM designated and marked route of travel. This existing road will be used for accessing Alt NV07.

Alternative access routes to access Alt NV07, both during construction and post-construction, are located just north, west and south of the Alt NV07 location. These existing roads are used by off-road motorized recreation users and mining claimants to access public land resources. The Proposed Action and Alternative A and Ball would use the existing road identified in the previous paragraph. Alternative C discusses alternative access other than the one proposed under the Proposed Action.

These roads are labeled and displayed in Figure 4 as:

a. Alt NV07 Post-Construction Access
b. Alt NV07 Post-Construction Access (Alternate)

Alternative access routes, other than the ones proposed in the 2/22/2010 Revised POD, present factors to consider such as are longer distance, steeper grades and the potential conflict with existing unpatented mining claims.

There are no alternative routes for Alt NV06.

Figure 1 displays the following:

-The existing access route network (designated and undesignated public roads);
-The installed met towers, approved met towers (yet to be installed) and proposed met tower relocation (Alt NV06 and Alt NV07).

Figure 2, 3, and 4 display the following:

- Zoomed views of the areas installed met towers, approved met towers (yet to be installed) and proposed met tower relocation sites (Alt NV06 and Alt NV07); and

- Proposed and alternative access to Alt NV06 and Alt NV07 during construction and post-construction.

4-2 Impacts from the Proposed Action

This action proposes to:

a. Relocate two met tower approved locations (NV06 and NV07) to new surveyed locations (Alt NV06 and Alt NV07),
b. Increase the height of one of the towers (Alt NV07), and

c. Place two small (10ft X 10ft) Sodar units adjacent to the met tower surveyed areas.

Besides the two relocated met tower site proposals, the Proposed Action will allow the installation of met towers on two of the remaining approved locations under NEPA LV EA document #2007-249 signed February 25, 2009.

The total number of towers under ROW Grant (NVN-82729) would be nine (9), including the already installed five (5) met towers.

For Alt NV07, this action proposes utilization of the existing road that consists three segments: Segment 1) A68M from Hwy 164 approximately one (1) mile south to the common section between Sections 17 and 20, T. 28S. R.62E. which is a designated route; Segment 2) a non-designated road within the ACEC and continuing along said road for approximately 0.50 miles; and Segment 3) a existing road outside of the ACEC for approximately one (1) mile to a point within Section 18 that has been cleared for installation of met tower Alt NV 07 and Sodar. See photos 7, 8 and 9.

No maintenance or grading would be required for the use of this path for construction. The ripping proposed of 500' at the either end of the closed road segment upon completion of construction should result in less use of the road and reduce impacts of unauthorized use of this road in the future.

Segment two (2) will require an authorization within the ROW Grant Amendment to allow access to Alt NV07.

For Alt NV06, this action proposes utilization of approximately 3.5 miles will require no maintenance or reclamation of the road during and post-construction. See Figures 3 and 3A.

Impacts of this alternative are similar to the impacts outlined in the NEPA LV EA document #2007-249 signed February 25, 2009, for the approved nine (9) met towers except for the tower height increase (from 60M to 120M) and the addition of the two (2) (10ft X 10ft) Sodar units which would be transported on the site via 4X4 pickup trucks and fenced as described in Chapter 2.

The use of Sodar here may result in less of a need for the use of taller towers at other locations within this ROW in the future.

All other impacts have been addressed in the 2008 analysis contained in NEPA LV EA document #2007-249.

4-3 Impacts from Alternative A- Limited Tower Number and Height

This Alternative would partially deny usage of the existing ACEC road and limit the total number of towers to seven (7) including the five (5) installed and limit the height of all towers under 60M.

This Alternative proposes to access Alt NV07 without utilizing the BLM designated route within the ACEC. Other existing roads (outside the ACEC) in the area would be used (see Figure 1 for alternate access routes).

Field biological and cultural surveys were completed, in December 2009, for Alt NV06 and Alt NV07. The surveyed areas (a circle with a radius of 350ft for Alt NV06) (a circle with a radius of 500ft for Alt NV07) contained no biological or archaeological resources.

Two (2) of the approved met towers would not be installed – which would reduce the overall impact from the disclosed scope and amount from the 2008 analysis contained in NEPA LV EA document #2007-249.

Impacts of this alternative are similar to the impacts outlined in the NEPA LV EA document #2007-249 signed February 25, 2009, for the approved nine (9) met towers except the addition of the two (10ft X 10ft) Sodar units - which would be transported on the site via 4X4 pickup trucks and fenced as described in Chapter 2.

