

# ***Air Force Real Property Agency***

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## **Renewable Energy EUL: Edwards and Kirtland AFB**



**Air Force Real Property Agency  
23 Feb 10**

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# Overview

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- **EUL Authority**
- **Edwards AFB EUL**
- **Kirtland AFB EUL**
- **Planning Considerations**



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# ***EUL Authority***

- **EUL authorized by Title 10 U.S.C. § 2667**
  - **Allows AF to lease non-excess land in exchange for lease payments via cash or in-kind consideration**
  - **AF must obtain fair market value (FMV) and required AF return on investment**
- **Non-excess land assets identified by Installation**
- **Highest Ranking Offeror identified through Request for Qualifications (RFQ) process; non-FAR transaction subject to full and open competition**
- **Private developer leases land, provides AF with compensation**



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# ***Energy EULs***

- **Over the past few years, AFRPA has identified opportunities for the Air Force to partner with private industry for energy development**
- **Energy EULs encompass a variety of energy types, including: solar, wind, biomass generation, landfill gas generation, fossil fuel generation and alternative fuel facilities**
- **Interest in projects has increased as states pass more stringent renewable portfolio standards**
- **Strong community relationships are key to a successful EUL Project**





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# ***Edwards AFB: Energy Project Scope***

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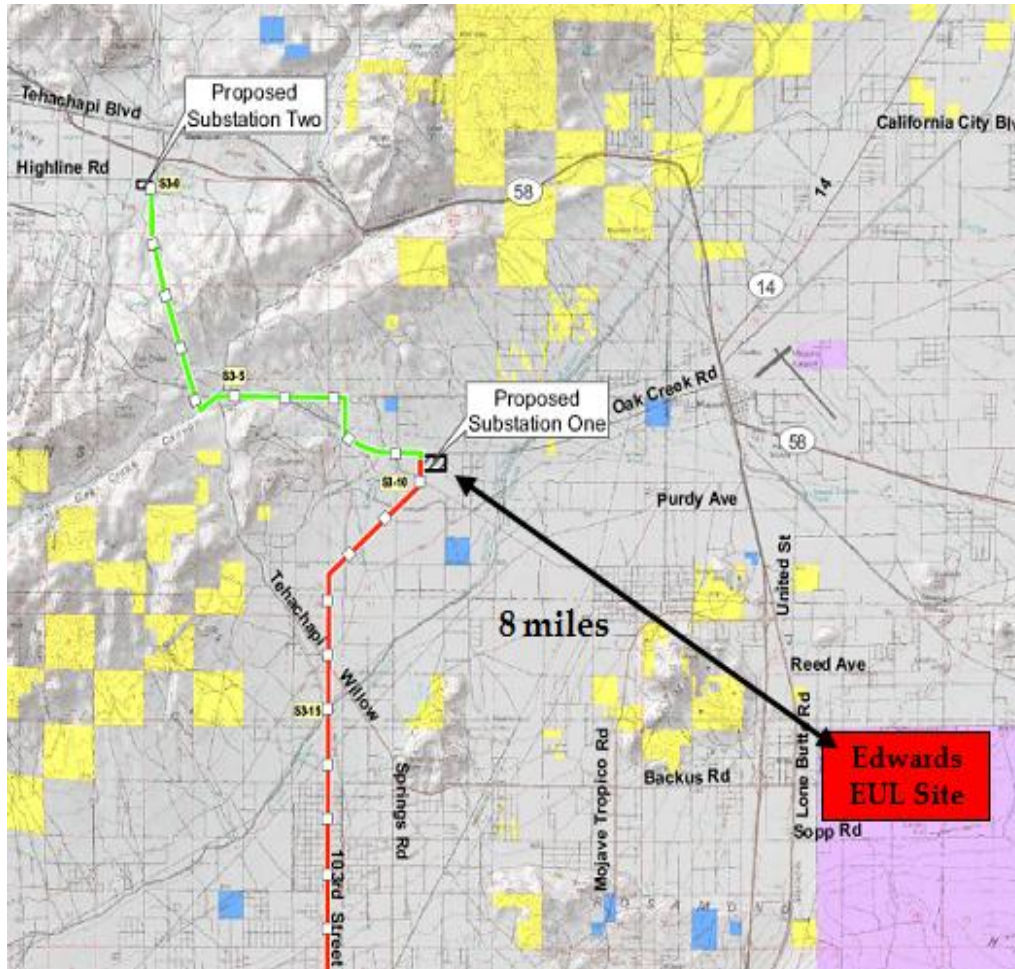
- **Proposed 450 megawatt solar project on 3,288 acres**
  - **Electricity will be sold to a California utility**
    - **Edwards AFB has left open the possibility of purchasing power as a separate acquisition to the EUL transaction**
- **In-Kind Consideration for this project could be taken in multiple forms, to include:**
  - **Separate solar project to meet renewable energy needs of Edwards AFB**
  - **Fund on-base energy efficiency investments to meet federal and Department of Defense energy mandates;**
  - **MILCON or other infrastructure and quality-of-life projects**
  - **Electricity and Renewable Energy Certificates**



