TOURISM ECONOMIC COMMISSIOM

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California Energy Commission

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Docket No.09-RENEW EO-O1

1516 Ninth Street

Sacramento, CA 95814-5512

Submitted electronically: docket@energy.ca.gov

Re: Desert Renewable Energy Conservation Plan

Gentlepersons:

Thank you for the extension of time to May 22, 2012 and the opportunity to comment on the DRECP as scoping is completed.

The Tourism Economics Commission is a nonprofit organization which has studied the impacts of the six (6) alternative scenarios of the Desert Renewable Energy Conservation Plan, the Power Point Presentation at the DRECP Stakeholders Meeting on April 25/26, 2012 in San Bernardino. The Commission has also interviewed many desert experts and studied other pertinent materials leading up to the scenarios including economic studies from Idaho State University, Michigan State University, The University of North Carolina, National Parks Conservation Association, Defenders of Wildlife, the National Park Service, the Harvard Kennedy School of Government, and "Death of Tourism in our area and across the American West" by Steve Brown of the Sun Runner California Desert Magazine.

What we see: THE DEATH OF THE TOURISM ECONOMY IN THE CALIFORNA DESERT. These comments address the reasons why, and the alternatives which are available to you to prevent serious damage to local economies in the desert and the failed expectations of millions of domestic and foreign visitors each year.

The Tourism Economics Commission is composed of over 55 members from the tourism industry in the California Desert: solar industry hands-on experts, businesses affected by the tourism industry, an architect experienced in desert design and construction with energy

efficiency a key design component, a former member of the BLM Desert District Citizens Advisory Commission appointed by the Clinton and then by the Bush administration, a desert publisher with significant expertise in California Desert public affairs, former planning commission members, the art community of the desert, seasoned desert ecologists, and scholars from the University of California at Santa Cruz, UCLA and USC. Commissioners come from throughout the desert - from Death Valley to the Mexican border.

The DRECP scenarios are flawed in the following respects:

A. Your science advisors do not include any economists – This must be remedied since the disclosure of serious economic impacts are required components under NEPA and CEQA, as well as mitigation alternatives.
B. The scenarios fail to take into account the economic effects of alternative energy developments on the tourism business in the desert, the many ancillary businesses which rely on tourism, the people who live in the desert, and millions of visitors to the California Desert from around the world.
C. The Scenarios do not use, or even consider, the federal standards established by the EPA in planning for solar, wind, geothermal and other forms of alternative energy.

What does the existing body of economic studies teach us?

Joshua Tree National Park is a much-studied tourism destination in the California Desert and the studies demonstrate the type of rigorous economic analysis which should be done before banishing the desert tourism industry to an undeserved permanent purgatory.

Joshua Tree National Park attracts approximately 1.4 million visits each year. Despite the worst economic recession since the 30's. Studies by the University of Idaho indicate that these visitors travel from throughout the United State to the extent of 81%, and from international locations to the extent of 19%. Several years ago Defenders of Wildlife studied visitation to the Mojave Deseret indicating that in 2003 there were over 7 million recreation visits in the Mojave bioregion. Annual visits are now much higher, and the DRECP fails to consider this significant tourism factor in its analysis.

Why do visitors come to the California Desert? Why do they spend money in the desert communities?

Studies at Joshua Tree National Park give us the answer. A University of Idaho study identified the ratings of the reasons why people visit Joshua Tree National Park:

Views without development	90%
Clean air	89%
Natural quiet, sounds of nature	87%
Desert plants/wildflowers	83%
Native wildlife	81%

These visitor attractions would be seriously damaged if the scenarios of the DRECP are adopted in their present form. They will disrupt wildlife habitat and corridors, impair scenic viewsheds, and harm air quality. The scenarios provide for large-scale development, with some tinkering

suggested by the Sierra Club, the Wilderness Society, the California Wilderness Coalition, and other non-profits. The California Desert ecosystem will not be protected by such tinkering. DRECP is a huge industrial experiment with no scientific evidence that it will work. Long-term biodiversity will be destroyed and the historical desert as we know it will be destroyed forever. That destruction will take with it the tourism industry and the longings of millions of people throughout the world who have come to treasure it!

It is time to listen to the federal EPA. Much of the damage to the tourism industry would be mitigated if the EPA standards were applied. And, the development of EPA recommendations would likely result in better energy economics and effectiveness.

An analysis by Daniel Stynes, Ph.D., professor emeritus of the Department of Community, Agriculture, Recreation & Resources at Michigan State University measures visitor spending from visits to Joshua Tree National Park. He estimates that the surrounding region (30 mile radius) receives total direct spending effects of $48 million, and secondary effects of $16 million, for a total effect of over $64 million each year. When one looks at the reasons for visiting the Park, and the effects of his money generation calculations, the surrounding regions will be crippled if that business is seriously impacted.

A recent study of Joshua Tree National Park by the Harvard Kennedy School of Government invites a more complete economic analysis of the costs of the industrial development of the desert. Their study indicates the following:

The Park provides values to users and non-users.

