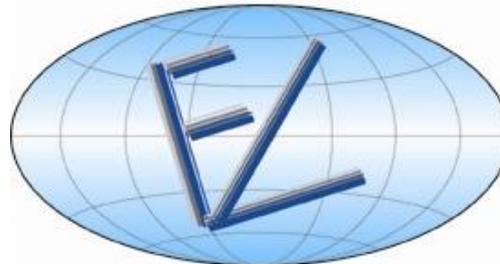


**Israel Energy Forum on Solar Power Plants**  
**9 February 2009, Samuel Neaman Institute, Haifa, Israel**

**Renewable Energy Action Teams:**  
*Streamlining Renewable Energy  
Power Plant Projects*

**The LEVON Group, LLC**



*Environmental Consultancy and Facilitation*

# Technological Complexity and Bureaucracy

- ✚ Large scale solar power plant projects are technologically complex and challenging
- ✚ Current tools used for review and permitting of such projects are cumbersome and time consuming
- ✚ In the U.S. each major project would required National Environmental Policy Act (NEPA) review
- ✚ California projects are also subject to the California Environmental Quality Act (CEQA)
- ✚ New attempts are being made to harmonize and simplify the processes



# U.S. Energy Act (August 8, 2005)

✦ Section 211 states:

***“It is the Sense of the Congress that the Secretary of the Interior should, before the end of the 10-year period beginning on the date of enactment of this Act, seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 MW of electricity”.***



# How can we accelerate permitting?

- ✦ Department of the Interior Bureau of Land Management (BLM) received 125 applications by May 2008:
  - Rights-of-way for solar energy development in the six southwestern states
  - Land covering almost one million acres (@ 4million dunam)
  - Potential to generate 70 Billion Watts of electricity,
  - Enough to power 20 Million average American homes.
- ✦ The U.S. DOE and BLM decided to jointly preparing a solar energy Programmatic EIS to quickly deploy solar energy projects



# The Role of Solar PEIS

- ✦ Facilitate permitting or sponsoring of large-scale solar electricity-generating installations in the Western United States
- ✦ Develop joint policies and strategies:
  - **BLM**: deciding on rights-of-way for solar projects on BLM-managed land.
  - **DOE**: choosing to provide financial grants for solar projects installed on BLM-managed or other lands in six Western states.
- ✦ Solar PEIS to be completed Spring 2010
- ✦ Site-specific reviews will follow:
  - Determine if development plans follow ‘best practices’ and mitigation strategies



# Alternatives evaluated for the Solar Energy PEIS

☼ No action alternative

☼ Proposed action

- Developing and implementing agency-specific programs that would facilitate environmentally responsible utility-scale solar energy development
- Programs to include policies and mitigation strategies related to solar energy development in the 6-state study area
- For BLM, amending individual land use plans to adopt the new program

☼ Limited development alternative

- Limit development to previously proposed solar energy development projects which have complete plans of development and are awaiting application approval



# Solar Energy Technologies Analyzed

## ☀ Concentrating Solar Power (CSP)

- trough (including with Fresnel lens)
- dish
- tower

## ☀ Concentrating Photovoltaic (CPV)

## ☀ Flat Panel Photovoltaic (PV)

- fixed
- tracking



# Status of Large Solar Energy Projects in California

- ✦ California's governor issued Executive Order S-14-08 (Nov. 08):
  - Streamline California's renewable energy project approval process
  - Increase California's Renewable Energy Standard to 33% renewable power by 2020
- ✦ Solar energy projects in the California desert area key to achieving goal
- ✦ Many large solar energy projects are being proposed on BLM lands:
  - California 'right-of-way' requests > 300,000 acres
  - Development of ~ 34 large solar thermal power plants
  - Totaling approximately 24,000 MW





# Selected Projects Under Review

(As of December 2008)

<b>Project Name</b>	<b>Location</b>	<b>Size / Technology (MW)</b>	<b>Status</b>
<b>Victorville 2</b>	<b>Victorville</b>	<b>513 MW / natural gas 50 MW / solar trough</b>	<b>Approved 7/16/08</b>
<b>Ivanpah Solar</b>	<b>SB</b>	<b>400 MW / solar tower</b>	<b>AFC 8/31/07</b>
<b>Carrizo</b>	<b>SLO</b>	<b>177 MW / Compact Linear Fresnel Reflector</b>	<b>AFC 10/25/07</b>
<b>Beacon Solar</b>	<b>Kern</b>	<b>250 MW / solar trough</b>	<b>AFC 3/14/08</b>
<b>SES Solar 2</b>	<b>Imperial</b>	<b>750 MW / Stirling engine</b>	<b>AFC 6/30/08</b>
<b>City of Palmdale</b>	<b>Palmdale</b>	<b>555 MW / natural gas 62 MW / solar trough</b>	<b>AFC 8/4/08</b>
<b>San Joaquin Solar 1&amp; 2</b>	<b>Fresno</b>	<b>106.8 MW / solar trough / biomass hybrid</b>	<b>AFC 11/26/2008</b>

# California's Streamlining Efforts

- ✚ Solar thermal projects (above 50 MW) require approvals from BLM and the CEC prior to construction.
- ✚ The governor directed state agencies to create comprehensive plans to prioritize regional renewable projects based on
  - An area's renewable resource potential, and
  - The level of protection for plant and animal habitat.
- ✚ Created the Renewable Energy Action Team (REAT)



# The Role of REAT

## ✦ REAT will create:

- A "one-stop" permitting process with the goal of reducing the application time for specific projects in half
- A special joint unit will concurrently review permit applications filed at the state level
- Identify preferred areas in the California desert that will benefit from a streamlined permitting and environmental review process

## ✦ REAT will coordinate approach with federal partners in the expedited permitting process

