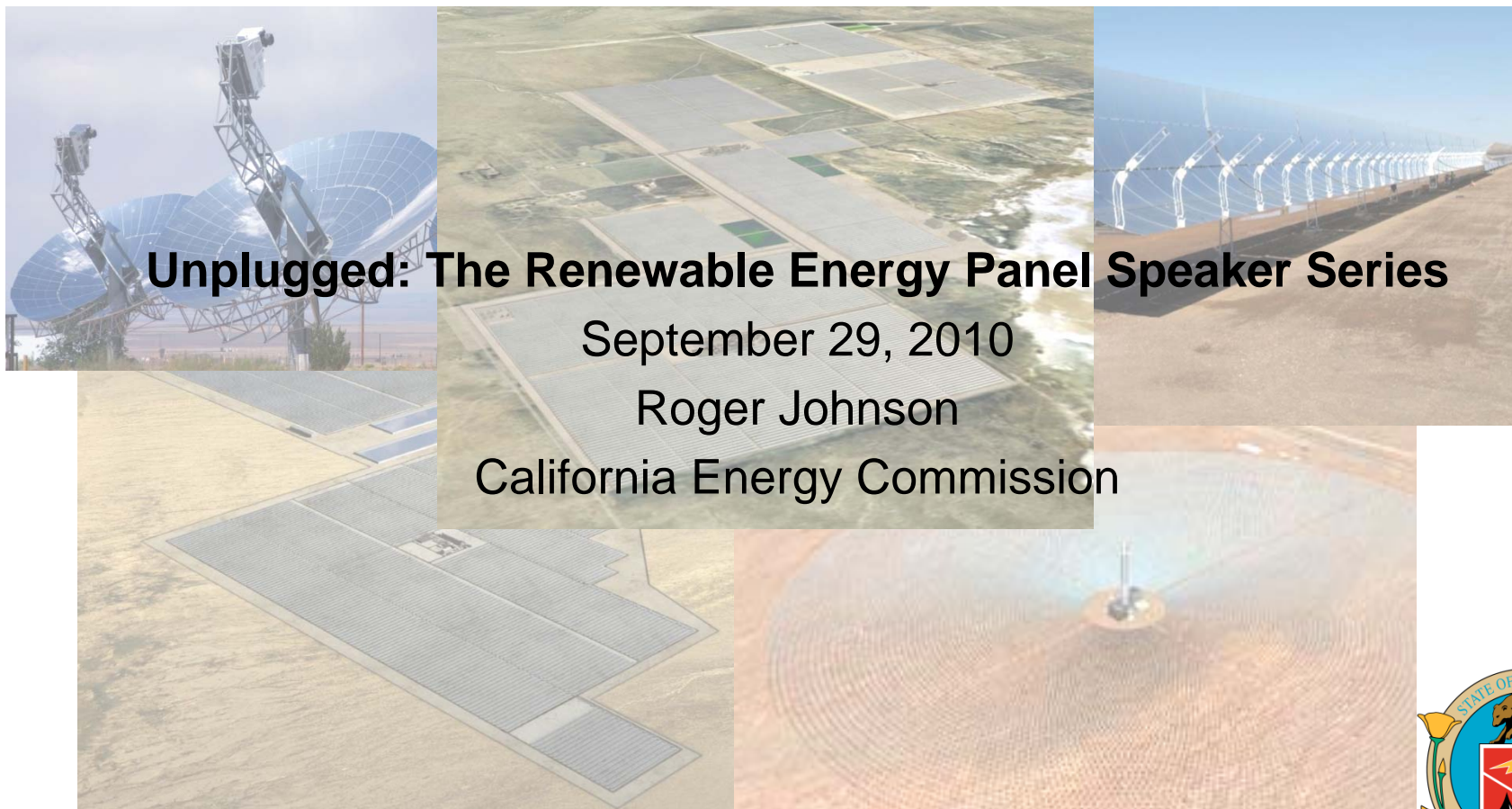


American Reinvestment & Recovery Act (ARRA) Solar Projects Progress at the Energy Commission



Unplugged: The Renewable Energy Panel Speaker Series

September 29, 2010

Roger Johnson

California Energy Commission



ARRA Opportunity and Timelines

Grant in Lieu of Investment Tax Credit (ITC)

- Cash grant provided by US Treasury to cover up to 30% of upfront project costs for eligible renewable energy projects
- Deadlines:
 - State & federal permitting processes must be complete by year end 2010
 - Projects must “start construction” by year end 2010, and come on line per specified dates.
 - “Safe harbor” provisions may permit expenditure of 5% of certain project costs by year end as an alternative to physical construction start.
 - Solar thermal projects need to be in service no later than year end 2016



