LOUNSBERY FERGUSON
ALTONA & PEAK LLP

ESCONDIDO AND SAN DIEGO

960 Canterbury Place, Suite 300
Escondido, California 92025-3870
Telephone (760) 743-1201
Facsimile (760) 743-9926
www.LFAP.com

SPECIAL COUNSEL
JOHN W. WITT

Direct: (760) 743-1226 ext 105
Email: KHL@LFAP.com

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Neil Millar
California Independent System Operator
250 Outcropping Way
Folsom, CA 95630
nmillar@caiso.com
regionaltransmission@caiso.com

RE: Comment Letter to 2014-2015 Draft Transmission Plan

Dear Mr. Millar:

Parties Represented

This office represents a coalition of organized and established regional interests in the Anza-Borrego Desert – the Tubb Canyon Desert Conservancy (the TCDC) and the Anza Borrego Foundation (the ABF). Each is an incorporated entity. Herein they are collectively referred to as "the Parties."

Focus of Comment Letter

The Parties are submitting this comment letter to address the February 2, 2015 draft of the 2014-2015 Transmission Plan (the Plan) prepared by the California Independent System Operator (the CAISO). The Parties particularly address a certain transmission route through the Anza-Borrego Desert State Park, and environs. It is identified in the May 2014 report entitled "Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Station (SONGS)" prepared by the Aspen Environmental Group (the Aspen Report), as alternative Routes 5, 1A and 5B, 1B (the Subject Route).

Prior Comment

As part of, and following, the Stakeholders Meeting of November 19-20, 2014, the ABF, one of the Parties, commented on the Subject Route by submitting reasoned objections to its inclusion in the draft Plan. A copy of the comment submittal is attached as Exhibit "A", and incorporated herein. In response, the CAISO stated that, "The ISO has not found a need in this transmission plan for any major transmission upgrades like the alternative 5 that is referenced in the comment."

Current Comment; the Infeasibility of the Subject Route

The Parties were participants, telephonically, in the Stakeholders meeting of February 17, 2015.

The Parties re-emphasize their opposition to the Subject Route. Noting that the Subject Route is not included in the Plan as a recommended upgrade, the Parties urge that the express exclusion of said route be addressed in the Plan, for the following reasons.

The Aspen Report identifies Alternative 5 as Very Challenging. In fact, by the terms of the Report, the Subject Route would be virtually impossible to permit and utilize, irrespective of the overhead (Alternative 1A of 5) or underground (Alternative 1B of 5) methods of construction. Pages 46-51 of the Aspen Report are attached, with maps, detailing the reasons for rejection of the Subject Route. (Exhibit "B")

In summary, the geographic, geologic, topographic and environmental features of the Route present insurmountable construction hurdles for the installation of overhead facilities. Such hurdles would be magnified exponentially by resorting to the undergrounding alternative.[1] These engineering constraints would be compounded by committed objections lodged by the State Parks Department, the State Parks Commission, the La Jolla Indian Reservation, and the Parties, to name only a few.

The infeasibility of utilizing Alternative 5 as a viable transmission corridor is so compelling that its rejection should not be by mere omission from the terms of the Plan. Rather, the CAISO should include in the Plan an express finding which rejects Alternative 5 as a result of a reasoned analysis and conclusion.

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[1] In the course of the February 17 stakeholders meeting there was an interesting exchange. As the presenter concluded the presentation of Southern California corridor facilities, a questioner commented with incredulity that one route could be proposed that, over a 35 mile stretch, would cost $2 billion dollars for overhead construction. Noting that undergrounding may be a necessity, the estimated cost was increased by "many multiples." The route under discussion bore a semblance to Alternative Route 5.

Current Comment; the Lack of Need for the Subject Route

While the Alternative Route 5 is a practical, engineering, and environmental impossibility, there is a more fundamental reason to consider its rejection – the basic and growing lack of need for this, or any similarly situated, transmission line route.

The generation of behind-the-meter solar power, aka distributed, in-basin generation, has changed, and promises to change more significantly in the future, the assumptions which drive the analysis of demand for transmission facilities. The Anza-Borrego corridor is a prime example of how such changes will be felt most acutely – in a positive way – by those who monitor the area.

