

Please register my following comments about DRECP. I am Edward
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California Energy Commission

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1. DRECP Is Unacceptable. The Desert Renewable Energy Conservation Plan (DRECP), as it stands, is unacceptable. Fixing it requires major changes, as stated below. Key point: reducing carbon dioxide emissions in the electricity sector nearly 60% by 2040 can be met with significantly less development in the DRECP region than is currently claimed in the draft DRECP plan.

2. DRECP Falls Short of Stated Goals. DRECP fails to live up to any of its basic goals, that is, channeling large-scale renewables projects into low-conflict areas; giving more protection to threatened wildlife and vegetation; and providing conservation measures that will endure. California's Energy Commission and the myriad other agencies and interests involved should take DRECP back to the drawing board and correct its flaws.

3. DRECP Lacks Transparency. Draft DRECP is shot through with inconsistencies, contradictory statements and maps with mistakes; its conservation baseline is unclear; its funding streams are murky. Most important, DRECP's assumptions about "need" for large-scale renewables are not transparent, whether in its "calculator" or other projections. And draft DRECP's extraordinarily voluminous and intricate nature makes it even harder for decision-makers, let alone ordinary citizens, to grasp implications. Transparency and comprehensibility being deficient, the lay citizenry is hard pressed to decipher DRECP's numerical assertions, check DRECP's projections and base forecasts, and decide whether or not they support the plan's intent, goals and purpose.

4. DRECP Lacks Wildlife Protection. Draft DRECP overreaches, well beyond any normal "conservation plan" by threatening to consecrate in perpetuity millions of acres of public lands for dune buggies, off-road biking, and other "motorized recreation". These areas would overlap designated conservation lands. DRECP also lacks sufficient protection of imperiled species, notably desert

tortoises and indigenous ground squirrels.

5. DRECP Exaggerates Industrial-Scale Renewables

“Need”. Draft DRECP inflates “need” for large-scale desert renewables and isn’t open enough about how it calculates this “need”. For example, it fails to account for all energy efficiency savings from state programs, particularly from the publicly-owned utilities and the state’s Zero Net Energy building goals. Currently, the plan assumes between 50,000 and 60,000 gigawatt-hours of efficiency savings by 2040 (the exact amount is difficult to know because the plan does not present assumptions clearly); this is likely too low, partly because it does not account for publicly owned utilities’ new efficiency program savings. It also does not account for the state’s Zero Net Energy building policies, or the governor’s new proposal to reduce energy use in buildings by 50 percent. Inflation of DRECP’s “need” estimate will bring more future impact than necessary to the desert region.

6. DRECP’s Industrial-Scale Renewable Target Too High.

Draft DRECP’s 20,000 MW target for utility-scale renewable generation is excessive. The plan itself appears to reckon “need” at only 17,000-19,000 MW; of this amount about 2800 MW is already built and another 3700 MW is approved or under development, for a total of 6,500 MW that is likely to be built in any case whether or not this DRECP plan is approved. Realistically, DRECP should plan for no more than 10,000 MW-15,000 MW of utility-scale renewable; it is important to count all projects, including those already built or under development, as contributing toward the DRECP limitation.

7. DRECP’s Solar Target Especially Exaggerated.

Draft DRECP’s planned 12,000 MW of large-scale solar in the desert plan area is thousands of megawatts too high. More than 6,000 MW is already being constructed, planned or permitted. Currently, draft DRECP includes in its base case nearly 20,000 MW of rooftop distributed solar generation that is for the customers’ own use (i.e., net metered); the rest (about 9,000 MW) is assumed to be throughout the state selling electricity to the utility. DRECP also includes an alternatives analysis showing 10,000 MW, 15,000 MW, and 20,000 MW of rooftop

solar (net metered). The lowest figure should be ruled out, as it is not even consistent with California Energy Commission's own forecasts which would result in closer to 15,000 MW of rooftop solar if projected out to 2040. However, the Commission's "official" forecast itself is too low because it does not account for implementation of the state's Zero Net Building policy which would have all new buildings supply their own renewable energy produced on-site.