ARRA Opportunity and Timelines

Department of Energy (DOE) Loan Guarantee

- DOE will repay construction cost of loan if borrower defaults on bank loan
- Available to renewable generators OR facilities that manufacture related renewable energy components
- Deadline:
 - Project construction must start by September 30, 2011
 - Projects that cannot meet Treasury Grant deadlines may still qualify for loan guarantee



California Energy Commission (CEC) Mandate Under Warren-Alquist Act

- CEC permit is in lieu of any state or local permit for thermal power plants with a capacity of ≥ 50 megawatts (MW)
- CEC is California Environmental Quality Act (CEQA) lead agency
- Certified Regulatory Program equivalent of environmental impact report
 - endangered species, cultural resources, visual, socioeconomic effects
 - Alternatives
 - Significant impacts must be mitigated or overridden
- Compliance with laws, ordinances, regulations and standards
- Safety and Reliability
- Power plant siting process provides a building permit for approved projects, and CEC is Chief Building Official



CEC Siting/Permitting Process

- **Data Adequacy**
 - Minimum requirements to accept application
- **Staff Discovery and Analysis**
 - Data Requests
 - Issues Identification & Resolution
 - Public Workshops
 - Staff Assessments (SA) – CEQA impact evaluations
- **Committee Evidentiary Hearing and Decision**
 - Evidentiary hearings based on SA and other information
 - Committee produces Presiding Member's Proposed Decision (PMPD)
 - PMPD goes before full Commission for decision and if approved, a certification

Note: Most ARRA solar thermal projects have been proposed on BLM lands, requiring a federal National Environmental Policy Act (NEPA) environmental analysis also.

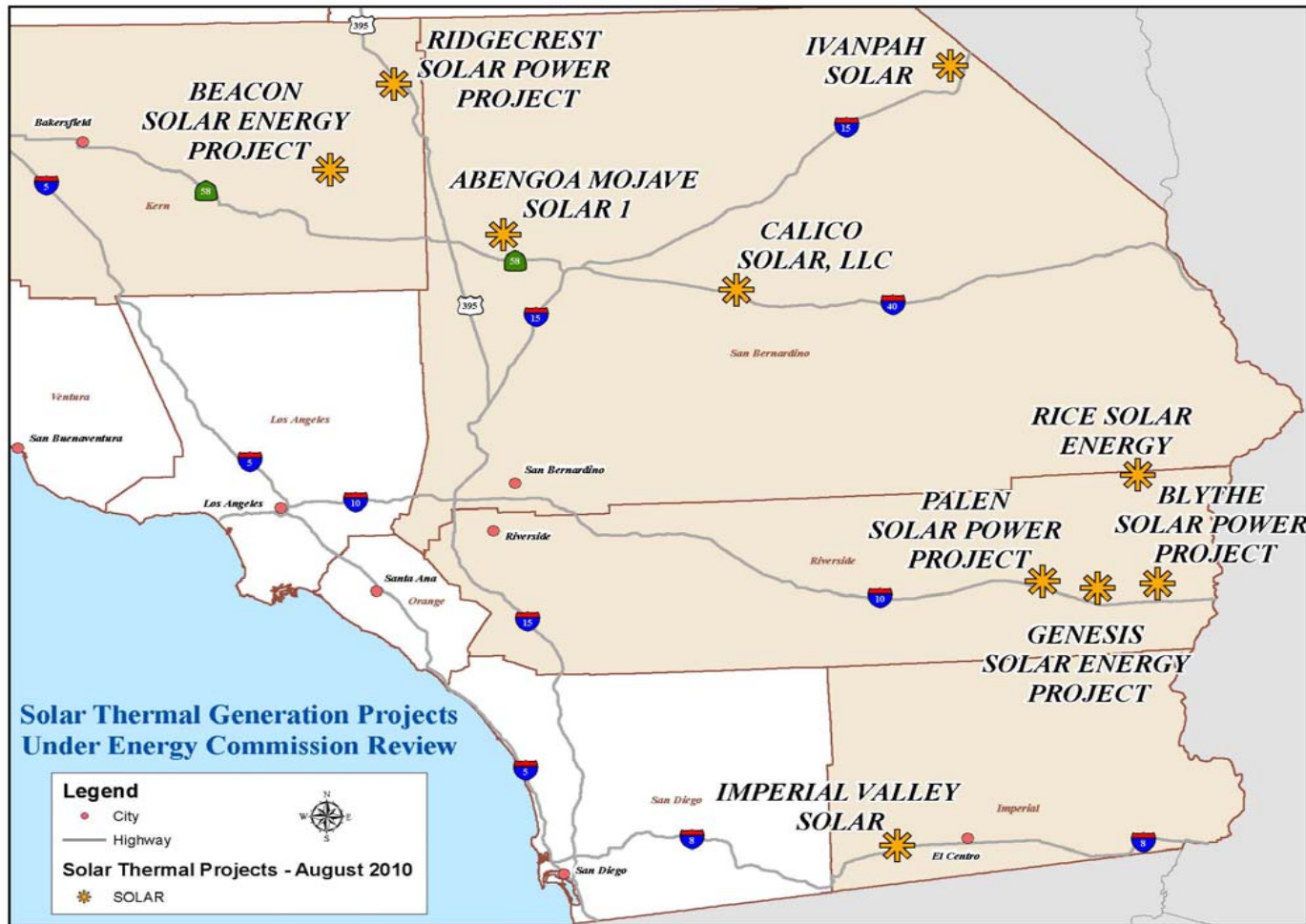


Ten Solar Thermal Projects Seeking ARRA funding Currently in the CEC Siting Process