4-4 Impacts from Alternative B-Limited Height

This Alternative would limit the height of the met towers to a maximum of 60M or below.

Field biological and cultural surveys were completed, in December 2009, for Alt NV06 and Alt NV07. The surveyed areas (a circle with a radius of 350ft for Alt NV06) (a circle with a radius of 500ft for Alt NV07) contained no biological or archaeological resources.

Impacts of this alternative are similar to the impacts outlined in the NEPA LV EA document #2007-249 signed February 25, 2009, for the approved nine (9) met towers except for the fact of additional of two (10ft X 10ft) Sodar units placed in two of the approved met locations. The Sodar units would be transported on the site via 4X4 pickup trucks and fenced as described in Chapter 2.

All other impacts have been addressed in the 2008 analysis contained in NEPA LV EA document #2007-249.

4-5 Impacts from Alternative C-Alternative Access

Under this alternative, the closed road between the BLM access road to the edge of the ACEC would not be used to access (see Proposed Action in Chapter 2 and Figure 4 for description of this alternative access to Alt NV07.)

Primary access to Alt NV07 under this alternative would be via a northern access road from SR Hwy 164 via a RS 2477 road (A68K in Section 14 T. 28S, R. 61E, MDM) continuing east thru Section 13 to reach Section 18. See Figures 4 and 4a.

Impacts of this alternative are similar to the impacts outlined in the NEPA LV EA document #2007-249 signed February 25, 2009, for the approved 9 met towers except for the fact of additional of two (10ft X 10ft) Sodar units placed in two of the approved met locations. The Sodar units would be transported on the site via 4X4 pickup trucks and fenced as described in Chapter 2.

Field biological and cultural surveys were completed, in December 2009, for Alt NV06 and Alt NV07. The surveyed areas (a circle with a radius of 350ft for Alt NV06) (a circle with a radius of 500ft for Alt NV07) contained no biological or archaeological resources.

Impacts resulting from this alternative would comprise of minor and insignificant additional displacement of soils from the maintenance grading measures that would be performed to allow for large equipment safe access via the alternate access routes. Such grading would move less than 50 cubic yards of soils and would likely reduce erosion on the roads that get this maintenance work and increase safety for all other users of these roads thereafter.
All other impacts have been addressed in the 2008 analysis contained in NEPA LV EA document #2007-249.

4-6 Impacts from Alternative D-No Action

Denying the Revised August 2009 POD Amendment for relocation of the two met towers (Alt NV06 and Alt NV07) would result in no additional impacts to the resources since the installation of the two met towers would not occur. However, installation of four (4) approved, but not yet installed, met towers would occur within a reasonable time frame. These impacts are contained in the 2008 analysis contained in NEPA LV EA document #2007-249.

4-7 Mitigations and Environmental Protection Measures

All mitigation measures, stipulations and terms outlined in the February 2009 ROW Grant (NVN-82729), will be followed as an integral part of the operations.

All efforts will be taken to minimize impacts to the land and resources by utilizing only the tools necessary to access the site and install the met towers in a safe and environmentally-sound manner.

In addition to the conditions outlined in the February 25, 2009 ROW Grant (NVN-82729), the following mitigations will be incorporated into the project operations:

Project Specific

a. Bird diverters will be installed approximately every 30ft along each guy wire to avoid and minimize the potential for bird strikes;

b. Orange balls will be attached 30 feet down from the top of the mast and 15ft up from the ground to increase the visibility of the towers and wires

c. Sodar units will be fenced and visibly marked to increase their visibility and avoid contact with public land users.

d. All Joshua Tree and Yucca stands will be avoided (as per photos 1, 2, and 10) and all tracks will be raked when installation operations are completed.

Traffic Management

OCES will comply with all current ROW stipulations in place for roads:

a. All Project related vehicles will not travel over 25 mph will be established unless otherwise posted. The speed limit on public motorways will be as posted;

b. When two vehicles are traveling in the same direction, the rear vehicle may not pass the front vehicle until the front vehicle has stopped and moved to a wide enough point in the road to pass; and

c. Seat belts are required any time a vehicle is in motion.

Aviation Lighting

The FAA requires aircraft warning markings on all structures taller than 200 feet. The Rohn 45G-65G tower series will require lighting according to FAA Advisory Circular AC70/7460-1K, Obstruction Marking and Lighting.

FAA assigned OCES' permit request case number (for met Alt NV-07) ASN 2010-WTW-7928-OE. This case is in accepted status as of the date of this document (May 5, 2010). Status of the met tower can be accomplished by logging into https://oeaa.faa.gov and using the above case number.