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# Edwards AFB: Energy Parcel Location

## Location Overview of EUL Project Site and Transmission

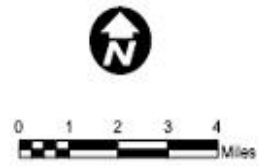


### Proposed Project Route and Options

- Legend**
- Proposed Project - (500 kV)
  - Mileposts\*
    - \* Segment 3 is denoted as "S3"
    - \* Segment 2 is denoted as "S2"
  - Proposed Project - (220 kV)
  - Option A Deviation - Proposed Project (Segment 2)
  - Option B Deviation - Proposed Project (Segment 2)

- Substations
- Developments

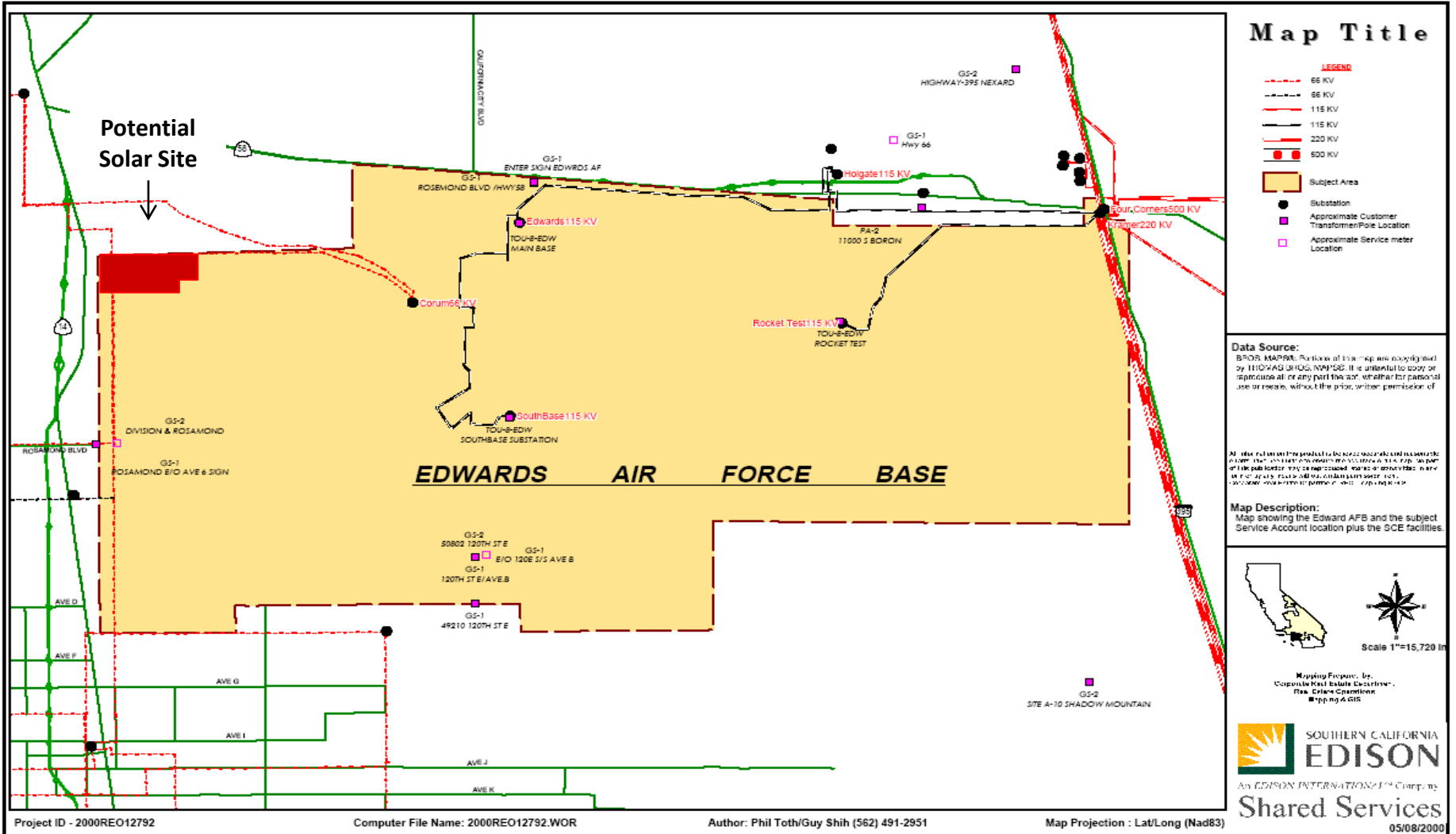
- Federal Lands**
- Bureau of Land Management
  - Department of Defense
  - US Forest Service
  - State