It is the Anza-Borrego route which has been targeted for the transmission of solar power from Imperial to the points of need in the San Diego metropolitan area. By all indicators, utility-scale solar, such as that proposed for Imperial, is going to be supplanted by locally generated power sources.[2] Currently, behind-the-meter solar installations produce more than 1,000 MW per year. Distributed, in-basin generation is increasingly cost-competitive with utility power. State law mandates that the Public Utilities Commission support sustained growth of behind-the-meter solar installations through appropriate rate design. The state is also committed to grid modernization to allow acceptance of two-way power flows, diminishing, or eliminating, transmission grid reliability issues.

It is an undeniable maxim – if solar power is generated at the point of need, transmission facilities delivering from distant utility-scale solar farms are unnecessary. Gone with such long transmission stretches are the concerns about reliability. Increased reliability is matched by another benefit – the cost of building transmission facilities becomes a savings.

At page 98 of the draft Plan, the CAISO touches on this issue. When discussing the Imperial Valley generation model, the Plan states:

> "There are a number of uncertainties that could impact the above results for the long-term planning horizon including uncertainties associated with the amount of authorized local capacity additions, AAEE, distributed generation, and the amount of existing demand response that would be repurposed for use in meeting local reliability needs. The assessment will be revisited in the next planning cycle with the latest available information."

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[2] In California, approximately 3,000 MW of customer roof-top and parking lot solar power had been developed by year-end 2014. The estimated solar resource potential from these two sources in California is in the range of 100,000 MW.

Aside and apart from the degree of difficulty in permitting and building a transmission line in the Anza-Borrego region, the more basic question of the necessity of such a line, irrespective of reliability issues, must be definitively asked and answered.

Conclusion

The Parties urge the CAISO to specifically reject the Alternative 5 transmission line route, based upon express findings of non-feasibility. Further, the Parties urge the CAISO to conduct a thorough analysis of the distributed, in-basin generating capacity in the San Diego and Los Angeles service areas and adjust its analysis of the need for transmission facilities serving such areas, accordingly.

