Department of Energy
Washington, DC 20585

DOE/EA-1784

FINDING OF NO SIGNIFICANT IMPACT
DEPARTMENT OF ENERGY LOAN GUARANTEE FOR FOTOWATIO NEVADA SOLAR, LLC'S APEX SOLAR POWER PROJECT IN CLARK COUNTY, NEVADA

AGENCY: U.S. Department of Energy, Loan Guarantee Program Office

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE) is adopting an environmental assessment (EA) completed by the U.S. Department of the Interior's Bureau of Land Management (BLM) in August 2010 that analyzed the potential environmental impacts associated with the construction and startup of Fotowatio Nevada Solar, LLC's (Fotowatio's) Apex Solar Power Project (Apex) located in Clark County, Nevada. BLM prepared the EA to assist its decision whether to grant a transmission line right-of-way across BLM land. DOE was a cooperating agency in preparing the BLM EA pursuant to an MOU between DOE and BLM Nevada signed in April 2010. BLM issued a Finding of No Significant Impact (FONSI) and Decision Record (DR) for the Apex project.

The DOE Loan Guarantee Program Office is considering whether to provide a federal loan guarantee pursuant to Title XVII of the Energy Policy Act of 2005 (EPAct 05), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, 42 U.S.C. 16516 (Recovery Act), to support the construction and startup of the proposed project. The purpose of Title XVII is to enable rapid deployment of renewable energy projects and related manufacturing facilities, electric power transmission projects, and leading edge biofuels projects.

John Hancock Life Insurance Company (John Hancock), as Lender-Applicant, on behalf of Fotowatio, submitted an application to the DOE Loan Guarantee Program for a Federal loan guarantee for Apex in response to DOE's October 7, 2009, solicitation, "Federal Loan Guarantees for Commercial Technology Renewable Energy Generation Projects under the Financial Institution Partnership Program." For this Solicitation DOE is implementing the application process by directly working with certain qualified financial institutions through a set of procedures established by DOE for its Financial Institution Partnership Program (FIPP). In general, the FIPP is intended to expedite the loan guarantee process and expand senior credit capacity for the efficient and prudent financing of eligible commercial projects under Section 1705 of Title XVII of EPAct 05. Under FIPP, proposed borrowers and project sponsors may not apply directly to DOE but must instead work with a financial institution that meets DOE qualification as a Lead Lender.

The Apex project is a conventional solar photovoltaic power project. The project's configuration consists of 70 full photovoltaic (PV) arrays, 20 partial PV arrays, a substation with step-up transformer, and a new 1,100 foot 69kV transmission line. The project is expected to produce 20 megawatts of renewable electricity annually. The entire output from the Project will be purchased by NV Energy and utilized to fulfill NV Energy's renewable portfolio standard (RPS) requirements. The project will create approximately 200 jobs during construction and is expected to produce enough energy during operations to power about 5,000 homes annually.

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All discussion and analysis related to the potential impacts of construction and operation of the proposed Apex project are contained in the BLM's Final EA (DOE/EA-1784), which DOE adopts and incorporates herein by reference. BLM examined potential impacts on the following resources and found none to be significant: floodplains; wetlands; water resources and water quality; threatened or endangered species and critical habitats; prime or unique farmlands; geology and soils; visual, recreational, and aesthetic resources; property of historic, archaeological, or architectural significance; Native American concerns; environmental justice; public health and safety; air quality; waste management; transportation; socioeconomic conditions; global climate change; intentionally destructive acts; and noise. The DOE Loan Guarantee Program Office reviewed the BLM analyses and determined that they adequately cover all areas of concern necessary to support DOE's FONSI.

DETERMINATION: On the basis of the Final EA, DOE has determined that providing a federal loan guarantee to Fotowatio Nevada Solar, LLC for construction and startup of the Apex Solar Power Project located in Clark County, Nevada, will not have a significant impact on the human environment. The preparation of an environmental impact statement is therefore not required.

Copies of the Final EA are available at the DOE Loan Guarantee Program Office website at http://www.lgprogram.energy.gov/NEPA-1.html or from

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Additional information on the DOE NEPA process is available from

Office of NEPA Policy and Compliance
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
202-586-4600 or 1-800-472-2756

Issued in Washington, DC on the 1st day of October in the year 2010.

Jonathan M. Silver
Executive Director, Loan Programs

U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

DOI-BLM-NV-S010–2010–0149–EA

July 2010

Apex Solar Power — 69kV Gen-Tie Transmission Line Project

APPLICANT

Fotowatio Nevada Solar, LLC

GENERAL LOCATION

Near Apex, Nevada, north of I-15 and west of U.S. Highway 93

BLM CASE FILE SERIAL NUMBER N-88313

PREPARING OFFICE

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NATIONAL SYSTEM OF PUBLIC LANDS

BLM

Environmental Assessment: DOI-BLM-NV-S010–2010–0149–EA

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Chapter 1. Introduction

Apex Solar Power — 69kV Gen-Tie Transmission Line Project

1.1. Identifying Information:

Fotowatio Nevada Solar, LLC (Fotowatio) proposes to construct a new 69 kilovolt (kV) transmission line connecting their proposed Apex Solar Power Project substation to an existing 69kV transmission line owned by NV Energy. The Apex Solar Power Project is a proposed 20 MWac (24.9 MWdc) photovoltaic solar power facility located entirely on private land within the Apex Industrial Park in the City of North Las Vegas, Nevada. The proposed transmission line would tie into a new substation to be located on private land in the Apex Industrial Park; crossing approximately 1,100 feet of public land administered by the Bureau of Land Management (BLM) Southern Nevada District, Las Vegas Field Office; then tap into the NV Energy transmission line, within an existing utility corridor. The project area is shown on **Figure 1–1 Project Location.**

The requested long-term right-of-way (ROW) width is 60 feet (30 feet each side of the transmission line) x 1,100 feet. The short-term right-of-way (STROW) 100 foot (20 feet on each side of the long-term ROW) x 1,100 feet ROW would be required during construction. The proposed transmission line ROW, would include 1.52 acres of ROW and 1.01 acres of STROW. The proposed transmission line would take approximately 2 to 3 months to construct, and would be operational for at least 30 years. The ROW application request is for 30 years, with a right to renew.

The proposed transmission line on Federal lands would tie (Gen-tie) into the proposed Apex 20 MW Photovoltaic Solar Power Project located on private lands in the Apex Industrial Park in the City of North Las Vegas. The electricity generated on private lands within Apex Solar Power Project will be distributed across public lands (BLM-administered lands) to interconnect to an existing 69kV transmission line owned by NV Energy.

1.1.1. Title, EA Number, and Type of Project:

Apex Solar 69 kV Gen-Tie Transmission Line Project / DOI-BLM-NV-S010-2010-0149-EA,

1.1.2. Location of Proposed Action:

Lots 3, 4, 6, and 8 of Section 17, Township 18 South, Range 63 East, Mount Diablo Base Meridian, Clark County, Nevada

1.1.3. Name and Location of Preparing Office:

Las Vegas Field Office, 4701 N. Torrey Pines Drive Las Vegas, NV 89130

1.1.4. Identify the subject function code, lease, serial, or case file number:

Case File Number N-88313

1.1.5. Applicant Name:

Fotowatio Nevada Solar, LLC.

1.2. Purpose and Need for BLM Action:

The proposed ROW is needed to connect Fotowatio's proposed Apex Solar Power Project substation with the nearby existing NV Energy transmission line. The BLM's purpose and need is to respond to Fotowatio's application under Title V of the Federal Land Policy Management Act of October 21, 1976 (FLPMA) for a ROW grant to construct, operate, maintain and terminate the proposed transmission line in accordance with FLPMA, and 43 C.F.R. Part 2800, and other applicable Federal laws. The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to Fotowatio for the proposed transmission line.

1.3. Connected Action:

The proposed Apex Solar Power Project, to be located on private lands in the Apex Industrial Park, is a "connected action" to the proposed project. The BLM's issuance of a ROW for the construction, operation, maintenance and termination of the transmission line, would allow electricity generated from the operation of the solar facility (a non-federal action), to be transmitted to NV Energy's existing 69kV transmission line. Under the National Environmental Policy Act (NEPA), a Federal agency must consider "connected actions" in their analysis of the proposed action. Connected action means that the actions are closely related; and therefore, should be discussed in the same environmental document (40 CFR 1508.25 (a)(1)). Actions are connected if they:

- Automatically trigger other actions which require environmental clearance;
- Cannot or will not proceed unless other actions are taken previously or simultaneously; or
- Are interdependent parts of a larger action and depend on the larger action for their justification.

This document will address the non-federal connected action in the NEPA analysis, however, the NEPA process is focused on agency decision making [granting the ROW] (40 CFR 1500.1(c), 40 CFR 1508.18, 40 CFR 1508.23). However, the Federal agency (BLM) must at a minimum, ensure any decision made by the agency regarding the proposed action would not result in the violation of Federal laws or regulation (e.g. Endangered Species Act, National Historic Preservation Act, Clean Water Act, etc.).

Fotowatio Nevada Solar, LLC. (Fotowatio), a division of Fotowatio Renewable Ventures, Inc (FRV) is proposing to construct and operate a 20MWac (24.9MWdc) photovoltaic solar facility in North Las Vegas, in Clark County, Nevada. The proposed project, RV Apex Solar Power Project (Project) would be located in the Apex Industrial Park, at the northwest corner of Grand Valley Parkway and Garnet Valley Boulevard (Assessor Parcel No 103-16-010-004). The 154 acre site is privately owned, in a General Industrial District zoned M-2 for heavy industrial use. In August, 2009, the City of North Las Vegas created the Apex Overlay District to specifically manage the Apex Industrial Park area for industrial and commercial uses. In the adopted ordinance, the proposed land use, a solar photovoltaic array, is classified as a utility installation and is a principally permitted use.

On October 15, 2009, Fotowatio received full Site Plan Approval from the City of North Las Vegas Planning Commission (SPR-15-09). This approval grants Fotowatio the right to utilize the proposed site for a photovoltaic solar project. Although, subject to final engineering design, the solar facility is anticipated to include the following project components:

- 70 Full Arrays (approximately 360 feet by 194 feet per array);
- 20 Partial Arrays (varying sizes);
- Substation with step-up transformer (80 feet by 110 feet), and
- 20 foot secondary maintenance access aisles between the arrays.

Throughout the site, setbacks from the property lines to the arrays will be maintained at 15 feet or greater. The site will be enclosed by a seven (7) foot chain link fence with three-strand barbed wire atop the fence as a security measure. Perimeter landscape will be provided in conformance with the City of North Las Vegas I-A Overlay District landscaping standards (17.20.240.G.4).

Before it commences operations, Fotowatio would develop a comprehensive security plan for the solar facility. Although the potential for intentional destructive acts would be low, Fotowatio anticipates having an on-site security presence to dissuade any malicious behavior. Fencing or some form of protective barrier would be constructed around the solar facility for the safety of the public and the welfare of the facility. While the type of protective barrier has not yet been selected, it is anticipated that Fotowatio would select materials that are consistent with the surrounding landscape and that provide maximum visibility for security personnel.

With these security measures in place, impacts to the Fotowatio solar facility from intentional destructive acts would be very small.

The proposed action analyzed in this EA is the granting of a ROW to Fotowatio to construct, operate, maintain, and terminate a 69kV transmission line across BLM-administered lands. The transmission line would originate on private lands within the proposed Apex Solar Power Project site in the Apex Industrial Park. The construction and operation of the solar facility on private lands is a non-federal connected action. The proposed transmission line must cross BLM-administered land to interconnect to an existing transmission line with available capacity to accept the electrical load (granting the ROW is a Federal action). Additional information about the connected action is included in Appendix B.

1.4. Purpose and Need for Department of Energy Action:

Fotowatio has applied to the Department of Energy (DOE) for a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAct 05), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, P.L. 111-5 (the “Recovery Act”). The DOE is a cooperating agency on this EA pursuant to a Memorandum of Understanding between the DOE and BLM Nevada signed in March 2010. The purpose and need for action by DOE is to comply with its mandate under EPAct 05 by selecting eligible projects that meet the goals of the Act.

The EPAct 05 established a Federal loan guarantee program for eligible energy projects, and was amended by the Recovery Act to create Section 1705 authorizing a new program for rapid deployment of renewable energy projects and related manufacturing facilities, electric power

transmission projects, and leading edge biofuels projects. The primary purposes of the Recovery Act are job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization. The Section 1705 Program is designed to address the current economic conditions of the nation, in part, through renewable energy, transmission and leading edge biofuels projects.