Tower marking and lighting will be in accordance with the FAA permit after it is issued. The following is an example of what types of mitigations expected:

Subsection 53 of FAA Advisory Circular AC70/7460-1K instructs that certain tower heights meet certain lighting requirements. In the event the tall tower at Alt NV7 is approved up to 120 meters (393 feet) one of the following standards apply.

Mounting Intermediate Levels: The number of light levels is determined by the height of the structure, including all appurtenances, and is detailed in Appendix 1. The number of lights on each level is determined by the shape and height of the structure. These lights should be mounted so as to ensure an unobstructed view of at least one light by a pilot.

1. Steady Burning Lights (L-810)

(a)Structures 350 Feet (107m) AGL or Less. Two or more steady burning (L-810) lights should be installed on diagonally or diametrically opposite positions.

(b) Structures Exceeding 350 Feet (107m) AGL. Install steady burning (L-810) lights on each outside corner of each level.

2. Flashing Beacons (L-864)

(a) Structures 350 Feet (107m) AGL or Less. These structures do not require flashing (L-864) beacons at intermediate levels.

(b) Structure Exceeding 350 Feet (107m) AGL. At intermediate levels, two beacons (L-864) should be mounted outside at diagonally opposite positions of intermediate levels.

Tortoise Mitigation

a. Each Sub-Contractor will receive a briefing and be required to signed a confirmation document that of their understanding of the briefing on the desert tortoises as required by Number 20 of the ROW Grant NVN-82729.

b. Perch deterrents would be installed on the lateral anemometer arms to prevent raptors and other birds from gaining perch in tortoise habitat areas.

c. The Desert Tortoise is an Endangered Species within the United States. Caution must be taken not to harass, hurt or disturb the tortoise. **If harassment, injury or death occurs, a fine up to $50,000 and imprisonment of up to one (1) year may result.** Always beware of tortoises in the roads, under parked vehicles or entering a site you may be using. The area of disturbance shall be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, public health and safety, and other limiting factors. Work area boundaries shall be delimited with flagging or other marking to minimize surface disturbance associated with vehicle straying.

d. All trash and food items shall be promptly contained within closed, raven-proof containers. These containers shall be regularly removed from the project site to reduce the attractiveness of the area to ravens and other tortoise predators.

e. To the extent that is possible, ground disturbing activities associated with the proposed action should be scheduled during a time of year when the temperatures are cooler and desert tortoises are more likely to remain in their burrows, generally between November 1st of one year and March 1st of the following spring.

f. Should a tortoise wander into the work area, all activity must stop. The LVFM shall be notified within 24 hours that a tortoise did enter the site.

g. Upon locating a dead or injured tortoise, the Holder is to notify the LVFM immediately. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death, if known and other pertinent information. Any dead tortoises encountered must be left in place and BLM notified. No relocation of live or dead tortoises around the project site is permitted under Federal law.

h. Workers shall inspect for tortoises under all vehicles prior to moving them. If a tortoise is present, the worker shall carefully move the vehicle only when necessary and when the tortoise would not be injured by moving the vehicle or shall wait for the tortoise to move out from under the vehicle.

i. Pets should be restrained either by enclosure in a kennel or by chaining to a point within the project site.

Construction Mitigation Measures

a. All Joshua trees and Yucca stands will be avoided and all tracks will be raked when a vehicle-mounted backhoe would typically be used to excavate holes for placement of the tower structures within each tower structure work area. Any holes left temporarily open or unguarded will be surrounded with high-visibility plastic mesh.

b. Where concrete is required, the concrete chutes will be washed in a depression created over the freshly poured concrete within the met tower work area. After the chute has been washed into the hole, the excavated soil will be replaced in the same order it was removed, thereby salvaging the seed bank.

c. Foundations and trenches shall be backfilled with originally excavated material as much as possible. Excess excavation materials shall be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.

d. Efforts shall be taken to minimize impacts to vegetation during all phases of activities within the right-of-way. This includes pre-disturbance surveys to identify vegetation suitable for salvage and to ensure that protected or sensitive plant species are properly protected.

e. Topsoil will be stockpiled and utilized in post construction reclamation efforts.

f. Weed Control measures will be utilized on all disturbed areas within the ROW and the temporary work areas.

g. Efforts shall be taken to preserve surface and subsurface cultural and paleontological resources that may be encountered:

> Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the OCES, or any person working on his behalf, on public or Federal land shall be immediately reported to the LVFO. OCES shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the LVFO. An evaluation of the discovery will be made by the LVFO to determine appropriate actions to prevent the loss of significant cultural or scientific values.

h. Efforts shall be taken to minimize impacts to wildlife during all phases of the project.

i. Efforts shall be taken to avoid impacts to migratory bird's nests during the appropriate breeding season. The following measures describe the most effective measures to avoid impacts:

> To prevent undue harm, habitat-altering projects or portions of projects should be scheduled outside bird breeding season. In upland desert

habitats and ephemeral washes containing upland species, the season generally occurs between March 15th and July 30th

If a project that may alter any breeding habitat has to occur during the breeding season, then a qualified biologist must survey the area for nests prior to the commencement of construction activities. This shall include burrowing and ground nesting species in addition to those nesting in vegetation.