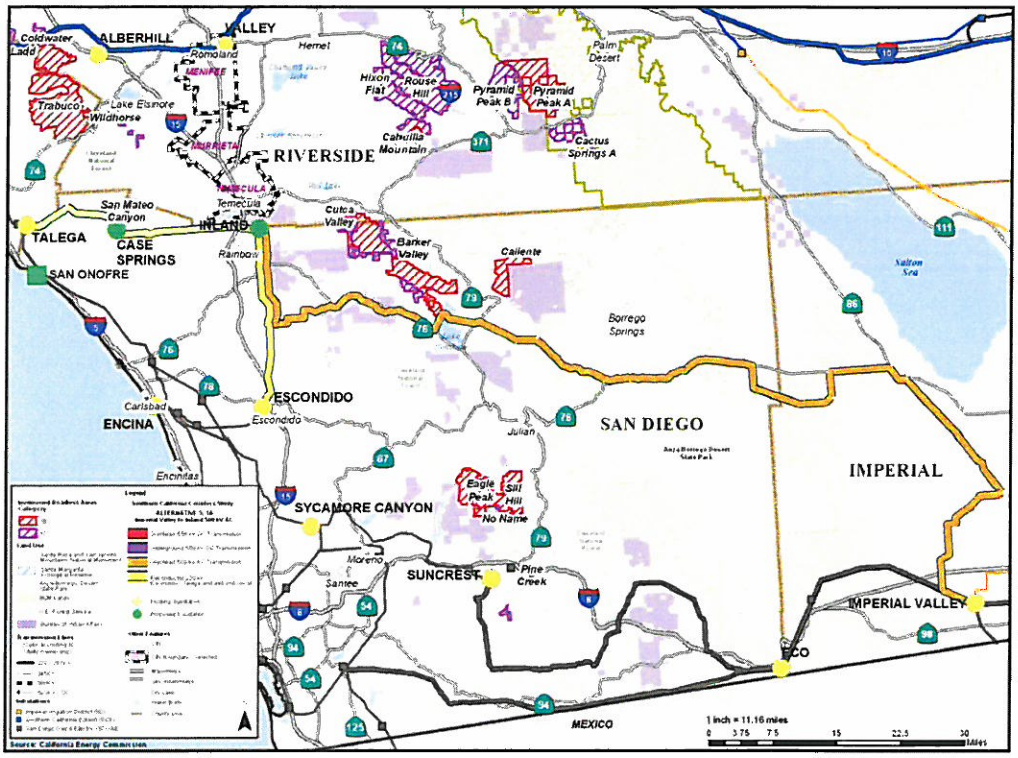
Respectfully submitted,

KENNETH H. LOUNSBERY

KHL:kld

Attachments

Figure 13: Alternative 5, Option 1A (Imperial Valley to Inland, 500 kV Overhead)



Source: California Energy Commission, 2014

EXHIBIT A

No	Comment Submitted	CAISO Response
1	**Anza-Borrego Foundation** **Submitted by: Jimmy Smith**	
1a	Anza-Borrego Foundation (ABF) wishes to comment on the Transmission Planning Process Stakeholder Meeting held November 19 and 20,2014. Although the topic of transmission lines was not specifically addressed in the meeting, ABF is firmly opposed to any transmission lines through, or affecting, Anza- Borrego Desert State Park. Specifically Anza-Borrego Foundation is opposed to Alternatives 5, 1A and 5, 1B as addressed in the Feasibility Study of May 2014 entitled "Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Station (SONGS)." Anza-Borrego Foundation is the nonprofit partner of Anza-Borrego Desert State Park. In 2005 SDG&E proposed the Sunrise Powerlink through Anza-Borrego Desert State Park. Anza-Borrego Foundation and many other community organizations fiercely opposed this project and it was ultimately approved outside the boundary of the Anza-Borrego Desert State Park. We are saddened to see SDG&E continue to pursue transmission route options through the park. Should Alternative 5 be chosen as a route in a public application, ABF and its members, donors and partners stand ready to provide significant public protest. Anza-Borrego Desert State Park includes more than 360,000 acres of designated wilderness and ABF will do everything it its power to defend this designation. Anza-Borrego Desert State Park is an important asset to our state. It provides significant recreational and emotional value to Californians, provides a home for wildlife that are important to our ecosystem, and preserves many places that are sacred to Native Americans. Anza-Borrego Foundation urges you to eliminate Alternative 5 as an option for transmission lines in Southern California. Furthermore, we encourage further research on rooftop solar so that no more of our natural areas are disturbed. Thank you for hearing our concerns. Please also add ABF (info@theabf.org) to your notification list of stakeholders for future meetings.	The ISO has not found a need in this transmission plan for any major transmission upgrades like the Alternative 5 that is referenced in the comment. However, for future planning cycles the ISO appreciates the input regarding the permitting challenges that would be associated with such an alternative. Similar concerns were raised during the ISO's Imperial County Consultation process which was facilitated by the ISO in 2014. Although the ISO is not responsible for reviewing or approving the specific routing of transmission lines, we do generally consider the potential feasibility of alternatives when selecting a preferred alternative. In addition, the ISO is not primarily responsible for selecting resource types and locations. We rely on the renewable portfolio development process managed by the CPUC and CEC.

EXHIBIT B

Alternative 5: Imperial Valley to Inland (AC or HVDC)

ALTERNATIVE 5
San Diego High-Voltage Transmission Options 1A and 1B

Imperial Valley to Inland – Option 1A (500 kV AC)

- New proposed 500 kV AC transmission line between the existing SDG&E Imperial Valley Substation and the new SDG&E Inland Substation within northern San Diego County. This alternative is proposed as an overhead line that would be nearly 140 miles in length.
- In addition to the new transmission line, the new 500/230 kV Inland Substation would be constructed at a new north inland location, as well as the upgrade/construction of a 500/230 kV substation at the existing Imperial Valley Substation.
- The proposed option may include provisions for the installation of two 500 MVA +/- 45° phase shifters at the new SONGS Mesa 230 kV Substation (that is, expand the existing Japanese Mesa Substation) to optimize network flow through the San Diego transmission system and into the Los Angeles load center.