On April 22, 2010 John Hancock Life Insurance Company, as Lender-Applicant, with Fotowatio, submitted an application to the DOE Loan Guarantee Program for a Federal loan guarantee for the solar power facility in response to DOE's October 7, 2009 solicitation, "Federal Loan Guarantees for Commercial Technology Renewable Energy Generation Projects under the Financial Institution Partnership Program." For this Solicitation DOE is implementing the application process by directly working with certain qualified financial institutions through a set of procedures established by DOE as its "Financial Institution Partnership Program" ("FIPP"). In general, the FIPP is intended to expedite the loan guarantee process and expand senior credit capacity for the efficient and prudent financing of eligible projects under Section 1705 of Title XVII that use commercial technologies. This objective will be primarily accomplished by additional roles defined for certain financial institutions satisfying applicable qualifications set forth by DOE. Under the FIPP program proposed borrowers and project sponsors may not apply directly to DOE but must instead work with a financial institution that meets DOE qualification as a Lead Lender.

1.5. Scoping, Public Involvement and Issues:

The proposed project was reviewed and scoped by a team of BLM resource specialists in the Las Vegas Field Office, and the Renewable Energy Projects staff between April 3 and July 9, 2010. The Environmental Assessment (EA) and the unsigned Finding of No Significant Impact (FONSI) will be available for a public comment period on the BLM's Southern Nevada District website and interested parties will be notified of the opportunity to comment. The comment period will be from July 22, 2010 through August 11, 2010.

Comments will be used to help inform BLM's decision on the proposed ROW.

Decision's to be Made:

The BLM will make a decision whether or not to issue a 69kV transmission line ROW and STROW to Fotowatio for the requested proposed action.

The DOE will make a determination whether or not to grant a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAct05).

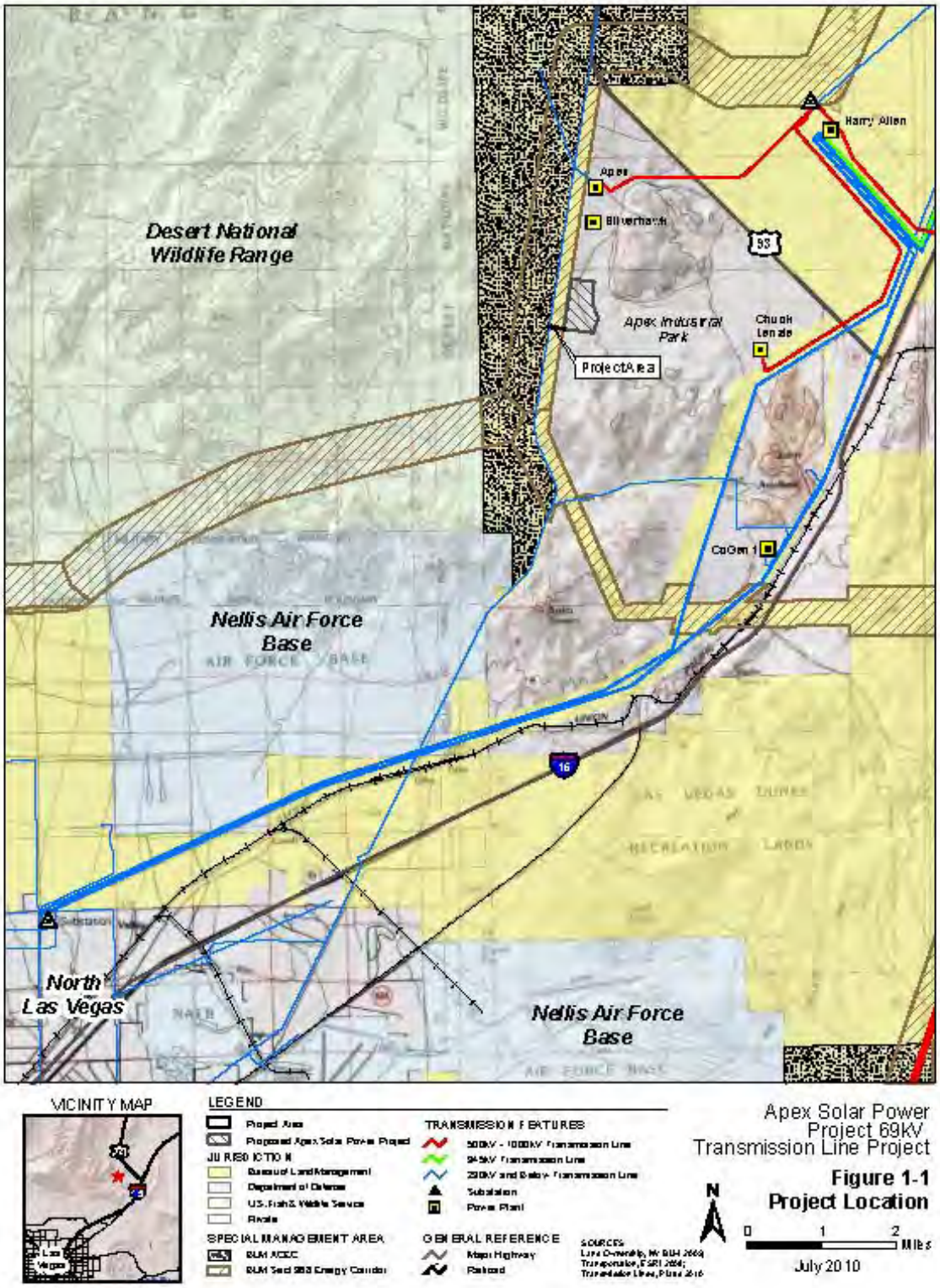


Figure 1–1 Project Location

Chapter 2. Proposed Action and Alternatives

2.1. Description of the Proposed Action:

The proposed action is for the BLM to authorize Fotowatio's ROW and STROW application to construct, operate, maintain, and terminate a new 69kV transmission line from their new 69kV project substation; to be constructed as part of the proposed Apex Solar Power Project, to an existing 69kV transmission line owned by NV Energy. If the application is approved, the proposed ROW would tie into the NV Energy transmission line, located in T. 18 South, R. 63 East, Section 17, Lots 3, 4, 6, and 8 .

2.2. DOE Proposed Action:

The BLM and the DOE have entered into a Memorandum of Understanding (MOU) dated March 2010, allowing DOE to be a cooperating agency on BLM renewable energy projects as part of the DOE Loan Guarantee Program pursuant to Title XVII of the Energy Policy Act of 2005 (EPAct 05).

DOE's proposed action is to issue a loan guarantee to John Hancock Life Insurance Company, as Lender-Applicant, with Fotowatio for construction and startup of the Fotowatio 20MWac (24.9 MWdc) solar power facility and to comply with its mandate under EPAct 05 by selecting eligible projects that meet the goads of the Act.

2.3. Proponents Proposal

The proposed transmission line would be approximately 1,100 feet in length, and would cross Federal lands administered by the BLM Southern Nevada District, Las Vegas Field Office. The requested ROW width is 60 feet (30 feet on each side of the center-line of the transmission line). A temporary 100 foot STROW width is required during construction (20 feet on each side of the transmission line ROW). Permanent disturbance for the proposed project will occur from the construction of the access road along the proposed transmission line, approximately 12 feet wide and approximately 1,100 feet long. Temporary disturbance will occur in three 100 x 100-foot temporary work areas around each structure for pulling and tensioning equipment. As shown in Figure 1-1, the entire ROW would be within the BLM Section 368 West-wide Energy Corridor.

The four proposed structures will be weathered, tubular steel poles. The two tangent structures are anticipated to be light duty class with a direct embed foundation. The two dead-end structures will be self-supporting, engineered poles with a drilled shaft foundation. All four structures would be constructed with perch deterrents installed to discourage perching by raptors. Structure sites would include assembly and crane-landing areas. Typical design characteristics for each structure are discussed in the Plan of Development and shown on Figure 1–1. Final design characteristics would be determined in the detailed design phase of the project.

Construction of the transmission line would generally follow a sequential set of activities performed by a number of small crews proceeding along the length of the existing power line road (no more than 15 employees on-site at any given time). Construction activities and considerations would include:

- Access road and construction of the access road (within the proposed ROW)
- Structure holes (for tangent structures)
- Foundation excavation
- Temporary work areas

- Structure assembly and erection
- Post construction cleanup and reclamation
- Hazardous materials
- Operation and Maintenance

Construction of the proposed transmission line, from site preparation to energizing the line, is expected to take 3 months or less to complete. Depending on the ROW authorizations and permit acquisitions, construction is anticipated to start in the last quarter of 2010 or earlier and proceed through the first quarter of 2011. Once constructed, Fotowatio would transfer ownership of the interconnection facilities (e.g. on-site switchyard, overhead transmission line, poles) to NV Energy.

Access Road – Access to the proposed transmission line ROW would be from the Apex Solar Energy Project site, east of the proposed transmission line. A new 12-foot-wide bladed dirt road would be constructed within the ROW between Power Line Road and the southwestern corner of the solar facility. The new access road would be used during construction to access the structure locations and tension/pull areas. Following construction, the access road would be maintained to provide access for future maintenance activities.

Structure Holes – The holes for standard or "tangent" structures would be augered with most being 19 to 25 feet in depth and four to five feet in diameter. Soil removed from the hole would be placed and tamped into the hole after the structure is plumbed and sloped away from the pole. All holes would be augered in the locations and would be large enough to provide space for tamping around the entire circumference of the pole.

Backfill would be banked and tamped 12 inches above the natural ground surface. Surplus excavated material including vegetation would be composed and leveled neatly to blend with surround contours. Backfill would be free of large rocks, organic material or other low density, unsuitable soils.

Foundation Excavation – Where the transmission line ends, a stronger structure must be installed. These are referred to as "dead-end" structures. The dead-end structure would require drilled-pier-type reinforced concrete foundations with an average depth of 28-35 feet. After the foundation concrete is placed, excess soil would be spread evenly around the structure base to promote site drainage away from the structure. A mechanical tamp would be required to compact the soil around the foundation. A backhoe, front-end loader, and/or pressure auger would be required to excavate the foundations.

Temporary Work Areas - Temporary work areas would be cleared and leveled as necessary with zero excess materials (see Figure 2-1). Structure pieces would be delivered to the temporary work area where workers would assemble the pole and attach insulators and hardware. The pole would be erected using a crane. The pull and tension sites would be located at each end of the transmission line. Construction activities on the western end of the transmission line would avoid the BLM Coyote Springs Area of Critical Environmental Concern (located west of the Power Line Road). After construction, temporary work areas would be reclaimed and restored. The proposed project would require approximately 4 laydown areas (one for each structure). (See Figure 2–1, Project Overview Map)

Structure Assembly and Erection – Equipment could include cranes, augers, bucket trucks, backhoes, air compressors, electric generators, pickup trucks, and other vehicles, machinery, and

field equipment. Construction materials and equipment would be placed in areas that minimize disturbance to vegetation.

Excavation and setting of structures would be performed in a continuous operation, preventing the possibility of caving of holes or injury to animals or persons in the vicinity of the construction. Essentially, the first hole will be excavated, and as the first pole is being erected, the second hole will be excavated. No excavations would be left uncovered when the contractor's personnel are not on site.