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# Edwards AFB: Energy Parcel Location





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# ***Kirtland AFB: Energy Project Scope***

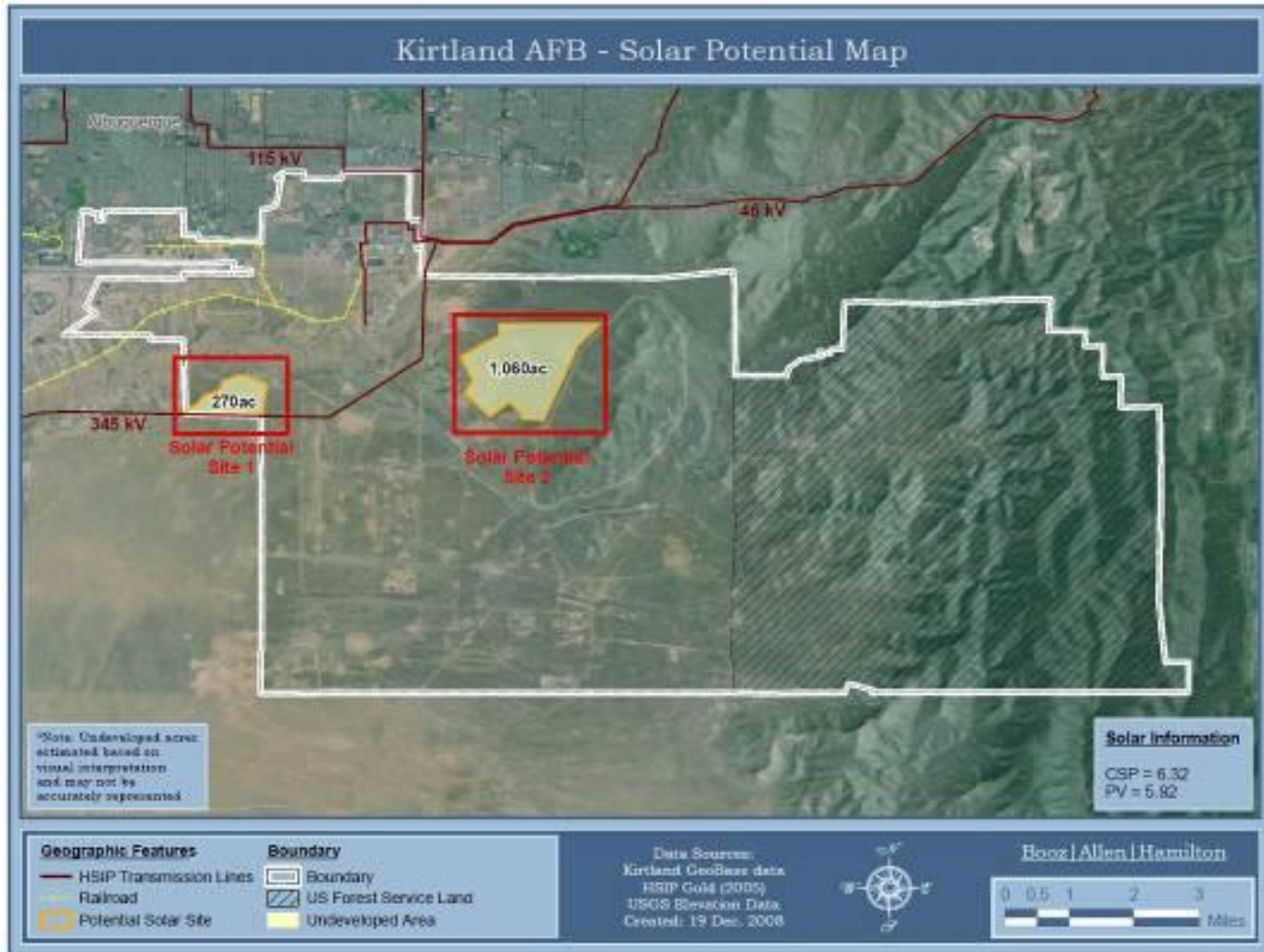
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- **Potential 20 MW PV facility located on one of two sites**
  - **Kirtland identified two potential non-excess parcels with optimal solar development characteristics**
  - **Size and technology type chosen due to external market needs and transmission constraints**
- **Project originated from a Memorandum of Understanding between AF and State of New Mexico which pledged coordinated action to examine renewable energy opportunities in the state**
- **Financial Viability – Project viability will depend on price received for electricity and Renewable Energy Credits (RECs)**
- **Market Assessment – Strong market for renewables in New Mexico; local utility indicates issuance of a new solicitation for solar energy in next 6-12 months**