Imperial Valley to Inland – Option 1B (HVDC)

- New proposed HVDC transmission line between the existing SDG&E Imperial Valley Substation and the new SDG&E Inland Substation within northern San Diego County. This alternative is proposed as an overhead and underground line that would be roughly 142.2 miles in length, with an underground segment of 36.3 miles.
- In addition to the new transmission line, the new Inland Substation would be constructed at a new north inland location as well as the installation of DC converter stations at this new substation and the existing SDG&E Imperial Valley Substation. This project will include provisions for integrating the proposed DC terminal at Imperial Valley with a DC flow control device to improve network flow across the ISO, IID, and CFE transmission systems.

System Upgrades for Both Options 1A and 1B

- Reconductor Escondido-Talega transmission line (TL 23030) to a minimum rating of 1175/1175 MVA normal/emergency and loop-in to the new Inland Substation. Construct a new 230 kV transmission line on the vacant side of the existing tower line supporting TL 23030 between Escondido and Talega Substations and loop-in to the new Inland Substation.

This alternative is described in two parts. The first section below presents Imperial Valley to Inland, Option 1A (500 kV AC), and the second section presents Option 1B (HVDC, overhead and underground). For each option, the major component addressed is the proposed new transmission line between the Imperial Valley Substation (Imperial County) and the new Inland Substation (northern San Diego County).

Appendix A presents details on the potential route for each alternative, including a description of the route itself and the land uses along the route. This section presents a brief overview of the route, as background for the discussion of routing constraints.

Imperial Valley to Inland, Option 1A (500 kV)

Figure 13, Alternative 5, on page 67 illustrates a potential route for this 500 kV line. The potential route is assumed to be all overhead. It follows much of the originally proposed 500 kV Sunrise Powerlink Transmission Project, combined with the SDG&E "500 kV Full Loop" proposed during the Sunrise proceeding. This route is not considered likely to be feasibly permitted, as described in the section below on constraints. However, it is described briefly here to illustrate the challenges of crossing ABDSP.

Imperial Valley to Inland, Option 1A: Routing Summary

In Chapter 1, the section "Anza-Borrego Desert State Park" describes three possible routes for crossing ABDSP. This alternative follows the existing 69/92 kV transmission lines through the park. Starting from the Imperial Valley Substation, the route follows the originally proposed Sunrise Powerlink route north through Imperial County, then west along Highway 78 into ABDSP.

Upon leaving the park at its western boundary, the potential route would diverge from the Sunrise route and instead would follow the Highway 76 route defined by SDG&E's "500 kV Full Loop." This route segment in northern San Diego County is common with that described for Alternatives 3 and 4. When the route meets the Talega-Escondido corridor (just north of the Lilac Substation), the 500 kV line would turn north and parallel the Talega-Escondido line (in new ROW) to the Inland Substation.

Imperial Valley to Inland, Option 1A: Constraints

The major constraints on the Alternative 5, Option 1A route are those listed below. Each constraint is described in more detail in the following paragraphs.

1. Overhead passage through Anza-Borrego Desert State Park
2. Inadequate ROW through ABDSP Wilderness
3. Passing through Angelina Spring Cultural Preserve area and potential direct and indirect effects on numerous cultural resources
4. Diminishing the recreational and scenic value of ABDSP
5. ROW across La Jolla reservation
6. Scenic and low-density residential areas in northern San Diego County

Constraint 1: Overhead Passage Through Anza-Borrego Desert State Park

As documented extensively in the Sunrise Powerlink EIR/EIS, an overhead 500 kV line through ABDSP would result in numerous significant and unmitigable impacts and very substantial opposition from the State Parks Department, members of the public, and organizations. The most important impacts would result from the following concerns:

- Loss of visual quality in and around ABDSP's central and heavily visited scenic region and designated wilderness areas.
- Effects on desert bighorn sheep and numerous other sensitive species.
- Construction noise and traffic.
- Corona noise in remote and quiet areas.

Constraint 2: Inadequate ROW Through ABDSP Wilderness

The required ROW width is not available through Grapevine Canyon between two ABDSP wilderness areas. Therefore, the State Parks Commission would have to reverse the wilderness designation of a segment along the ROW for the State Parks Department to permit the transmission project.