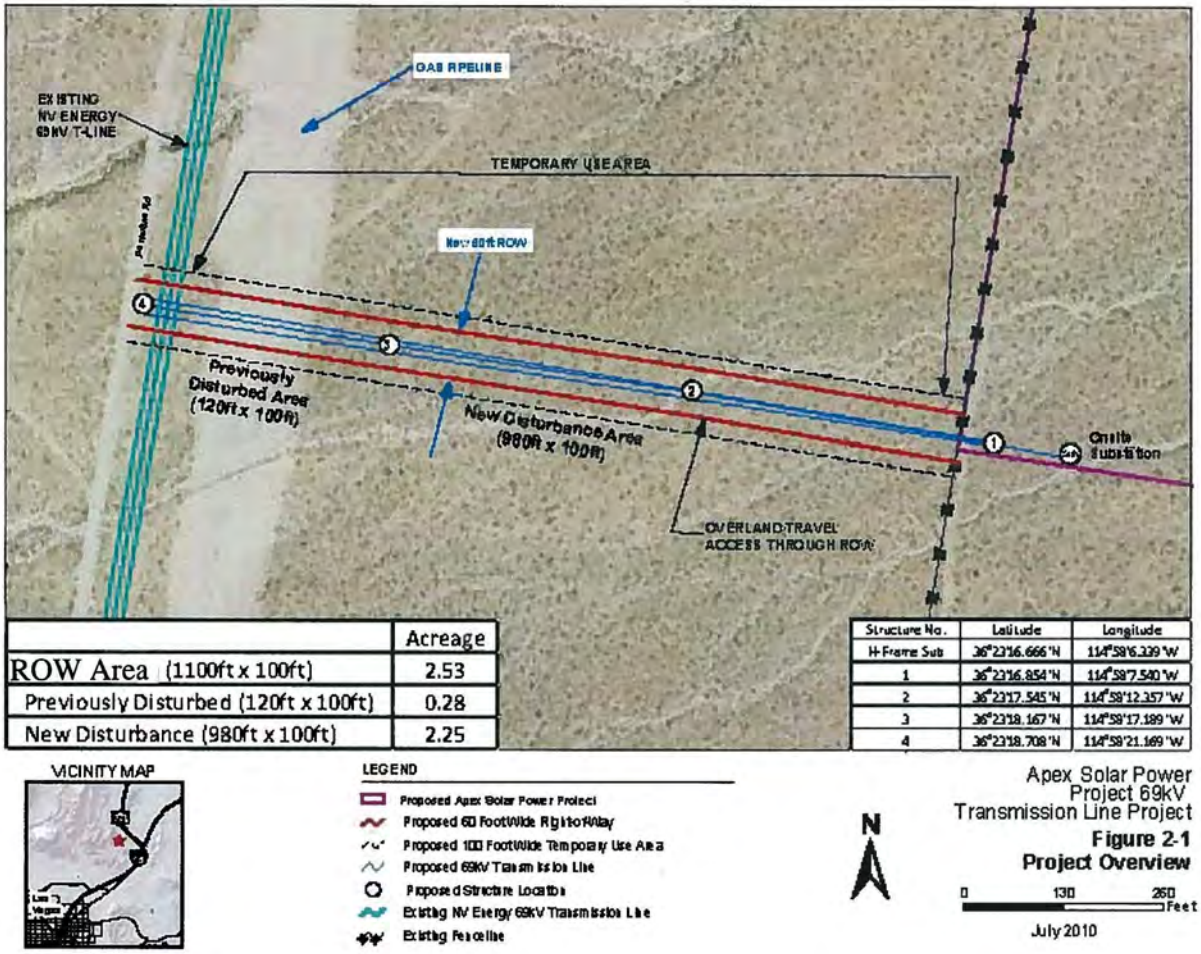
Post Construction Cleanup and Reclamation - The contractor would be required to have a continuous cleanup program throughout construction. The contractor would restore the temporary use areas to their pre-construction condition. Restoration would include the removal of deep ruts and the disposal of foreign objects such as: slash, chunks of concrete, pile cut-off, construction materials, etc. Reclamation would include re-contouring of impacted areas to match the surrounding terrain, cleaning trash out of gullies and restoring terraces. The standard operating procedures will be in accordance with the BLM guidelines. Oils and fluids would not be dumped along the ROW. Waste oils or chemicals would be hauled to an approved site for disposal.

All affected land, not part of the long-term project (e.g. access road, transmission line structures, etc.), would be reclaimed in accordance with the final Reclamation Plan; to be developed in consultation with the BLM. These would include any overland travel routes, pole erection sites, wire setup sites, and temporary work areas.

Hazardous Materials – No hazardous materials, as defined in this document, would be used, produced, transported or stored on or within the ROW, or used in the construction, operation, maintenance or termination of the ROW or any of its facilities. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1967 (RCRA), as amended, 42 U.S.C. 9601 et seq., and its regulations. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101(14), 42 U.S.C. 9601 (14), nor does the term include natural gas.

Petroleum products such as gasoline, diesel fuel, crankcase oil, lubricants and cleaning solvents would be present within the ROW during construction activities. When not in use, materials would be properly stored to prevent accidental releases. These products would be stored in fuel trucks or approved containers. The contractor would implement standard refueling procedures for heavy equipment that is left on the ROW for long periods of time, such as cranes, blades, cats, drill rigs, etc. This equipment would be refueled in place, however, no personal or light duty vehicles would be allowed to refuel within/on the ROW.

Spill kits would be on site and approved absorbent materials would be placed under leaking equipment immediately to prevent ground contamination. All construction waste, including trash and litter, garbage or solid waste, petroleum products and other materials would be removed to a disposal facility authorized to accept such materials.



	Acreage
ROW Area (1100ft x 100ft)	2.53
Previously Disturbed (120ft x 100ft)	0.28
New Disturbance (980ft x 100ft)	2.25

Structure No.	Latitude	Longitude
H-Frame Sub	36°23'16.666"N	114°58'6.229"W
1	36°23'16.854"N	114°58'7.540"W
2	36°23'17.545"N	114°58'12.357"W
3	36°23'18.167"N	114°58'17.189"W
4	36°23'18.708"N	114°58'21.169"W

Figure 2.1. Site Map

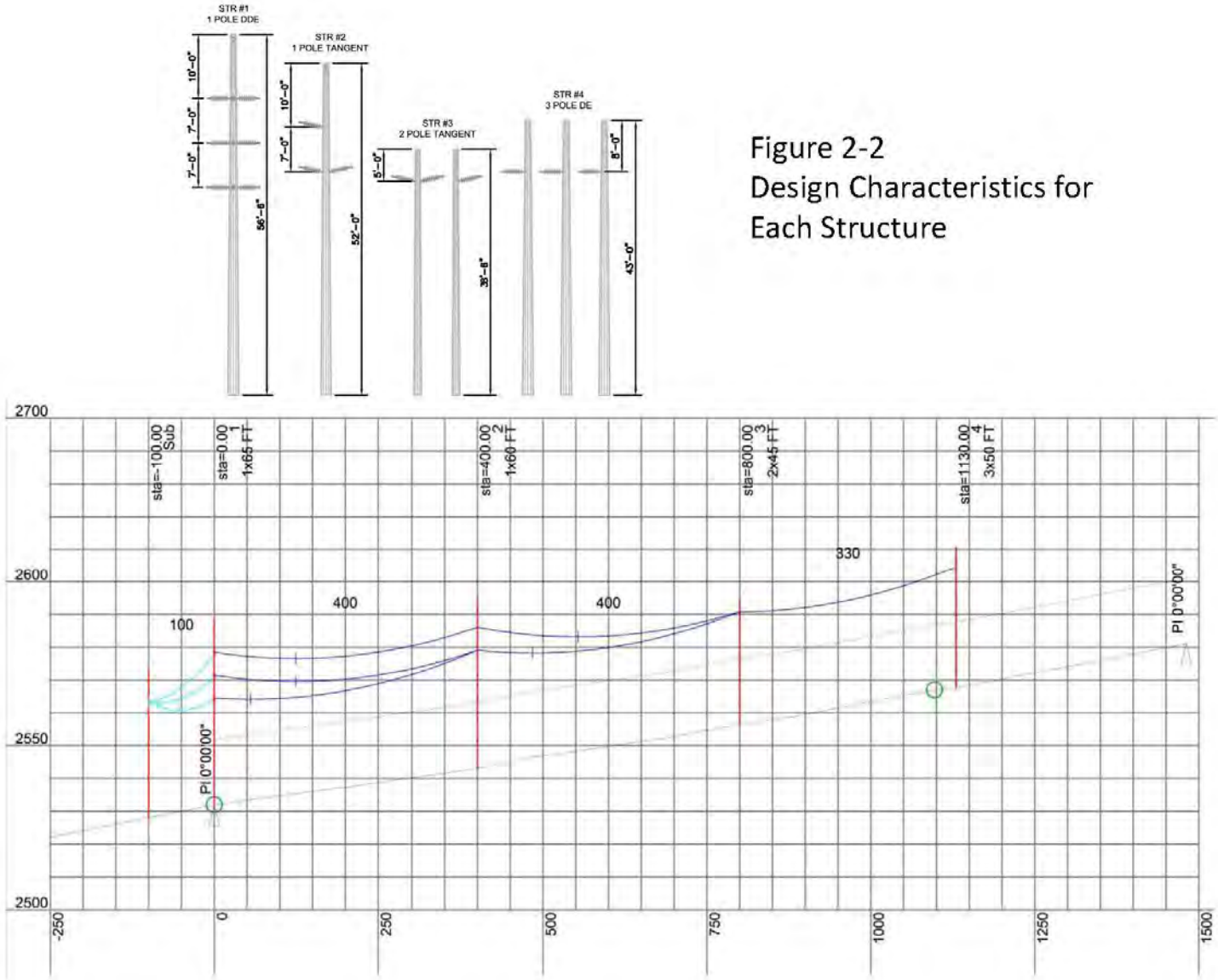


Figure 2.2. Pole Configuration

Operation and Maintenance — Once energized, the proposed transmission line would be in virtually continuous operation.

Reliability of service is an overriding consideration in the design and operation of utility electrical systems. Periodic inspection and maintenance of the transmission line are required to maintain safe and reliable operation.

An AC transmission line is protected with power circuit breakers and related line relay protection equipment. If conductor failure occurs, usually due to a weather event, power would be automatically removed from the line. Lightning protection is provided by shield wires along the line. All fences and metal gates crossing within the transmission line ROW would be grounded to prevent electrical shock.

The electrical equipment and poles are anticipated to have a lifetime of approximately 50 to 60 years or more depending upon maintenance operations and climatic conditions

2.4. Alternatives Considered but not Analyzed in Detail

No other reasonable alternative routes or modes were considered. Route selection was predicated upon the transmission line interconnecting to the nearest available transmission line with available capacity. It is also the shortest and most direct route to the point of interconnection. No other alternative routes are considered economically feasible.

2.5. No Action Alternative Analyzed in Detail

Under a “No Action” alternative, no ROW would be issued. The No Action would result in Fotowatio not being able to interconnect their proposed Apex Solar Power facility to NV Energy’s existing 69kV transmission line; therefore, the power generated by the solar project would not be able to be distributed.

2.6. DOE No Action Alternative

If a DOE loan guarantee were not granted, construction of the project would be contingent upon the ability of Fotowatio to obtain commercial financing without a Federal guarantee. If Fotowatio were able to obtain this financing the environmental impacts outlined in the EA would still occur, otherwise the project would not go forward and the impacts would not occur.

2.7. Conformance

The proposed action is in conformance with the Las Vegas Resource Management Plan (RMP) Record of Decision (ROD) signed October 5, 1998, Although not specifically provided for in the plan, the action is clearly consistent with the terms, conditions and decisions of the approved plan in the following Land Use Plan decision(s):

Right of Way Management

Objective

RW-1 Meet public demand and reduce impacts to sensitive resources by providing an orderly system of development for transportation, including legal access to private in holdings, communications, flood control, major utility transmission lines, and related facilities.

Management Direction

RW-1-h. All public lands within the planning area, except as stated in RW-1-c through RW-1-g, are available at the discretion of the agency for right—of—way under the authority of the Federal Lands Policy Management Act.

Chapter 3. Affected Environment:

Introduction

This chapter describes the affected environment associated with the Proposed and Connected Action, and the No Action alternative. The affected environment is the physical area that bounds the environmental, sociological, economic, or cultural features of interest that could be impacted by the Proposed or Connected Action, or the No Action alternative. When preparing this EA, the best available information was used to describe the existing environment and the Applicant's proposed action, including construction and operation of the proposed Apex Solar Power Project (Connected Action). This information serves as a baseline from which to identify and evaluate environmental changes resulting from all alternatives.

Based on consideration of the issues raised during internal scoping, as well as guidance from NEPA and related statutes, resources of the human environmental that are considered in this Environmental Assessment include: Air Quality, Greenhouse Gases and Global Climate Change, Soils, Biological Resources - including Threatened, Endangered, and Candidate Fish and Wildlife Species; Migratory Birds; Vegetation (including Noxious Weeds and Invasive Species); Forestry, and Visual Resources. Elements not affected by the Proposed and Connected Actions, and the rationale for not including those elements in this EA, are listed in the Supplemental Authorities table in ???.

Project Location

The project area is located in the Apex Industrial Area, North Las Vegas, in Clark County, Nevada. The project area includes the proposed 69kV gen-tie transmission line on BLM land as well as the adjacent solar facility.