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# Kirtland AFB: Energy Parcel Location



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# *Planning Considerations*

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- Renewable energy projects have multiple financial and regulatory requirements to be feasible to include:
  - Renewable Portfolio Standards (RPS)
  - 30% Federal Investment Tax Credit and Production Tax Credits
  - Access to transmission
- Long planning horizon in power generation
  - Lengthy transmission and environmental process
  - Utility releases Request for Proposal (RFP) with short response window
- Electricity prices are rising and unlikely to fall
- Solar equipment prices are down
- Height Restrictions
- BLM land may become available



# ***SUMMARY***

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- **Energy EULs provide additional revenue stream to Installation and DoD**
  - **Installation can achieve renewable/energy security goals through careful specification of in-kind consideration**
- **RPS creates demand for renewable energy projects**
- **Electricity prices expected to increase**
- **Federal solar incentives extended through 2016**
- **Renewable energy projects have long and extensive planning requirements**



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***Questions?***

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# ***Backup***



# Technology Selection

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- **Best value with acceptable risk – Proven technology that maximizes value and minimizes risk rated on four characteristics:**
  - **Financeability – Capital markets must trust technology to provide attractive financing**
  - **Market Demand – Federal/State incentives and regulations vary that may favor one technology over another, i.e. a technology using no/low water**
  - **Performance – Technology must have long track record of sustained performance**
  - **Cost Effectiveness – Some technologies are cost prohibitive or are not as attractive from a performance, installation, and maintenance standpoint**





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# *How Energy EULs Can Support AF Goals*

- **AF energy goals:**
  - **EPAct 05: 7.5% renewable electricity consumption by 2013; 2% annual demand reduction from FY06 – FY15**
  - **E.O. 13423: 50% of EPAct requirement must be new generation**
  - **EISA 07: goal of 25% renewable energy consumption by 2025**
- **Solar EUL envisioned here *could* support MAJCOM/Installation by provision of in-kind consideration in the following forms:**
  - **Provision of renewable energy system by HRO for on-base use**
  - **RECs or free power from system**
  - **Energy security – negotiated agreement grants first-access rights to installation in case of grid outage**



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# *Energy EULs and Power Purchase Agreements*

- EULs are the appropriate tool when:
  - Strong market demand for energy
  - Project output is for sale back to utility or external party
- AF Power Purchase Agreements (PPAs):
  - Appropriate when project output is for installation use only
  - Air Force Civil Engineer Support Agency (AFCESA) leads PPA determination and execution
  - AFRPA is involved when land is leased



**-- NOTE --**

Office of Management and Budget stipulates EULs and PPAs must be negotiated separately



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# ***Energy EUL Vision***

***The Air Force seeks an energy project that:***



- **Creates an enduring, long-term partnership between the Government and private industry**
- **Enhances Air Force relations with local government and neighboring communities**
- **Yields maximum value for all parties and supports Air Force energy goals**
- **Adheres to best commercial practices**
- **Maintains compatibility with Government uses and the installation's mission**