Constraint 3: Passing Through Angelina Spring Cultural Preserve and Potential Direct and Indirect Effects on Numerous Cultural Resources

In 2012, park officials completed their review of the valuable cultural zones and designated several of them as "cultural preserves." One of these, Angelina Spring, is traversed by the existing 69 kV line through Grapevine Canyon. This new designation as a preserve presents an additional reason for the infeasibility of an overhead route through the park.

According to the 2012 *Anza-Borrego Desert State Park Cultural Preserve Management Plan,*[1]

> A cultural preserve is an internal unit of an existing State Park, State Recreation Area or State Vehicle Recreation Area. It is a delineated zone where the primary goal is for focused management based on preservation. These designations incorporate park lands that contain rich and outstanding prehistoric and historic resources which include archaeological sites, village locations, burial grounds, rock art panels, trails, ranches, structures and cultural landscapes.[2]

The Legislature provided for the cultural preserve subclassification in the Public Resource Code:

> Cultural Preserves consist of distinct non-marine areas of outstanding cultural interest established within the boundaries of other state park system units for the purpose of protecting such features as sites, buildings, or zones which represent significant places or events in the flow of human experiences in California. Areas set aside as cultural preserves shall be large enough to provide for the effective management and interpretation of the resources. **Within cultural preserves, complete integrity of the cultural resources shall be**

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1. http://www.parks.ca.gov/pages/21299/files/FINAL_ABDSP_Cultural_Preserve_Management_Plan_112612.pdf

sought, and no structures or improvements that conflict with the integrity shall be permitted." (P.R.C. 5019.74; emphasis added)

Constraint 4: Diminishing the Recreational and Scenic Value of ABDSP

Based on detailed comments provided by officials of the ABDSP and the State Parks Department on the proposed Sunrise Powerlink Project and the route through ABDSP, a 500 kV transmission line along Highway 78 and through Grapevine Canyon would have severe adverse effects on the use and value of the park. The EIR/EIS for the Sunrise Powerlink also identified significant and unmitigable visual and recreational impacts.

Constraint 5: ROW Across La Jolla Reservation

See discussion of Constraint 1 for Alternative 3, "ROW Across La Jolla reservation."

Constraint 6: Scenic and Dispersed Residential Areas and Tribal Concerns in northern San Diego County

See discussion of Constraint 4 for Alternative 2, "Scenic and Dispersed Residential Areas and Tribal Concerns in Northern San Diego County."

Imperial Valley to Inland, Option 1B (HVDC)

As illustrated in Figure 14, Alternative 5, Option 1B has the same substation endpoints as Alternative 5, Option 1A, but is an HVDC alternative, so it can more easily be installed underground. See Appendix C on ROW requirements for AC and DC transmission lines. Because this option is an HVDC line, it would require construction of AC/DC converter stations at the Imperial Valley and Inland Substations. The potential route for Alternative 5, Option 1B is illustrated in Figure 14 on page 68.

Imperial Valley to Inland, Option 1B: Routing Summary

The route of Option 1B is very similar to that described in Option 1A except that this option is suggested to be installed underground through ABDSP, within the ROW of Highway 78. Because this is not a controlled-access highway, the Caltrans restrictions described in Alternative 2, Constraint 2 ("Use of I-15 Caltrans ROW") would not be applicable.

This all-underground option was studied and found to be feasible in the Sunrise Powerlink EIR/EIS. It was considered because it would eliminate the visual impacts in the park of the overhead transmission line, it would eliminate corona noise, and it would avoid the Angelina Spring Cultural Preserve.

Imperial Valley to Inland, Option 1B: Constraints

While an underground line would not be visible, there remain several challenges and constraints to installation of an underground line, even HVDC, through the park. The major constraints on the Alternative 5, Option 1B route are those listed below. Each constraint is described in more detail in the following paragraphs.