Key Resources

3.1. Air Quality

The project area is located in Garnet Valley/Dry Lake (Hydrographic Area 216). The Garnet Valley/Dry Lake Area is designated as unclassified for 8-hour ozone (regulated through nitrogen oxide [NO_X] and volatile organic compounds [VOC]) and is attainment area for particulate matter less than 10 microns (PM_{10}), carbon monoxide (CO), and sulfur oxide (SOX). The Clark County Department of Air Quality and Environmental Management (DAQEM), is responsible for monitoring air, developing proper control measures, and enforcing those measures. The DAQEM regulates all stationary and non-vehicular sources, including construction sources, of fugitive dust. According to Section 17 of Clark County's Air Quality Regulations, a plan-specific permit is required for construction activities involving surface disturbances great than one-quarter acre, such as grading and trenching. This permit would include conditions requiring control of fugitive dust emissions, as defined in Section 41 of the regulations.

3.2. Greenhouse Gases and Global Climate Change

In its Fourth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) stated that warming of Earth's climate system is unequivocal, and that warming is very likely due to anthropogenic greenhouse gas concentrations (IPCC 2007). Currently there is no standardized methods to correlate exclusively the carbon dioxide emissions resulting from the proposed project to any specific impact to global warming.

3.3. Soils

Soils within the project area are classified as Colorock-Tonopah association, moderately sloping. This association within the project area possesses a moderately low erosion potential (K factor = .24). Colorock soils (55%) are well drained, and consist of very gravelly loam to extremely gravelly sandy loam to cemented material derived from sedimentary rock. These soils are found on fan remnants, on 2 to 8 percent slope. Tonopah soils (45%) are excessively drained, and consist of very gravelly sandy loam to extremely gravelly sand alluvium derived from mixed sources. These soils are found on fan remnants, on 2 to 8 percent slope (USDA-NRCS 2010).

3.4. Threatened, Endangered or Candidate and Wildlife Species

Threatened and endangered species are placed on a Federal list by the U.S. Fish and Wildlife Service (USFWS) and receive protection under the Endangered Species Act of 1973, as amended. The only threatened or endangered species known to occur in the vicinity of the project area is the threatened Desert Tortoise (*Gopherus agassizii*).

The proposed project is located in moderate density desert tortoise habitat. On May 3, 2010, Desert Tortoise surveys were conducted within the requested ROW corridor located on BLM administered lands. The zone of influence transects were conducted at 200, 400, and 600-meters outside of the ROW adhering to USFWS protocol. The biologist did not detect any live Desert Tortoise or any signs (carcass, scat, burrow, or tracks).

3.5. Migratory Birds

Migratory Bird Treaty Act

Under the Migratory Bird Treaty Act of 1918 and subsequent amendments (16 U.S.C. 703-711), it is unlawful to take, kill, or possess migratory birds. A list of the protected bird species can be found in 50 C.F.R. § 10.13. The list of birds protected under this regulation is extensive and the project area has potential to support many of these species. Typically, the breeding season is when these species are most sensitive to disturbance. This is generally considered to occur from March 15 through July 30.

While conducting surveys on May 3, 2010, no migratory bird nests were detected; however, many migratory birds are known to nest in the vicinity of the project area. Among these species are the Black-throated Sparrow (Amphispiza bilineata), Horned Lark (Eremophilia alpestris), Chipping Sparrow (Spizella passerina), and the Western Burrowing Owl (Athene cunicularia).

Bald and Golden Eagle Protection Act

Under the Bald and Golden Eagle Protection Act of 1940 and subsequent amendments (16 U.S.C. 668-668c), anyone without a permit from the Secretary of the Interior is prohibited from “taking” bald or golden eagles, including their parts, nests, or eggs. Anyone found to “take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or any manner, any bald eagle” or golden eagle can be subject to fines or imprisonment.

Surveys were conducted on May 3, 2010 and no bald or golden eagles were detected. There was no suitable nesting, roosting, or perching structures located within the project area.

3.6. Wildlife

The project area supports and is adjacent to lands that support wildlife characteristic of the Mojave Desert. Biological diversity varies according to topography, plant community, and proximity to water, soil type, and season. Several common species of reptiles that may be present in the vicinity of the proposed project site may include the Desert Iguana (Dipsosaurus dorsalis), Side-blotched Lizard (Uta stansburiana), Zebra-tailed Lizard (Callisaurus draconoides), and Western Shovel-nosed Snake (Chionactis occipitalis). Common bird species that may be present in the vicinity of the proposed project site may include the Black-throated Sparrow, Turkey Vulture (Cathartes aura), Common Raven (Corvus corax), and Red-tailed Hawk (Buteo jamaicensis). Common mammal species include the Black-tailed Jackrabbit (Lepus californicus), the Desert Cottontail (Sylvilagus audubonii), Coyote (Canis latrans), Badger (Taxidea taxus), Kit Fox (Vulpes macrotis) and many species of rodents. Additionally, several BLM and Nevada sensitive species have the potential to occur within the project area. These include the Banded Gila Monster (Heloderma suspectum), Burrowing Owl, Loggerhead Shrike (Lanius ludovicianus), and LeConte's Thrasher (Toxostoma lecontei). The Banded Gila Monster and LeConte's Thrasher are also Nevada state protected species.

3.7. Vegetation and Invasive Species/Noxious Weeds

The vegetation within the project area is characteristic of Mojave Desert Scrub. Dominant species include Creosote Bush (Larrea tridentata) and the White Bursage (Ambrosia dumosa). Other common plant species include: Ratany (Krameria erecta), Nevada Jointfir (Ephedra nevadensis), Mojave Yucca (Yucca schidigera), Indigo Bush (Psorothamnus fremontii), Chaffbush (Amphipappus fremontii), Mojave Aster (Xylorhiza tortifolia), and Globemallow (Sphaeralcea ambigua).

Executive Order 13112, Invasive Species, directs federal agencies to prevent the introduction and spread of invasive plant species (noxious weeds), and to minimize impacts associated with invasive species. The State of Nevada and U.S. Department of Agriculture maintain an official list of weed species that are designated noxious for the state. The Nevada Control of Insects, Pests, and Noxious Weeds Act (Nevada Revised Statutes ([NRS]: Chapter 555) grants the Director of the Nevada Department of Agriculture the authority to investigate and control noxious plants.

According to NRS 555.005, noxious weeds are defined as "any species of plant that is or is likely to be detrimental or destructive and difficult to control or eradicate." Noxious weeds are a concern in most parts of the United States and in southern Nevada, as they are opportunistic, and can exclude native plants from an area if left unchecked. Therefore, the BLM established a goal that all NEPA documents analyze potential for noxious weed spread and explore measures to minimize the potential for noxious weed invasion for each management practice involving surface disturbance.

In May 2010, EPG conducted rare plant and noxious weeds surveys of the project area. No species listed as noxious weeds by the State of Nevada was found within the project area.

3.8. Forestry

The proposed project is located in an area containing high densities of cactus and yucca. Cactus and yucca are considered a commodity and government property. As such, they are regulated under the BLM forestry program.

Table 3–1 list the estimated number of cactus and yucca observed within the proposed transmission line ROW during the survey conducted on May 3, 2010.

Table 3–1 Cactus and Yucca within the Proposed ROW

Species	Common Name	Quantities *
Cylindropuntia echinocarpa	Silver cholla	7
Echinomastus johnsonii	Johnson's fishhook cactus	15
Echinocereus engelmannii	Engelmann's hedgehog cactus	5
Ferocactus cylindraceus	California barrel cactus	7
Opuntia basilaris	Beaver tail cactus	5
Yucca schidigera	Mojave yucca	60

*numbers are approximate based on counts made during site survey conducted on May 3, 2010

3.9. Visual Resources

The proposed project is located on BLM-administered land designated VRM Class III.

The proposed project is located within the Mojave Desert section of the Basin and Range Province which is characterized by linear desert mountain ranges separated by large desert basins. The basins are generally occupied by low-growing vegetation such as creosote bush, sagebush, yucca and cactus.

The localized setting associated with the Fotowatio proposed project has been modified by an existing H-Frame transmission line, an underground gas pipeline, and access road directly adjacent to the site. The Silverhawk and Apex generation stations are located approximately .8 and 1.15 miles to the north, respectively. The Chuck Lenzie power generation station is located approximately 2 miles to the east. Other development which has modified the setting include US 93, the Harry Allen power generation station and associated substation, the Garnet Valley power generation station, and numerous high-voltage transmission lines. As such, the BLM has generally assigned VRM Class III to lands administered by the BLM. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Chapter 4. Environmental Effects:

The potential environmental consequences, or impacts, described in this chapter are based on the environmental effects that would result from the construction and operation of the proposed project. A detailed discussion of the specification and construction of the proposed project is found in Chapter 2. To identify project-related impacts, changes to the environment that would result from construction and operation of the proposed project were determined by comparing these actions to the existing environment (described in Chapter 3).

4.1. Air Quality

Proposed and Connected Action: Construction and operation of the proposed project and adjacent solar facility will require compliance with all applicable federal, state, and local air quality laws and regulations. The project's impacts to air quality are anticipated to be minor, temporary and short-term in nature. Increased emission of PM10 and PM2.5 would likely occur as a result of the soil disturbance associated with vegetation removal, construction activities, and movement of construction equipment. Construction of the transmission line is expected to take up to three months. Construction of the solar facility is expected to take six to nine months; thus these soil disturbing activities will be short-term and in a localized area. In addition, the use of water during construction activities and the subsequent application of acceptable soil stabilizing treatments would reduce the potential emissions. Clark County DAQEM has implemented a dust control permit program whereby all construction activities within the Las Vegas area must follow the permit process and associated terms and conditions based on the type and duration of the project.

4.1.1. No Action Alternative:

The ROW would not be issued and there would be no disturbance to air quality at or within the vicinity of the proposed project. Therefore, there would be no effect to air quality, and no additional impact would occur.

4.1.2. Mitigation

No additional mitigation required.

4.2. Greenhouse Gases and Global Climate Change

Proposed and Connected Action:Except for emissions related to the increase in localized vehicular travel and temporary construction emissions, photovoltaic technology generates electricity while producing fewer greenhouse gas emissions than fossil-based sources. The proposed solar facility would generate about 54,670 kWh/year of clean electricity to power over 5,000 homes annually, while helping Nevada comply with its progressive renewable portfolio. This clean electricity would offset approximately 32,841 tons of CO_2 per year as well as 0.55 tons of methane and 0.23 tons of nitrous oxide (EPA 2010).

4.2.1. No Action Alternative:

The ROW would not be issued and there would be no reduction in greenhouse gases. Therefore, the current trend of climate change would continue.

4.2.2. Mitigation

No additional mitigation required.

4.3. Soils

Proposed and Connected Action: Surface disturbance and removal of soil resources during construction of the proposed project and associated solar facility would result in direct impacts within the project area. Under the proposed action, up to 2.53 acres would be temporarily impacted during construction. Following construction, the long-term footprint of the service road and clearance areas around each structure would total 1.52 acres. Temporary use areas would be restored to their pre-construction conditions. Construction and operation of the Apex Solar Power Project would permanently disturb approximately 154 acres of undeveloped, private lands within the Apex Industrial Park. Ground disturbing activities on private lands within the Apex Industrial Park are subject to use approval from the City of North Las Vegas and other entities. Information about the Apex Solar Power Project facility is provided in **Appendix A.**

Potential for water and wind erosion would be increased on disturbed areas after soil salvage operations due to removal of the vegetative cover and the loss of surface soil structure. Minimization measures to reduce soil erosion and sedimentation would be implemented during construction and operation of the transmission line and solar facility. The selected erosion and sediment control best management practices and environmental protection measures would be based on the type of disturbance expected, soil type, and the location of the site relative to sensitive resources. With minimization measures the impacts to the temporarily disturbed acres of this resource would be site-specific, temporary, and moderate. The remaining acres would be reclaimed to the extent possible except for the permanently disturbed areas in the transmission line corridor (access road and pole structures), and the solar facility footprint.

During construction and operation, a comprehensive system of management controls, including long—term and temporary site-specific actions to minimize soil erosion and sediment transport would be implemented. A Notice of Intent application and Stormwater Pollution Prevention Plan would be prepared in accordance with the State of Nevada, National Pollutant Discharge Elimination System Stormwater General Permit NVR 100000. The Notice of Intent will be filed with the Nevada Department of Environmental Protection prior to the initiation of any construction activities.