Total economic value includes:

- Benefits accrued by consumers who directly use the Park, and
- Benefits that accrue from knowing that the Park exists, even if services are not directly used.

Measurement must include:

A. Direct Use and Passive Use within the Park, and

B. Cooperative Programming - benefits produced by cooperating with partners to extend the benefits of natural and cultural resource conservation and recreation throughout California, the country and the world

The study identifies the advantages of Joshua Tree National Park:

a) Diverse resources: desert landscapes, mountains, unique geology
b) Educational programs at multiple levels
c) Size: surrounding cities and 9 campgrounds
d) Unique location
e) Cultural resources are unique values
f) Recreational opportunities - measured by traditional cost-valuation techniques
g) Research values: many studies of air quality, rare and special status species, recreation use

It approaches the economic values of the Park by:

- Economic Methodological Foundations

  Revealed Preference methods (valuation by people based on their economic actions)

- Travel Cost Method (TCM) - amount people pay to travel to the Park
  - Zonal Method
  - Individual travel cost method
- Hedonic Pricing Method (HPM)
  A combination of payments for different qualities:
  - Value of open space on real estate
  - Value of ecosystem functions and services
- An examination of the services provided by NPS operations, assets, and programming
  a) The services provided by the lands, and
  b) The services created through the maintenance and programming connected with these lands
  c) Programmatic values created by NPS outside of Park Boundaries
     I. Funding - grants to protect natural and cultural resources outside of Park boundary (i.e. Land and Water Conservation Fund)
     II. Coordination and management
     III. Technical expertise
     IV. Organizational leveraging

- Direct Use Values
  - Production of goods: Intellectual property (Research, Media)
  - Services:
    - Ecosystem Services
      - Climate Regulation
        - climate regulation
        - carbon storage
          - deserts 15 tonsCO2/hectare/year
          - forests 250 tons C02/hectare/year
      - Watershed services
      - Soil formation and erosion control
      - Air quality
      - Biological diversity
      - Open space
        - real estate values
        - sightseeing
        - camping
        - climbing
        - hunting
        - wildlife viewing
        - cultural and historic values
    - Education
      - learning
      - Increased locus of control effects on school and job performance
    - Human development for volunteers
- Passive Use Values

Existence value - the benefit of knowing that a resource exists

Bequest value - value to individuals of preservation for their heirs

- And, values generated by Cooperative Programming with others

THE VARIOUS SCENARIOS IN THE DRECP INVITE A SERIOUS ECONOMIC ANALYSIS ALONG THE ABOVE LINES IN ORDER TO COMPLY WITH THE LEGALLY REQUIRED PROPER DISCLOSURE OF ALTERNATIVES WHICH REFLECT ECONOMICS VALUES. FOR EXAMPLE, NUMEROUS STUDIES PROVE THAT REAL ESTATE VALUES WHICH ARE NEAR OR ADJACENT TO OPEN SPACES HAVE A PREMIUM OF 20% OR MORE. WHAT WILL HAPPEN TO THOSE PREMIUMS IF THEY ARE SUDDENLY NEXT TO A 60,000 ACRE WIND FARM? AND, WHAT ABOUT THE LOSS OF PROPERTY TAX REVENUES FROM THESE DECLINES IN VALUES?

MANAGEMENT ISSUES:

A. Management Capability: In 2011, the Supplemental Solar PEIS (the solar planning effort for six western states) placed the area from the Coxcomb Mountains at the east end of Joshua Tree National Park to Iron Mountain off-limits to solar development because of sensitive environmental reasons. BLM is the key player in the PEIS. Yet the BLM then proceeded to approve a pre-application stage authorization, for the analysis and collection of data, for a 60,000+ acre wind development in that same "off-limits" area. Are the agencies charged with managing the California Desert ($1/5^{th}$ the area of California) under-funded and under-staffed to properly manage these huge planning efforts? It appears to the Economics Commission that the very large administrative costs to implement the DRECP and permanently police its enforcement is likely to be a significant new cost burden on all government agencies.

B. Need to follow EPA Guidelines:

The Environmental Protection Agency "has evaluated more than 11,000 EPA-tracked sites and nearly 15 million acres with potential for developing solar, wind, biomass and geothermal facilities" (EPA "Re-Powering America's Land", and EPA's Clean Energy web page). Accidents, spills, leaks, and past improper handling of hazardous materials and waste have created huge human health risks and environmental damage. These sites degrade economic growth, jobs, and the vitality of our local communities. Why take land which is significant for environmental health, tourism business development, or agriculture and rob local communities of jobs and economic health? It makes no sense! Jared Blumenthal, EPA's Regional Administrator for the Pacific Southwest, has been quoted in an EPA press release:

> "Tapping sun and wind power at brownfield sites, rooftops, parking lots, and abandoned land could provide untapped gigawatts of clean energy."

These common-sense solutions to our energy and climate change problems should be applied at the DRECP state-wide level.