- Ivanpah Solar Electric Generating System (370 MW) **APPROVED 9/22/10**
- Beacon Solar Energy Project (250 MW) **APPROVED 8/25/10**
- Imperial Valley Solar Project (750 MW) **PMPD Consideration 9/29**
- Calico Solar Project (850 MW)
- Abengoa Mojave Solar (250 MW) **APPROVED 9/8/10**
- Blythe Solar Power Project (1,000 MW) **APPROVED 9/15/10**
- Palen Solar Power Project (484 MW)
- Genesis Solar Energy Project (250 MW) **PMPD Consideration 9/29**
- Rice Solar Energy Project (150 MW)
- Ridgecrest Solar Power Project (250 MW) – delayed



Solar Thermal Projects Seeking ARRA funding Currently in the CEC Siting Process



Comparative Footprint of Projects at CEC

| | SOLAR | NATURAL GAS |
|------------------|--------------|--------------------|
| Active Projects* | 9 | 12 |
| Avg. MW | 511 | 500 |
| Avg. Acres | 3,800 | 30 |

The average solar project site is over **125 times larger** than the average natural gas project.

* In addition to 21 natural gas and solar projects, the Energy Commission is reviewing the Hydrogen Energy California project - a 390 MW petroleum coke/coal gasification project proposed on 473 acres in Kern County to demonstrate carbon sequestration technology.



Solar Thermal Project Permitting Challenges

Large project size exacerbates impacts

- Many in areas with minimal previous disturbance cause potential for significant impacts on biological resources
- Presence of sensitive cultural resources in desert
- Complex water/surface drainage engineering issues



Solar Thermal Project Permitting Challenges

Collaboration

- Need for unprecedented coordination with US Bureau of Land Management (BLM) given large number of projects proposed on federal land
- Impacts to endangered species require close coordination between CEC, CA Department of Fish & Game (DFG), and U.S. Fish and Wildlife Service (USFWS)



Meeting the Challenge

- SBx8 34 – Siting and human resource issues
- Close coordination between State and federal agencies
- High level coordination/ trouble shooting
 - Renewable Energy Policy Group (agencies)
 - Renewable Energy Action Team (state/federal agency mgmt)
 - Desert Renewable Energy Conservation Plan (DRECP) (agencies & stakeholders)



SB 8x 34 Provisions

- Bill by Senator Alex Padilla signed into law on March 22, 2010
- Improved California permitting process for certain solar thermal projects located in DRECP boundary seeking ARRA 2010 funding
- Established incentives and recruitment/retention benefits for CEC staff working on ARRA solar project permitting
- Enables CEC decision makers to confer with other CA agency department heads about ARRA project issues
- Provides an option for dealing with biological resources impacts - paying into an interim mitigation fund administered by CA DFG in coordination with CEC



External Critical Path Items

- CEC Resolution of Cultural Resources Dispute with BLM
- Legal Vulnerability
- Biological Resources
- Transmission



Summary of Where We Are Now

- CEC hearings are “completed” or in progress for all but Palen and Rice projects.
- BLM has released 5 NEPA process Final Environmental Impact Statements (FEIS) (Blythe, Calico, Genesis, Imperial, Ivanpah projects) and will release more in September.
- BLM is completing Cultural Resources Programmatic Agreements for release in September.
- U.S. Fish and Wildlife Service is completing Biological Opinions on ARRA projects’ impacts to federally listed species in desert.
- Project developers and agencies considering options for phasing project development and phasing impact mitigation costs
- CEC has approved 4 and released 2 PMPDs for 2,870 MW



Crossing the Finish Line

- BLM issues Records of Decisions in a timely fashion that are consistent with CEC Proposed Decisions
- CEC and BLM post-decision phase: For approved projects, compliance with Conditions of Certification (CEC) and Right of Way Grant Conditions (BLM)
- CPUC approval of Final Power Purchase Agreements
- CPUC and SCE have a credible transmission arrangement
- SCE and CAISO achieve all the necessary FERC approvals
- DOE loan guarantees secured
- Project Financing Closed
- Project owners meet substantial construction requirements
- ARRA cash grants are paid



Additional Information

Project Information www.energy.ca.gov/sitingcases

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