4.3.1. No Action Alternative:

The ROW would not be issued and there would be no additional impacts to soil resources at or within the vicinity of the proposed project.

4.3.2. Mitigation

No additional mitigation required.

4.4. Threatened, Endangered, or Candidate Fish and Wildlife Species

Proposed and Connected Action: The project area is located within moderate density tortoise habitat. Since tortoises have been found in the vicinity and undisturbed habitat exists in the area, there is potential for tortoises to be found within or to wander into the project area. If not noticed and avoided during construction, Desert Tortoises could be either injured or killed or may need to be harassed to move them out of harm's way. This proposed project and associated solar facility will result in the loss 156.53 acres of tortoise habitat.

Indirect effects from noise and vibration associated with construction activities could cause some tortoise to abandon their burrows and seek other existing shelters. This will temporarily expose them to increased predation as they seek other burrows within their home range.

In the event that a tortoise is found in the project area, impacts would include loss of foraging, nesting, and cover sites; loss of dispersal areas and connectivity to other areas; and contracted home ranges. Juvenile Desert Tortoise may face an increased risk of predation from raptors and ravens attracted to the site and increased availability of perches. Tortoises may also face impacts due to increased risk from roads and traffic.

4.4.1. No Action Alternative:

The ROW would not be issued and there would be no additional disturbance to threatened, endangered or candidate fish or wildlife species.

4.4.2. Mitigation

Section 7 Consultation for the proposed project is covered under the Programmatic Biological Opinion for Multiple Use Activities (1-5-97-F-251) contingent on compliance with terms and conditions associated with the Biological Opinion. The proponent will adhere to the Biological Opinion Terms and Condition outlined in **Appendix C**.

4.5. Migratory Birds

Proposed and Connected Action: The project area occupies habitat suitable for nesting and foraging by migratory bird species including the Western Burrowing Owl, a BLM sensitive species. The construction of the transmission line will result in the impacts of 1.52 acres of permanent habitat and 1.01 acres of temporary habitat and the adjacent solar facility will result in the loss of 154 acres of habitat. During construction, nests could be destroyed and eggs and nestlings could be harmed. The loss of habitat associated with the proposed action represents a long-term lost of breeding and foraging habitat for migratory birds.

4.5.1. No Action Alternative:

The ROW would not be issued and there would be no additional disturbance to migratory birds from the proposed project.

4.5.2. Mitigation

- 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 15 and July 30.
- If a project that may alter any breeding habitat must occur during the breeding season, then a qualified biologist must survey the area for nests prior to commencement of construction activities. This shall include burrowing and ground nesting species in addition to those nesting in vegetation.
- If any active nests (containing eggs or young) are found, an appropriately-sized buffer area must be avoided until the young birds fledge.

4.6. Wildlife

Proposed and Connected Action: Wildlife species would be displaced as lands are disturbed within the project area. The primary direct impact of the proposed action on wildlife would be killing or maiming of ground dwelling animals during construction and the loss of habitat. The construction of the transmission line will result in the impacts of 1.52 acres of permanent habitat and 1.01 acres of temporary habitat and the adjacent solar facility will result in the loss of 154 acres of habitat. Additional impacts associated with the mortality from vehicular traffic may also be realized upon the completion of construction and subsequent use of the project area. The lost of habitat associated with the proposed project represents a long term lost of breeding and foraging habitat for wildlife.

Wildlife species may also be subject to increased predation as result of activities associated with the proposed project and associated solar facility. Predators such as coyotes and ravens are attracted to trash and litter that may be found at construction sites. Additionally, the construction of transmission poles and fencing will provide additional perching locations for raptors.

4.6.1. No Action Alternative:

The ROW would not be issued and there would be no disturbance to fish or wildlife species at or within the vicinity of the project area. Therefore, there would be no additional effect to fish or wildlife species, and no impact would occur.

4.6.2. Mitigation

Adherence to the biological opinion terms and conditions outlined in Appendix C would lessen direct impacts to wildlife species to the maximum extent practicable. Construction personnel will be directed to collect and contain all waste and litter to minimize the attraction to predators.

4.7. Vegetation and Invasive Species/Noxious Weeds

Proposed and Connected Action: Native vegetation would be removed or damaged during construction of the access road, tower pads, and transmission line installation. Removal of the native vegetation could result in the establishment of noxious weeds. The Federal Noxious Weed Act, Public Law 93-629 (7 U.S.C. 2801 et seq.; 58 Stat. 2 148), enacted January 3, 1975, established a Federal program to control the spread of noxious weeds. Executive Order 13112 issued February 3, 1999 further defines the responsibilities of Federal Agencies to prevent the introduction of invasive species and provide for their control by minimizing the economic, ecological and human health impacts that invasive species cause. The issuance of a ROW grant for the proposed project requires the proponent to comply with the Executive Order 13112 and prevent the spread or introduction of invasive species and noxious weeds.

4.7.1. No Action Alternative:

The ROW would not be issued and there would be no additional disturbance on botanical resources at or within the vicinity of the proposed project. Therefore, there would be no effect to these resources, and no impact would occur.

4.7.2. Mitigation

The proponent will be responsible for weed control on disturbed areas within the limits of the ROW. The proponent is responsible for consultation with the BLM and/or local authorities for acceptable weed control methods within the ROW and private lands associated with the solar facility.

4.8. Forestry

Proposed and Connected Action: The proposed action will result in potential impacts to cactus and yucca as described in Table 3–1. Mitigation will be used to minimize impacts to this resource.

4.8.1. No Action Alternative:

The ROW would not be issued and there would be no disturbance to cactus and yucca from construction and operation of the proposed transmission line.

4.8.2. Mitigation

All cactus and yucca within the ROW and the STROW impact areas on BLM land may be salvaged and replanted and maintained in temporary impact areas or undisturbed portions of the project area. Alternatively, cactus and yucca may be transported to a BLM stockpile for later use by BLM, sold to the public, or another alternative may be developed in coordination with the Forestry Program Lead.

4.9. Visual Resources

Proposed and Connected Action: The proposed project would result in the introduction of structural elements that are visually similar to existing conditions and landscape character (i.e. a modified landscape with varying levels of energy infrastructure). As such, contrast associated with the project would be low and would not attract the attention of the casual observer. Mitigation to further reduce contrast resulting from the project could include; constructing the project using non-specular conductors, restoring access roads where feasible, and matching the color and spans of the adjacent existing transmission towers where feasible. Therefore, compliance with VRM Class III objectives is anticipated.

4.9.1. No Action Alternative:

The ROW would not be issued and there would be no change in the visual setting at or within the project area.

4.9.2. Mitigation

- Constructing the project using non-specular conductors.
- Restoring access roads where feasible.
- Matching the color and spans of the adjacent existing transmission towers where feasible.

Chapter 5. Cumulative Impacts

The CEQ (40 CFR 1508.7) defines cumulative impacts as:

"...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions."

These actions include current and projected area development, management activities, and authorizations on private and public land, land use trends, and applicable industrial/infrastructure components. Although the individual impacts of each separate project may not be significant, the additive effects of multiple projects could be. These past, present, and reasonably foreseeable future actions are analyzed to the extent that "they are relevant and useful in analyzing whether the reasonably foreseeable effects of the agency proposal for action and its alternatives may have an additive and significant relationship to those effects."

Under NEPA, the Apex Solar Power Project is a "connected action" to the proposed project (construction and operation of a transmission line on Federal lands managed by the BLM). Therefore, the construction and operation of the transmission line on Federal lands, and the construction and operation of the Apex Solar Power Project on private lands, are considered together when analyzing the cumulative effects of other past, present, and reasonably, foreseeable future actions.

The approach to cumulative impacts of the proposed projects considers "past" projects to be those that have completed construction and are in operation. "Present" projects include those that are currently under construction or have been fully permitted such that they are likely to be part of the existing environment when the proposed projects would begin construction. "Reasonably foreseeable" future projects are those for which a formal permit application has been filed.

Interrelated Projects or Actions to be Analyzed

Table 5.1, "Existing Conditions and Reasonably Foreseeable Future Actions" (p. 35) lists past, present, or reasonably foreseeable interrelated projects, BLM activities, or environmental condition in the project area. These were evaluated to determine if they were: 1) relevant to potential impacts, 2) within the project area of influence, and 3) of a magnitude that could potentially result in a cumulative impact.

Table 5.1. Existing Conditions and Reasonably Foreseeable Future Actions

Action	Description	Area affected
Past and Present Actions		
NV Energy 69kV Transmission Line	69kV Transmission Line NVN-053399 (Authorized) Case No. 4057406 Line was originally constructed by Lincoln County Power District but conveyed to NV Energy in 1987 (see NVCC-0020073)	Transmission line is located at the western terminus of the proposed ROW. Fotowatio's proposed 69kV transmission line would interconnect to this line.
Kern River Natural Gas Pipeline	Approximately 276 miles in Nevada	Located within the BLM Section 368 West-wide Energy Corridor.

Action	Description	Area affected
Silver Hawk Power Plant	570-MW natural gas-fired combined cycle electric generating station.	Located approximately one mile northeast of the proposed transmission line.
NV Energy Chuck Lenzie Power Plant (formerly Moapa Energy Facility)	1,102 MW combined cycle natural gas-fired electric generating station,	Located approximately 2 miles east of the proposed transmission line. The power plant is located entirely on private lands in the Apex Industrial Park.
Apex Project	BLM-administered lands transferred to public ownership under Public Law 101-67. NVN-052787	Apex Industrial Park; located west of the proposed transmission line.
FTV Communication c/o Level 3	Communications / fiber optics facilities (66 miles) NVN-062093	Located within the BLM Section 368 West-wide Energy Corridor.
Reasonably Foreseeable Future Actions		
UNEV Pipeline	The proposed pipeline is a 400-mile, 12-inch buried, common carrier products pipeline that will originate near the refineries in North Salt Lake City and ship product from them to a distribution terminal in Iron County, Utah, and a terminal in the Apex Industrial Park area in North Las Vegas. The pipeline will initially carry approximately 62,000 barrels per day of petroleum products but will have the capacity to run 118,000 barrels per day.	The proposed facility is located approximately 1.5 miles east of the proposed transmission line on private lands located in the Apex Industrial Park.
Solar Energy Projects on BLM-administered lands	Development of utility scale solar projects NVN-084052 (NV Energy) NVN-085773 (Cogentrix) NVN-085621 (Cogentrix) NVN-084232 (First Solar) NVN-085651 (Cogentrix) NVN-085612 (Cogentrix)	Six ROW applications have been filed for the development of solar projects within 10 miles of the proposed project site. As of May 2010, no grants have been issued for solar projects in Nevada. Plans of Development are not available for review. Several applications are “second-in-line” applications for the same parcel.

Action	Description	Area affected
Silver State Energy Project	Proposed 230kV transmission line from Silver Hawk substation to Newport substation. NVN-086357	Requested ROW is within the BLM Section 368 West-wide Energy Corridor.
Southern Nevada Water Authority, White Pine, Lincoln, and Clark County Groundwater Development Project	Proposed groundwater development project with associated water transmission pipelines originating in White Pine, Lincoln, and Clark Counties.	White Pine, Lincoln, and Clark Counties. Project undergoing NEPA review.

5.1. Summary of Cumulative Impacts

The following sections provide an analysis of potential cumulative impacts related to construction and operation of the proposed transmission line and solar facility on each resource when viewed in conjunction with other past, present, and reasonably foreseeable actions in the cumulative impact study area. The cumulative impact study area includes the federal lands adjacent to the proposed transmission line ROW, and private lands located in the Apex Industrial Park. This analysis considers the anticipated additive effect that both projects would have to cumulative impacts after BLM-approved mitigation measures are implemented.

Because many of the reasonably, foreseeable future projects are in the early stages of development, there is insufficient information to fully understand the project's potential impacts. However, general assumption can be made based on impacts that normally occur with the types of projects listed in Table 5.1, "Existing Conditions and Reasonably Foreseeable Future Actions" (p. 35).

During construction some impacts would be temporary in nature, such as increases in air pollution and dust, construction noise, and a disruption in local traffic patterns due to an increased amount of labor. Potential permanent impacts would be loss of habitat for local wildlife and plant species, possible loss of cultural or historical resources, and use or disturbance of water resources. Additional project-specific impacts might result.

During operations permanent impacts might include the loss of habitat for wildlife, possibly increased air emissions depending on the type of technology being used, alteration of visual and aesthetic characteristics, water resources, increases in local employment, and other impacts that may be project specific.