C. Scenic Highway Values: There have been recent serious discussions of creating a National Scenic Highway of the route from Anza Borrego Desert State Park, through Joshua Tree National Park and the Mojave National Preserve, to Death Valley National Park. Such a designation is a recognition of the unspoiled beauty of the area traversed by these highways and would enhance visitor experience. The development scenarios in the DRECP would destroy that experience and hurt the tourism industry. Similar efforts are progressing along Hwy 247 from Yucca Valley to Barstow. The scenarios would similarly destroy the great scenic value of the Hwy 247 corridor.

Jim Andre, highly regarded scientist and director of the University of California's Granite Mountains Desert Research Center tells us "This area (California Desert) is treasured by scientists throughout the world for its unparalleled pristine quality among deserts, one of the last functional ecosystems left on planet earth." And wildlife biologist Laura Cunningham indicates "This site is rich in life and needs to be preserved, not industrialized." Tourists understand these values and do not want to be surrounded and obstructed by huge wind farms, solar fields and towers.

The DRECP is not just lacking in economic science, it is also engaged in a large-scale speculative gamble with unproven ecological science. With so much at stake, and other EPA guided directions to go, why should you put the California Desert at such risk?

What does peer-reviewed science tell us about the risks? The Tourism Economics Commission looked to Jeff Lovich, Ph.D., Deputy Director of the Southwest Biological Science Center of the United States Geological Survey for the answer which he published with Joshua Ennen in *BioScience,* a peer-reviewed, heavily cited monthly journal in December, 2011 – ***Wildlife Conservation and Solar Energy Development in the Desert Southwest, United States.***

It is clear that DRECP (as well as the Solar PEIS) is a very risky experiment, with a low probability of success on ecological grounds.

Here is what Dr. Lovich's had to say:

1. (pg. 982) *Paradoxically, the implementation of large-scale solar energy development as an "environmentally friendly" alternative to conventional energy sources may actually increase environmental degradation on a local and on a regional scale ….*
2. (pg. 982) *…almost no information is available on the effects of solar energy development on wildlife.*
3. (pg. 983) *…tortoises are important as ecological engineers who construct burrows that provide shelter to many other animal species, which allows them to escape the temperature extremes of the desert . . . . little is known about the effects of USSEDO (utility-scale solar energy development) on the species . . .*
4. (pg. 984) ***Effects due to construction and decommissioning*** *The construction and decommissioning of solar energy facilities will have impacts on wildlife, including rare and endangered species, and on their habitats in the desert. These activities involve significant ground disturbance and direct (e.g. mortality) and indirect (e.g. habitat loss, degradation, modification) impacts on wildlife and their habitat. Many of the areas*

being considered for the development of solar energy in the Mojave and Sonoran Deserts are, at present, relatively undisturbed.

5. (pg. 985) *. . . construction activities produce dust emissions . . . . Dust can have dramatic effects on ecological processes at all scales.* Dr. Lovich then explains these effects: alteration of fertility and water-retention capabilities of the soil, adverse influence on gas exchange, adverse influence on photosynthesis, changes in water usage of desert shrubs, root exposure and damage to leaves and stems. **. . .**
6. ***(pg. 985)*** *there is a dearth of scientific research and literature on the effects of dust suppressants on wildlife.*
7. (pg. 985) ***Mortality of wildlife.*** *We are not aware of any published studies documenting the direct effects of USSED on the survival of wildlife.*
8. Other effects referenced by Dr. Lovich include: Impacts of roads, off-site impacts, habitat fragmentation, noise effects, electromagnetic field generation, microclimate effects, pollutants from spills, water consumption by wet-cooled solar, increased fire risks, light pollution, etc.
9. Dr. Lovich spells out some areas needing research and further answers:
    - Before and after studies on the direct and indirect effects of USSEDO on wildlife
    - Cumulative effects of large numbers of dispersed or concentrated energy facilities
    - Effects of wildlife of different designs of facilities
    - *Detailed information on wildlife distribution and habitat requirements are crucially needed for proper site location and for the design of renewable energy developments.*
    - *Solution to mitigation difficulties such as wildlife translocation*
10. (pg 990) *Abbasi and Abbasi stated that renewable energy sources are not the panacea they are popularly perceived to be; indeed in some cases, their environmental effects can be as strongly negative as the impacts of conventional energy sources.*

Climate change is an international problem of huge dimension. New energy sources are vital to our country's economy and security. But, the DRECP is fatally incomplete by its failure to deal with the above economic values and unknown ecological risks. It is also defective in that it fails to deal with the potential for other methodologies to deal with energy and climate change:

- Conservation technology to reduce energy consumption in our built environments
- Generation of renewable energy on a smaller scale at locations near to the point of use and which do not interfere with other important societal values
- "rooftop" energy generation
- Exhaustive and thoughtful EPA guidelines for distributive generation and the use of degraded and disturbed lands
- Use of feed-in tariffs to expedite distributive alternative energy generation, as has been so successful in Germany

DRECP is an experiment. Dr. Lovich concludes: ***Our analysis shows that, on a local scale, so little is known about the effects of USSEDO on wildlife that extrapolation to larger scales with any degree of confidence is currently limited by an inadequate amount of scientific data.*** The California Desert is a tourism icon around the world. It should not be sacrificed for an unproven experiment.

Sincerely,

Paul F. Smith, Chair

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