8. DRECP's Acreage Targets Shrank but Need More

Shrinking. Since DRECP's inception, overall reduction in DRECP acreage owing to various changes and corrections is about 65% to 75% less than the earliest versions of the desert plan; those original versions, for whatever reason, began with wildly overblown and unsubstantiated guess-estimates of "need", and were rightly abandoned. The earlier version of this planning process assumed a need for 43,000 megawatts (MW) of renewable energy in the DRECP region with an estimated land footprint up to more than 1 million acres at its peak. The current plan has reduced this target to 20,000 MW, and the land footprint to 300,000 acres or less. DRECP should continue and conclude work now underway to correct remaining exaggerations, miscalculations and lack of clarity which, if corrected, would reduce needed acreage by almost half again. DRECP should immediately release to the public the Excel spreadsheet with the full suite of assumptions used to devise its latest (July 29, 2014) "acreage calculator".

9. DRECP's Total Energy Calculation Not Transparent. DRECP's estimate of total energy needed to reach the target of 58% carbon reduction from 1990 levels by 2040 is not transparent. The public needs to know more specifically how it was arrived at. DRECP should make public what assumptions were used to reckon the estimated amount of energy efficiency, customer-side DG solar PV, existing renewable generation, zero carbon imports, and acreage "discount" factors. DRECP should prove it uses "best available information" in its "calculator" – that is, the most current official state demand and population forecasts.

10. Where Renewables Should Be Sited in DRECP. Industrial-

scale renewables, as a rule, especially solar, should be allowed only in already degraded areas near already existing transmission lines or substations. DRECP's draft plan fails this test. There is already adequate desert acreage of this sort without disturbing sensitive habitats and areas worth protecting. (See para. 13, below.)

11. Get Related DRECP Assumptions Right. Draft DRECP should reduce the excessive assumption for energy storage and assume other flexible resources needed to ensure grid stability, such as electric vehicles, demand response, smart inverters that can control distributed generation, and other technologies.

12. Other Transparency Steps DRECP Still Needs to Take.

a. DRECP should explain all of the assumptions used in its extrapolations from official forecasts out to 2040. This explanation is so far limited to select assumptions that do not allow full reconstruction.

b. DRECP should include analysis of energy that will become available from re-powering wind turbines by 2040 in the plan area (Tehachapi).

c. DRECP should provide the aggregated scenario for all technologies and subareas, and confirm that it constitutes the allowable limit of impacts for NEPA/CEQA analysis.

d. DRECP should make explicit the balance of remaining generation needs by technology, and allocate geographically all constrained resources. Acreage allotted to wind should include the full project footprint—and not just the relatively small fraction of space occupied by the turbines and physical infrastructure—to accurately reflect fragmentation and other impacts.

e. DRECP should explain, why is DRECP “aggressive” in estimating electricity demand but “regressive” about estimating customer-side distributed (DG) solar? Why are calculator demand assumptions labeled backwards (i.e., called “conservative”) in this regard?

f. DRECP should provide the aggregated scenario for all technologies and subareas, and confirm that it constitutes the allowable limit of impacts for NEPA/CEQA analysis.

g. DRECP should revise its megawatt distribution plan to be

transparent and spatially explicit, disclosing acreage “footprint” for renewable energy development and “discount factors” for all areas and technologies. Definitions: “Footprint” is the amount of land occupied by the projects, while “discount factors” are actually multipliers that allow options for alternative siting for future projects. Unfortunately, in DRECP these terms are confusingly labeled and inconsistently used.

13. DRECP Energy Elements That Merit Support. Draft DRECP proposes 2,500 MW of mid-sized distributed generation (DG) solar located near utility substations in the desert. DG solar is an excellent low impact way to develop solar energy and should be supported. Also, the plan’s assumption of 2,800 MW of geothermal should be supported: geothermal is a geographically unique resource which provides high reliability and exceptionally low land footprint for the amount of energy produced. DRECP should make clear that 3,000 MW of assumed wind in the Preferred Alternative is mostly already complete.

/s/ Edward A. Mainland
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