Impacts can and would be required to be mitigated. Permits required for construction and operation include stipulations that require the operator/owner to utilize best management practices (BMPs) to establish and maintain compliance with the permits. It is important to note that each of the cumulative proposed projects on federal land will undergo its own NEPA review process, and will be required to comply with applicable regulatory requirements and to mitigate impacts that are identified in the review process. The project on private lands would also be subject to Federal, state, and local laws and regulations, depending on the type of use requested.

5.2. Air Quality

Clark County DAQEM requires all projects disturbing more than 0.25 acres of land obtain a dust control permit and implement BMPs to control fugitive dust from construction sites. All construction activities within the Las Vegas area must follow the permit process and associated terms and conditions based on the type and duration of the project.

During construction of the proposed transmission line, mitigation measures will be in effect to control and minimize construction equipment and fugitive dust emissions. Each of the cumulative projects listed in Table 5-1 must undergo a separate environmental review process and address its own emissions and impacts. The adjacent natural-gas power plants are required to comply with project-specific air quality permits. The proposed Apex Solar Power Project is considered a renewable energy facility, and thus would displace electricity generation that otherwise likely would occur with higher-polluting fossil fuels.

5.3. Greenhouse Gas and Global Climate Change

Currently there are no emission limits for suspected Greenhouse Gas emissions, and no technically defensible methodology for predicting potential climate changes from Greenhouse Gas emissions. However, there are, and will continue to be, efforts by various Federal, state, and local agencies to address Greenhouse Gas emissions as more information is known.

5.4. Soils

The potential for cumulative impacts to soil resources as a result of the construction of the proposed transmission line and solar facility is moderate when evaluated against other reasonably, foreseeable, future projects in the area. In the context of soil resources, moderate is defined as an impact that may affect the quantity or quality of a regionally significant resource, may affect the long-term productivity of the resource, may involve some irreversible or irretrievable damage to the resource, or creates an impact that can be mitigated on some level. The development of the reasonably, foreseeable future projects listed in Table 5-1, would reduce the amount of soils available to plant, animal, and human communities in the project area.

Clark County DAQEM requires all projects disturbing more than 0.25 acres of land obtain a dust control permit and implement BMPs to control fugitive dust from construction sites. All construction activities within the Las Vegas area must follow the permit process and associated terms and conditions based on the type and duration of the project.

5.5. Vegetation and Wildlife Resources

Cumulative effects to vegetation and wildlife resources, including threatened, endangered, or candidate plant and wildlife species; migratory birds; noxious and invasive weeds; and forestry (cactus and yucca); are relative to the amount of impact in the cumulative analysis area and would be proportional to the amount of ground disturbance within the specific project area. In particular, the cumulative effect of several projects constructed in the same area, is likely to produce impacts that will vary to some extent depending upon proximity of additional modifications. Increasing numbers of utility projects and access roads in areas of wildlife habitat are an important consideration. Such impacts can be minimized through the concentration of

linear projects (transmission lines, pipelines, etc.) into designated corridors with the goal of reducing habitat fragmentation. Any proposed action within the cumulative impacts region of influence requires compliance with mitigation measures for the Desert Tortoise in accordance with the USFWS approved biological opinion or permit.

5.6. Visual Resources

Implementation of the proposed action, along with past, present, and reasonably foreseeable actions, may have direct and long-term effects on visual resources. Development of additional electrical transmission and other renewable energy facilities, if approved and constructed, would modify the setting in the vicinity of the proposed project further degrading scenic quality.

Chapter 6. Tribes, Individuals, Organizations, or Agencies Consulted:

Table 6.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Joe Marhamati	Department of Energy/DOE Loan Program Office, Environmental Compliance Division	DOE Purpose and Need, Green House Gases, Intentional Destructive Acts (Appendix B)

Chapter 7. List of Preparers and Reviewers

This EA was prepared at the direction of the BLM Las Vegas Field Office, Las Vegas, Nevada, by EPG, under a contract with Fotowatio Nevada Solar, LLC. The following is a list of individuals responsible for the preparation of the EA:

Table 7.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Sandra Fairchild	Project Manager	Chapter 1 and 2; Cumulative Impacts
Ashley Rosia	Environmental Planner	Air Quality
Alison Pruett	Wildlife Biologist	Threatened, Endangered, Candidate Wildlife Species; Migratory Birds; Wildlife
Matt Hamilton	Botanist	Vegetation, Forestry
Rebecca Halbmaier	Archeologist	Cultural Resources
Marc Schwartz	Visual Resources Director	Visual Resources
Bob Ross	Las Vegas Field Manager	Reviewer
Greg Helseth	Renewable Energy Project Manager	Reviewer
Krystal Johnson	Wild Horse & Burro Specialist	Farmlands (Prime or Unique), Livestock Grazing, Rangeland Health Standards, Wild Horse & Burros
Brenda Wilhight	Realty Specialist	VRM and Land Use
Mark Chandler	Realty Specialist	VRM and Land Use
Kathleen Sprowl	Archaeologist	Cultural Resources, Native American concerns, Paleontology
Mike Moran	Environmental Protection/ HazMat Specialist	Waste (Hazardous or Solid)
Lisa Christianson	Envrionmental Protection Specialist	Air Quality, Greenhouse Gas Emissions
Fred Edwards	Botanist	Botanist, Forest Initiative Healthy (Cactus/Yucca), Threaten, Endangered or Candidate (PLANT Species), Vegetation Excluding Listed Species
Greg Marfil	Fire Planner	Fuels/Fire Management
George Varhalmi	Geologist	Geology/Mineral Resources/Energy Production
Nora Caplette	Natural Resource Specialist	Invasive Species/Noxious Weeds

Name	Title	Responsible for the Following Section(s) of this Document
Sarah Peterson	Hydrologist	Floodplains, Hydrologic Conditions, Riparian/ Wetlands Soils, Water Resources/Quality (Drinking/Surface/Ground), Wetlands/Riparian Zones, Wild & Scenic Rivers
Lauren Brown	NRS Restoration Ecologist	Visual Resources
John Evan	Planning & Environmental Coordinator	NEPA Reviewer
Sendi Kalcic	Wilderness Planner	Areas with Wilderness Characteristics
Jayson Barangan	Wildlife Biologist	Fish & Wildlife, Migratory Birds, Threatened, Endangered or Candidate (ANIMAL Species)

Appendix A. Appendix A Supplemental Authorities

Supplemental Authority	Not Present	Present/Not Affected	Present/May be Affected	Rationale
Air Quality		X		Impacts assessed in the EA.
Area of Critical Environmental Concern (ACEC)	X			Not present. The proposed project area is not within an ACEC or any desert tortoise critical habitat.
Cultural/Historical Resources	**X**			Not present. To support NEPA compliance as well as the Section 106 process, the Area of Potential Effect (APE) for the proposed transmission line and solar facility were surveyed and documented in BLM Cultural Resources Report # 5–2644. The APE consisted of approximately 159.5 acres; 154 acres on private land for the proposed solar facility and approximately 5.5 acres for the proposed 69kV generation tie-in line. No cultural resources were located during the survey; therefore, the project will have no effect on cultural resources.
Environmental Justice	X			Not present.
Farmlands Prime or Unique	X			Not present.
Floodplains	X			Not present.
Invasive Non-native Species/Noxious Weeds		X		Impacts assessed in the EA.

Supplemental Authority	Not Present	Present/Not Affected	Present/May be Affected	Rationale
Migratory Birds		X		Impacts assessed in the EA.
Native American Religious Concerns	X			Not present. There are no religious concerns in the project area.
Forest and Rangeland (HFRA)	X			Not affected.
Riparian/Wetlands Zones	X			Not present.
Threatened, Endangered and Special Status Plant Species	X			Not present. A biological survey conducted on May 3, 2010 indicated there are no threatened, endangered, or candidate plant species within the project area.
Threatened, Endangered and Special Status Animal Species			X	Impacts assessed in the EA.
Waste, Hazardous/ Solid	X			Not present.
Water Quality Drinking — Ground		X		Not affected. There are no surface waters in or near the project area. The U.S. Army Corps of Engineers issued a jurisdictional determination on November 24, 2009 indicating the solar facility site does not contain any jurisdictional Water of the U.S.
Wild & Scenic Rivers	X			Not present.
Wilderness/WSA	X			Not present.

Other resources of the human environment that have been considered for this EA are listed in the table below. Elements that may be affected are further described in the EA. Rationale for those elements that would not be affected by the proposed action and alternative is listed in the table below.

Other Resources	Not Present	Present/Not Affected	Present/May be Affected	Rationale
Greenhouse Gas Emission		X		Impacts assessed in the EA.
Fish and Wildlife (Excluding Federally Listed Species)			X	Impacts assessed in the EA.
Fuels/Fire Management		X		Not affected.
Geology/Mineral Resources/ Energy Production		X		Not affected. Any necessary excavation that produces mineral materials within the ROW must be used within the ROW or stockpiled on the site for sale by the BLM.
Hydrologic Conditions		X		Not present
Lands/Access	X			Not affected. The proposed 69kV transmission line is located in a designated utility corridor west of the Apex Industrial Park. The Apex Industrial Park is zoned for industrial development. There are no residential areas in or near the project area.
Livestock Grazing	X			Not present
Paleontology	X			Not present. Standard mitigation measures would be implemented in the event unanticipated paleontological resources are unearthed during construction.
Recreation	X			Not affected.

Soci-economic Resources		X		Not affected. The proposed 69kV transmission line is located in a designated utility corridor west of the Apex Industrial Park. The Apex Industrial Park is zoned for industrial development. The placement of the transmission line will provide electricity to the power grid, which may increase income to the power company, which in turn may provide jobs to the local community.
Soils		X		Impacts assessed in the EA.
Woodland/ Forestry		X		Impacts assessed in the EA.
Vegetation Excluding Federally Listed Species			X	Impacts assessed in the EA.
Visual Resources		X		Impacts assessed in the EA.
Wild Horses and Burros	X			Not present.

Appendix B. Appendix B FRV Apex Solar Energy Project

Fotowatio Nevada Solar, LLC. (Fotowatio), a division of Fotowatio Renewable Ventures, Inc (FRV) is proposing to construct and operate a 20MWac (24.9MWdc) photovoltaic solar facility in North Las Vegas, in Clark County, Nevada. The proposed project, RV Apex Solar Power Project (Project) would be located in the Apex Industrial Park, at the northwest corner of Grand Valley Parkway and Garnet Valley Boulevard (Assessor Parcel No 103-16-010-004). The 154 acre site is privately owned, in a General Industrial District zoned M-2 for heavy industrial use. In August, 2009, the City of North Las Vegas created the Apex Overlay District to specifically manage the Apex Industrial Park area for industrial and commercial uses. In the adopted ordinance, the proposed land use, a solar photovoltaic array, is classified as a utility installation and is a principally permitted use.

On October 15, 2009, Fotowatio received full Site Plan Approval from the City of North Las Vegas Planning Commission (SPR-15-09). This approval grants Fotowatio the right to utilize the proposed site for a photovoltaic solar project. Although, subject to final engineering design, the solar facility is anticipated to include the following project components:

- 70 Full Arrays (approximately 360 feet by 194 feet per array);
- 20 Partial Arrays (varying sizes);
- Substation with step-up transformer (80 feet by 110 feet), and
- 20 foot secondary maintenance access aisles between the arrays.

Throughout the site, setbacks from the property lines to the arrays will be maintained at 15 feet or greater. The site will be enclosed by a seven (7) foot chain link fence with three-strand barbed wire atop the fence as a security measure. Perimeter landscape will be provided in conformance with the City of North Las Vegas I-A Overlay District landscaping standards (17.20.240.G.4).

Before it commences operations, Fotowatio would develop a comprehensive security plan for the solar facility. Although the potential for intentional destructive acts would be low, Fotowatio anticipates having an on-site security presence to dissuade any malicious behavior. Fencing or some form of protective barrier would be constructed around the solar facility for the safety of the public and the welfare of the facility. While the type of protective barrier has not yet been selected, it is anticipated that Fotowatio would select materials that are consistent with the surrounding landscape and that provide maximum visibility for security personnel.

With these security measures in place, impacts to the Fotowatio solar facility from intentional destructive acts would be very small.