If any active nests are found the area must be avoided until the young birds fledge.

j. Should hazardous materials be spilled or deposited within the ROW areas by OCES, its agents, or a third party responsible to OCES, the LVFO's Authorized Officer shall be notified immediately. Any clean up or reporting requirements shall be completed in compliance with all applicable State and Federal laws and regulations.

k. OCES will be in compliance with Federal and State air and water quality laws.

Conclusion

The overall objective of the project is to install light-footprint equipment (met towers and Sodar) to collect atmospheric data for 1-1/2 years, to minimize impacts during the use of the area for wind resource assessment, and after the project to leave the site in a stable condition, compatible with surrounding land uses.

Installation of two meteorological towers (and two Sodar units) is, by nature, a short-term, temporary land use (as required by the 3 year Type II SF-299 right of way application) and would disturb less than 0.25 acres.

Pre-disturbance field scouting to locate optimum access and siting of met tower locations, after biological and archaeological surveys were completed, greatly minimized potential impacts to resources and reduced the project footprint on the soil and the land. No sensitive archaeological or biological resources were found on the met tower sites.

Incorporation of avoidance as the principle mitigation measure into the Proposed Action, as outlined in Chapter 2, eliminated most of the project impacts outside of what was disclosed in the January 2009, 30-day public review period in NEPA LV EA document #2007-249 signed February 25, 2009.

Chapter 5

5-0 Agencies and Persons Consulted

NEPA LV EA document #2007-249 signed February 25, 2009 and was made available for a 30-day public review period in January 2009. Five comments were received and expressed concerns about future development –which was not proposed under this wind assessment program.

No special status animal or plant species (or their habitat) was found; therefore, consultation with US Fish and Wildlife Service is not necessary.

5-1 Document Preparation

BLM Las Vegas Field Office Interdisciplinary Team	
Gregory |Helseth	Energy Manager
Susanne Rowe	Cultural Resource Specialist
Brenda Wilhight	Realty Specialist
Jayson|Barangan	Wildlife Biologist
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Project Management/Supporting Consulting Team	
Matt Amalong	Biologist – AMEC.
Nathan Moorhatch	Biologist – AMEC.
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Ahmed Mohsen	Project Management – NEPA Document Lead Preparer Informed Decisions Environmental Solutions (IDES).
Michael T. Hogan	Realty/LLE – POD Document Lead Preparer Solar Winds Environmental Technologies, Inc.

5-2 Availability of Document and Comment Procedures

This EA, and the NEPA LV EA document #2007-249 signed February 25, 2009 and the ROW Grant are available at the BLM Las Vegas Office located at 4701 Torrey Pines Dr, Las Vegas, NV 89130.

Documents Incorporated by Reference

The 2/2/2010 Revised Plan of Development for Oak Creek Energy Systems, Inc Castle Mountain Wind Assessment Project NVN-82729.

Figures, Maps and Photos

List of Figures

Figure 1 – Depicts SR Hwy 164, BLM existing roads, designated roads, met tower locations (installed and not installed), ACEC boundary and alternative access.

Figure 2 – Satellite photo depiction of existing roads and proposed Alt NV06.

Figure 3 – Topographic depiction of access roads, their length and alternative access to the Alt NV06 met tower site, Sodar and tower GPS location.

Figure 3A – Alt NV06 aerial photo and depiction of existing roads, biological and cultural surveyed area, Sodar site GPS locations and other features.

Figure 4 –Topographic depiction of access roads, their length and alternative access to the Alt NV07 met tower site, Sodar and tower GPS location.

Figure 4A – Alt NV06 aerial photo and depiction of existing roads, biological and cultural surveyed area, Sodar site GPS locations and other features.

List of Maps

Plot Map 1 –Alt NV06 - Depiction of biological and cultural surveyed area, Sodar site and type of tower footprint.

Plot Map 2 – Alt NV07 - Depiction of biological and cultural surveyed area, Sodar site and type of tower footprint.

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