The project is expected to produce 55,850 MWh of renewable energy and portfolio credits annually. The entire output from the project will be purchased by NV Energy and utilized to fulfill NV Energy's renewable portfolio standard (RPS) requirements. All the electricity produced by the project will be used by customers of NV Energy's service territory. The project will create approximately 200 jobs during construction and is expected to produce enough energy during operations to power about 5,000 homes annually.

Environmental Considerations

Lands associated with the Apex Industrial Park were originally transferred out of federal ownership to private development under the Apex Project, Nevada Land Transfer and Authorization Act of 1989 (Public Law 101-67). Since the late 1980's the Apex Industrial Park area has been the subject of numerous studies and environmental analysis, including prior NEPA review, in which environmental impact and/or the approved mitigation measures and implementing agreements with relevant local, state, and Federal regulatory agencies.

These studies include:

Final Clark County Multiple Species Habitat Conservation Plan and Environmental Impact Statement for Issuance of a Permit to Allow Incidental Take of 79 Species in Clark County, Nevada (Clark County Department of Comprehensive Planning, U.S. Fish and Wildlife Service, September 2000)

Incidental Take Permit, U.S. Fish and Wildlife Service, Sacramento, California, Special Terms and Conditions for TE034927-0 (2001)

Implementing Agreement, Clark County Multi-Species Habitat Conservation Plan(MSHCP), November 2000. This agreement documents the legal obligations of the MSHCP participants, including Clark County, Nevada and the City of North Las Vegas, in implementing the MSHCP.

Intra-service Biological and Conference Opinion on Issuance of an Incidental Take Permit to Clark County Nevada for an Incidental Take Permit, File No. 1-5-00-FW-575 (U.S. Fish and Wildlife Service, November 19, 2000)

Phase I and Phase II Site Assessment and Sampling, Kerr McGee Chemical property, Apex Nevada (URS Corporation, March 2002)

Archaeological Excavations for the Apex Land Exchange, Clark County Nevada, Volumes I and II (Harry Reid Center for Environmental Studies, University of Las Vegas Nevada (April 2001, May 2001)

Clark County, Desert Conservation Plan, (RECON, April 1995)

Biological Resources

The proposed site of the solar facility, Apex Industrial Park in North Las Vegas, is covered by the mitigation and minimization measures of the Clark County Multiple Species Habitat Conservation Plan (MSHCP) (Clark County 2006), as evaluated under NEPA in the accompanying MSHCP environmental impact statement. The MSHCP classifies areas subject to the conservation plan according to use intensity that designates the likelihood of a covered species being present in a particular location in the MSHCP plan area. The proposed solar facility site is within the Un-Managed Area (UMA) of the MSHCP, which is defined as an area in which limited potential for the species covered by the plan to be present based on the predominance of human activity.

Clark County and several cities have received a Section 10(a) Permit under the Endangered Species Act. Because the solar facility is a connected action to BLM's issuance of a ROW grant for the transmission line, the solar facility is also subject to Section 7 under the Endangered Species Act. Fotowatio would comply with the MSHCP by obtaining a grading permit at the appropriate municipality and paying the current year's rate of $774 per acre remuneration fee on

federal lands, and $550 per acre remuneration fee on private lands within the Apex Industrial Park. Additional compliance requires worker environmental training for possibly encountering desert tortoise on the site, contacting appropriate authorities, and arranging for tortoise relocation with that authority.

Cultural Resources

The Apex Industrial Park site has been the subject of a comprehensive cultural resources evaluation, including a review of archaeological sites and historic structures. On the basis of site surveys, mapping, and review conducted by the Harry Reid Center for Environmental Studies at the University of Las Vegas, Nevada, it was determined that no cultural resources would be affected by development at the Apex Industrial Park. Specifically, the Harry Reid Center determined that no archaeological sites retained attributes recommended for eligibility under criterion (d) of the National Historic Preservation Act or received values under 36 CFR 800.9(c)(1). (Harry Reid Center for Environmental Studies, 2001).

To support NEPA compliance, as well as the Section 106 process, the Area of Potential Effect (APE) for the Apex Solar Power Project and 69 kV transmission line were surveyed for cultural resources by EPG on May 03, 2010 (BLM Cultural Resources Report #5-2644). The APE consisted of a total of approximately 159.5 acres; 154 acres on private land for the proposed photovoltaic array and approximately 5.5 acres for the proposed 69 kV generation tie-in line. No cultural resources were located during the survey. Therefore the construction and operation of the proposed solar facility and associated transmission line would have no effect on cultural resources.

Water Resources

The U.S. Army Corp of Engineers has determined that the site does not contain any jurisdictional "Waters of the U.S.". Therefore a Department of the Army Permit is not required (SPK-2009-01379-SG).

A Technical Drainage Study, in conformance with the APEX/KAPEX Flood Control Master Plan, as well as a Traffic Study, has been prepared and approved by the City of North Las Vegas Public Works Department. All other City of North Las Vegas permits, with the exception of the civil improvement plans design drawings, are currently in process at the City. The civil improvement plans are planned to be submitted in early July. These plans are subject to design approval – they do not relate to use approval. Such use approval was granted under SPR-15-09.

Construction of the solar facility will be subject to a General Storm Water Permit for Industrial Activities from the Nevada Division of Environmental Protection (NDEP). This permit will require development and implementation of a storm water pollution prevention plan (SWPPP) and a monitoring plan during construction thereby minimizing any impacts from storm water runoff. Such SWPPP has already been developed by Fotowatio and is under review by NDEP.

Proposed water usage will be minimal for the site. Domestic water use will be trucked in from off-site existing permitted water resources. No water will be drawn on-site or from Apex Industrial Park. Water will be utilized for annual solar panel washing to maximize efficiency of the modules. Total water for washing the solar panels during operation is estimated at 60,000 gallons per year.

Air Emissions

Construction of the solar facility will require a Surface Area Disturbance Dust Control Permit from Clark County Department of Air Quality and Environmental Management (DAQEM) for

dust emissions during construction. The permit will require dust mitigation during construction (such as pre-watering and maintenance of surface soils in a stabilized condition where loader support equipment and vehicles will operate, and maintaining vehicles speeds at less than 15 mph). No air emissions will be generated from operation of the solar facility.

Public Health and Safety

A Phase I Site Assessment was conducted for the Apex Industrial Park to identify any Recognized Environmental Conditions at the property. This was followed by a Phase II investigation in which shallow soils at the site were collected and analyzed. On the basis of the records review and research for the site, no significant Recognized Environmental Conditions were identified. In addition, soil sampling and laboratory analysis indicated that the tested chemical and metals were well below established regulatory action levels and did not pose a threat to the environment (URS 2002).

Construction and operation of the solar facility will not generate or store any hazardous materials. During construction, best management practices will be used to contain construction debris on site and any solid waste generated will be disposed of using a licensed contractor. No hazardous waste will be generated during construction or operation of the solar facility.

Appendix C. Appendix C Desert Tortoise Stipulations

Case File #: N-88313

NEPA Project #: DOI-BLM-NV-S010-2010-0149-EA

Section 7 Log #: NV-052-10-160

Terms and Condition of Biological Opinion in Area B

File No. 1-5-97-F-251

In order to be exempt from the prohibitions of section 9 of the Act, the applicant must comply with the following terms and conditions, which implement the reasonable and prudent measures described below. These terms and conditions are non-discretionary.

1. Measures shall be taken to minimize take of desert tortoises due to project-related activities.

a. A qualified tortoise biologist, or designee of the Bureau, shall present a tortoise-education program to all foremen, workers, and other employees working on the project. The program will include information on the life history of the desert tortoise, legal protection for desert tortoises, penalties for violations of Federal and State laws, general tortoise activity patterns, reporting requirements, measures to protect tortoises, terms and conditions of the biological opinion, and personal measures employees can take to promote the conservation of desert tortoises. The definition of "take" will also be explained. Workers will be encouraged to carpool to and from project sites. The program shall be approved by the Service prior to implementation. Specific and detailed instructions will be provided on the proper techniques to capture and move tortoises which appear onsite, in accordance with Service-approved protocol. Currently, the Service-approved protocol is Desert Tortoise Council 1994, revised 1999.

b. A speed limit of 25 miles per hour shall be required for all vehicles on the project site and unposted dirt access roads.

c. During construction activities, tortoise burrows should be avoided whenever possible. If a tortoise is found onsite during project activities which may result in take of the tortoise (e.g., in harms way), such activities shall cease until the tortoise moves, or is moved, out of harms way. The tortoise shall be moved by a qualified tortoise biologist, or individual trained in the proper technique of handling and moving desert tortoises. All workers will also be instructed to check underneath all vehicles before moving such vehicles. ***Tortoises often take cover under vehicles.***

d. ***The project shall require a tortoise biologist onsite during construction activities.*** Unless the area is fenced and cleared, the project will require an onsite biologist during construction of the project during the tortoise active period (March 1 through October 31), and a biologist on call during the tortoise inactive period (November 1 through February 28/29).

e. The FWS must approve the selected consulting firm/biologist to be used by the applicant to implement the terms and conditions of the biological opinion or permit issued by the Bureau. Any biologist and/or firm not previously approved must submit a curriculum vitae and be approved by the FWS before authorized to represent the Bureau in meeting compliance with the terms and

conditions of the biological opinion. Other personnel may assist with implementing mitigation measures, but must be under direct field supervision by the approved qualified biologist.

In accordance with Procedures for Endangered Species Act Compliance for the Mojave Desert Tortoise (Service 1992), a qualified desert tortoise biologist should possess a bachelor's degree in biology, ecology, wildlife biology, herpetology, or closely related fields as determined by the Bureau. The biologist must have demonstrated prior field experience using accepted resource agency techniques to survey for desert tortoises and tortoise sign, which should include a minimum of 60 days field experience. All tortoise biologists shall comply with the Service-approved handling protocol (Desert Tortoise Council 1994, revised 1999) prior to conducting tasks in association with terms and conditions of the biological opinion. In addition, the biologist shall have the ability to recognize and accurately record survey results.

f. **All project areas including construction sites, access routes, staging areas, and fencelines, will be cleared by a qualified biologist before the start of construction or ground disturbance.** The parcel shall be surveyed for desert tortoise using survey techniques which provide 100-percent coverage. During the tortoise active season, the pre-construction clearance shall be no more than 3 days before initiation of construction. During the tortoise inactive season, the pre-construction clearance shall be within 5 days before work begins.

****Pre-construction clearance shall be conducted on both the transmission line and the connected action on private lands.**

g. Desert tortoises encountered experiencing heat stress will be placed in a tub by a qualified tortoise biologist with one inch of water in an environment with a temperature between 76 degrees F and 95 degrees F for several hours, until heat stress symptoms are no longer evident.

h. Tortoises and nests found shall be relocated by a qualified tortoise biologist in accordance with Service-approved protocol (Desert Tortoise Council 1994, revised 1999). Burrows containing tortoises or nests will be excavated by hand, with hand tools, to allow removal of the tortoise or eggs.

i. Tortoises that are moved offsite and released into undisturbed habitat on public land, must be placed in the shade of a shrub, in a natural unoccupied burrow similar to the hibernaculum in which it was found, or in an artificially constructed burrow in accordance with Desert Tortoise Council (1994, revised 1999).

j. Desert tortoises moved during the tortoise inactive season or those in hibernation, regardless of date, must be placed into an adequate burrow. If one is not available, one will be constructed in accordance with Desert Tortoise Council (1994, revised 1999). During mild temperature periods in the spring and early fall, tortoises removed from the site will not necessarily be placed in a burrow.

k. **The project will require desert tortoise exclusion fencing. Fences will tie in to any existing fencing adjacent to the project area.** The fence may be permanent or temporary, as determined on a case by case basis. Fenced areas will require an initial tortoise clearance of the fenceline prior to fence construction, and a tortoise clearance following fence construction. Project sites to be fenced with permanent tortoise-proof fencing must be fenced prior to the commencement of surface disturbance activities within the project site. Fencing will consist of 1-inch horizontal by 2-inch vertical mesh. The mesh will extend at least 18 inches above ground and, where feasible, 6 inches below ground. In situations where it is not feasible to bury the fence, the lower 6-12

inches of the fence shall be bent at a 90-degree angle towards the potential direction of encounter with tortoise and covered with cobble or other suitable material to ensure that tortoise or other animals cannot dig underneath, thus creating gaps through which tortoises may traverse. The height of tortoise-proof fencing will be a minimum of 18 inches above ground. The fence shall be inspected, and zero clearance maintained between the bottom of the fence and the ground.

****Fencing will be required for the connected action on private lands.**

l. If fence construction occurs during the tortoise active season, a qualified tortoise biologist shall be onsite during construction of the tortoise-proof fence to ensure that no tortoises are harmed. If the fence is constructed during the tortoise inactive season, a biologist will thoroughly examine the proposed fenceline and burrows for the presence of tortoises no more than 5 days before construction. Any desert tortoises or eggs found in the fenceline will be relocated offsite by a qualified tortoise biologist in accordance with approved protocol. Tortoise burrows that occur immediately outside of the fence alignment that can be avoided by fence construction activities shall be clearly marked to prevent crushing.

Following Fence Construction: Prior to the commencement of project activities, all desert tortoises shall be removed from the site. A qualified biologist shall oversee the survey for and removal of tortoises using techniques providing 100-percent coverage of all areas. Two complete passes of 100-percent coverage will be accomplished. All desert tortoise burrows, and other species burrows which may be used by tortoises, will be examined to determine occupancy of each burrow by desert tortoises. Tortoise burrows shall be cleared of tortoises and eggs, and collapsed. Any desert tortoises or eggs found in the fenced area will be removed under the supervision of a qualified tortoise biologist in accordance with Service protocol.

m. After a project has been fenced and a tortoise clearance completed, if the operator encounters a desert tortoise in imminent danger, the operator shall move the tortoise out of harm's way and on to adjacent Bureau land. If the tortoise cannot be avoided or moved out of harm's way onto Bureau land, it shall be placed in a cardboard box or other suitable container and held in a shaded area until the Clark County pickup service or Bureau personnel can retrieve the tortoise.

n. On phased development projects, the operator may have the option with concurrence of the Bureau of initially fencing less than the total project acreage. The fenced area will be enlarged as the disturbance expands. To ensure that no tortoises are harmed, each new segment of fence will be constructed under the provision described in Terms and Conditions **1.k.** and **1.l**. above. Payment of the mitigation fee identified in Term and Condition **3.d**. below, will be required prior to surface disturbance of each phase.

o. The operator shall inspect the fencing at least on a quarterly basis, to insure that it is in compliance with the standards described in Term and Condition **1.k** and **1.l.** above, and shall perform maintenance when needed including removing trash, sediment accumulation, and other debris. Temporary fencing shall be removed at the end of the construction activity. Permanent fencing may be removed upon termination and reclamation of the project, or when it is determined by the Bureau and Service that the fence is no longer necessary. Monitoring and maintenance shall include regular removal of trash and sediment accumulation and restoration of zero ground clearance between the ground and the bottom of the fence, including re-covering the bent portion of the fence if not buried.

p. Where the Bureau allows or requires the installation of a temporary tortoise-proof fence, the fence shall include as much of the proposed construction site as feasible. This may in some

cases require the installation of temporary fencing along access routes. Typical fence design should consist of 1-inch mesh or 1-inch horizontal by 2-inch vertical mesh (hardware cloth or plastic) and be installed flush with ground and extend at least 18 inches above ground. Temporary tortoise-proof fencing should not be buried.

2. Measures shall be taken to minimize predation on tortoises by ravens drawn to the project area.

This will involve a litter-control program. This program will include the use of covered, raven-proof trash receptacles, removal of trash from the construction site to the trash receptacles following the close of each work day, and proper disposal of trash in a designated solid waste disposal facility. Vehicles hauling trash to the landfill and leaving the landfill must be secured to prevent litter from blowing out along the road.

3. Measures shall be taken to minimize destruction of desert tortoise habitat, such as soil compaction, erosion, or crushed vegetation, due to project-related activities.

a. If possible, overnight parking and storage of equipment and materials, including stockpiling, shall be within previously disturbed areas or areas to be disturbed which have been cleared by a tortoise biologist. If not possible, areas for overnight parking and storage of equipment shall be designated by the tortoise biologist which will minimize habitat disturbance.

b. All vehicle traffic will be restricted to existing access roads. New access roads will be created only when absolutely necessary and only when approved by the Bureau. Routes for new access roads will be flagged by the tortoise biologist prior to surface disturbance.

c. Project activity areas will be clearly marked or flagged at the outer boundaries before the onset of construction. All activities shall be confined to designated areas. Blading of vegetation will occur only to the extent necessary and shall be limited to areas designated for that purpose by the Bureau or tortoise biologist.

d. Remuneration fees apply to future disturbance in tortoise habitat. Past disturbance or disturbance on land not considered to be tortoise habitat by a tortoise biologist, and approved by the Bureau, are not assessed a tortoise remuneration fee. Remuneration fees will be used to fund management actions which are expected to benefit the desert tortoise. Actions may involve: Habitat acquisition; population or habitat enhancement or protection; research that increases our knowledge of desert tortoise biology, habitat requirements, or factors affecting habitat attributes; reducing loss of individual animals, documenting the species' current status and trend, and preserving distinct population attributes or any other action described in the Management Oversight Group's report titled *Compensation for the Desert Tortoise* (Hastey, et al. 1991) or Recovery Plan.

e. Payment of a remuneration fee, currently set at **$774.00 per acre on BLM administered lands and $550.00 per acre on private lands**, will be required for all projects prior to issuance of the lease, permit, notice to proceed, or other Bureau authorization, with the following exceptions:

(1) Because many mining plans of operation are phased in over a number of years, remuneration fees may be collected prior to the beginning of each phase.

(2) Mineral material sales and leases will be charged a fee of 25 cents per cubic yard up to the equivalent of $774.00 per acre of disturbance, or will be assessed $774.00 per acre for each phase of disturbance, at the discretion of the Bureau.

The current rate of $774.00 per acre will be indexed for inflation as described in Term and Condition **3.g**. below.

f. For Community Sand And Gravel Sales: Fees will be assessed on the basis of cubic yards of material removed from project site. A fee of 25 cents per cubic yard will be applied until such time as the fees collected are equal to $774.00 per acre for each acre of surface disturbance, or the equivalent rate as indexed for inflation. The fee shall be paid directly to the Bureau while purchasing mineral materials at the Las Vegas District Office. The fee shall be deposited directly into the Bureau's 5320 account.

g. This rate will be indexed for inflation based on the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) on January 31 of each year, beginning January 31, 1998. Fees assessed or collected for projects covered under this biological opinion after January 31st of each year will be adjusted based on the CPI-U. Information on the CPI-U can be found on the Internet at: http://stats.bls.gov/news.release/cpi.nr0.htm.

The total fee for this project is $86,658.22 ($774.00 x 2.53 acres + $550.00 x 154 acres).

• **$1,958.22 (Section 7 fee)**

• $84,700.00 (Section 10 fee)

The Section 7 fee will be paid directly to the Bureau of Land Management, Las Vegas, Nevada. These funds are independent of any other fees collected by BLM for desert tortoise conservation planning.

The payment shall be accompanied by the **Section 7 Fee Payment Form,** (Attachment) and completed by the payee. Payment shall be by certified check or money order payable to DOI/BLM, and delivered to:

The Bureau of Land Management

Las Vegas Field Office

4701 North Torrey Pines Drive

Las Vegas, Nevada 89130

(Contact: (702) 515-5000)

Acct. No.;

In addition, a copy of the Section 7 Fee Payment Form will be accompanied with a payment verification and delivered to:

The Bureau of Land Management Las Vegas Field Office

4701 North Torrey Pines Drive

Las Vegas, Nevada 89130

Attn: Assistant Field Manager, Renewable Resources Division

Desert tortoise habitat on non-federal lands would be compensated at $550.00 per acre and paid into the Clark County MSHCP account. The MSHCP fees are not currently indexed for inflation.

h. Projects resulting in residual impacts will require the submission of a Bureau-approved reclamation plan, unless determined by the Bureau and Service that reclamation rehabilitation is not necessary. The reclamation plan will describe objectives and methods to be used, species of plants and/or seed mixture to be used, time of planting, success standards, and follow-up monitoring. Depending upon the size and location of the project, reclamation could simply involve recontouring, if needed, and rehabilitation and restriction of access points or could involve reclamation over the entire area of surface disturbance. Reclamation will be addressed on a case-by-case basis.

4. Measures shall be taken to ensure compliance with the reasonable and prudent measures, terms and conditions, reporting requirements, and consultation reinitiation requirements contained in the biological opinion.

a. The project applicant shall notify the Bureau at least 10 days before initiation of the project. Notification shall be made to the Bureau's wildlife staff at (702) 515-5000.

b. The Bureau wildlife staff (702/515-5000) and Service (702/515-5230) must be notified of any desert tortoise death or injury due to the project implementation by close of business on the following work day.

c. All appropriate NDOW permits or letters of authorization shall be acquired prior to handling desert tortoises and their parts, and prior to initiation of any activity that may require handling tortoise.

d. The project proponent must submit a document to the Bureau within 30 days of completion of the project showing the number of acres disturbed; remuneration fees paid; and number of tortoises taken, which includes capture and displacement, killed, injured, and harassed by other means, during implementation of programmatic actions.

e. For tortoise removals in Clark County, the applicant shall make prior arrangements with Clark County's tortoise pickup service (702/593-9027) at least 10 days prior to the commencement of tortoise collection. Outside Clark County, initial notification shall be made to the Bureau as stated in Term and Condition **4.a**. above.

Attachment A

SECTION 7 FEE PAYMENT FORM

PAYMENT CAN NOT BE ACCEPTED WITHOUT FORM

Entire form is to be completed by project proponent

Biological Opinion File Number: ____1-5-97-F-251_____

U.S. Fish and Wildlife Service Office that Issued the Opinion:

Nevada Fish and Wildlife Office, Reno, Nevada

Species: Desert tortoise (Gopherus agassizii)

Project: _____Apex Solar Power – 69kV Gen-Tie Transmission Line Project_____

Case File No: N-88313

Amount of Payment Received: $_____

Total Payment Required: $ $1,958.22

Date of Receipt: _____

Check or Money Order Number: _____

Number of Acres to be Disturbed: _____

Project Proponent: ____Fotowatio Nevada Solar, LLC ._____

Telephone Number: _____

Authorizing Agencies: _____

Make checks payable to: DOI/BLM

Deliver check to:

Bureau of Land Management

Las Vegas Field Office

4701 North Torrey Pines Drive

Las Vegas, Nevada 89130

(Contact: (702) 515-5000)

Acct. No.:
If you have questions, you may call the Southern Nevada Field Office of the U.S. Fish and Wildlife Services at (702) 515–5230 *revised 4/27/04*

Attachment B

DESERT TORTOISE SECTION 7 COMPLIANCE FORM

Entire form is to be completed by the project proponent and delivered to the Bureau of Land Management within 30 days of project completion

Biological Opinion File Number: 1-5-97-F-251

Species: desert tortoise (Gopherus agassizii)

Project Name Apex Solar Power – 69kV Gen-Tie Transmission Line Project_____

Acreage of Disturbance Authorized: 2.53 (BLM administered); 154 (Private) _____

Acreage Actually Disturbed:_____

Fees Assessed: $1,958.22 – BLM; $84,700 - Private___ Rate: $754/acre; $550/acre

In accordance with this biological opinion, applicants or project proponents must avoid or remove tortoises from lands to be disturbed within the project area.

Area B mandatory desert tortoise clearance survey

Area C mandatory desert tortoise clearance survey

Area C voluntary desert tortoise clearance survey conducted

Area C voluntary desert tortoise clearance survey not conducted

Date(s) clearance survey(s) conducted:

Number of desert tortoises observed:

Number of desert tortoise burrows observed:

Number of desert tortoises injured:

Number of desert tortoises killed:

Number of desert tortoises removed from the project site:

(Provide a report detailing all tortoise encounters and what happened to the animals. This report will include age class, gender, and health of each animal, maps showing where each tortoise was captured and later relocated, and the air temperature during the relocation.)

Company and persons who conducted the survey and removal1 :

Company:_____

Name:_____

Address:_____

Phone:_____

State Permit #:_____

If desert tortoises were encountered, attach a summary of each action. This summary shall include: date encountered; whether the animal was avoided, injured, killed, or moved out of harm's way; and if the animal was handled, please identify where the animal was relocated to.

Deliver this completed form and required supplemental information to:

Bureau of Land Management

Division of Recreation and Renewable Resources

4701 N. Torrey Pines Drive

Las Vegas, NV 89130

(702) 515-5000

If you have questions, call the BLM's Wildlife staff at (702) 515-5000.

[1] BLM approval of biological monitors/surveyors required. Submit resumes for review/approval 15 days prior to construction·