1. Construction disturbance and traffic obstruction through Anza-Borrego Desert State Park.

2. Construction challenges related to bedrock and crossing of the Earthquake Valley Fault.

3. Disturbance of desert bighorn sheep and likely seasonal construction constraints.

4. ROW across La Jolla reservation.

5. Scenic and low-density residential areas in northern San Diego County.

Constraint 1: Construction Disturbance and Traffic Obstruction Through Anza-Borrego Desert State Park

While this route would be entirely underground within ABDSP, the construction within the narrow and winding Highway 78 would likely require road closures. With Highway 78 closed, access between the Imperial Valley and northern San Diego County would be extremely time-consuming. Construction would likely require blasting to construct the trench in bedrock, so construction noise within the park would be severe.

Constraint 2: Construction Challenges Related to Bedrock and Crossing of the Earthquake Valley Fault

This option would cross the Earthquake Valley Fault and would parallel the fault for several miles along County Highway S2. The crossing of major faults is not recommended for high-voltage transmission lines when installed underground, due to the risk of cable rupture and the time required for repair. However, due to the extremely high value of the protected open space in ABDSP and the San Felipe Valley, and the unknown frequency of major earthquakes in this area (likely substantially less frequent than once in 100 years), the underground line is considered to be feasible and a worthwhile trade-off for elimination of visual and other severe impacts.

Construction in County Highway S2 would be likely feasible, but State Route (SR) 78 is narrow (as narrow as 23 feet in width) and winding with rocky slopes on both sides of the roadway. This would make construction challenging and costly in this portion, but it is likely to be feasible. A job hazard analysis prior to the start of construction would be required to evaluate the risk of falling rock due to vibration from construction equipment. The job hazard analysis would identify the hazard and would propose solutions to mitigate or eliminate the risk of falling rocks.

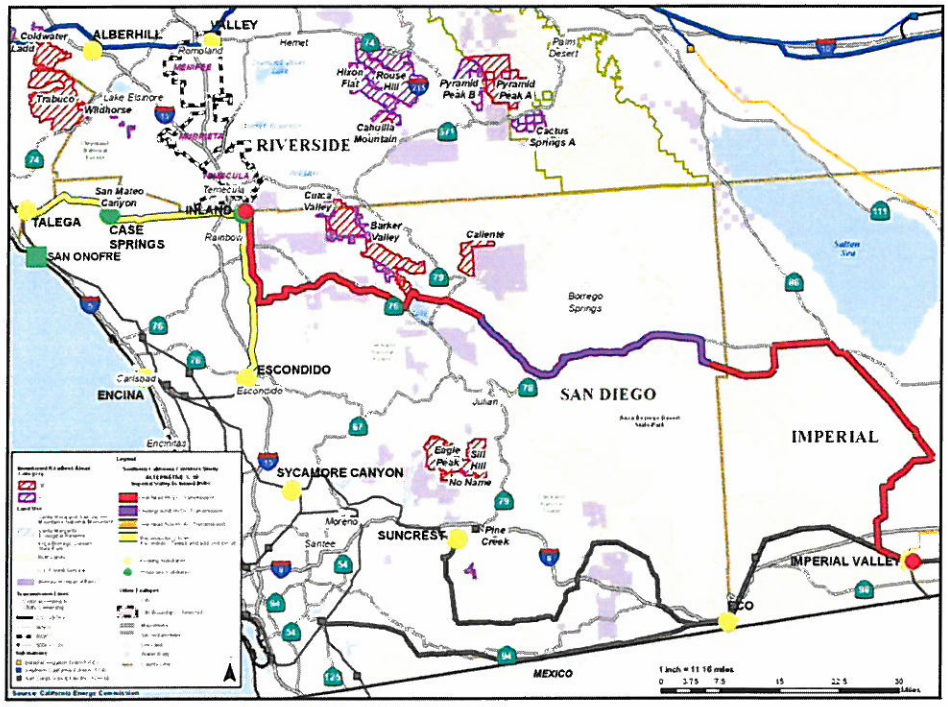
Constraint 3: Disturbance of Desert Bighorn Sheep and Likely Seasonal Construction Constraints

This route through the park passes through a significant population of desert bighorn sheep. The sheep are protected during their lambing season, so construction would likely be prohibited during this season. Other seasonal constraints on construction may also be imposed for different species or during major park visitation periods. This could result in an extremely long construction time frame.

Constraint 4: ROW Across La Jolla Reservation

See discussion of Constraint 1 for Alternative 3 ("ROW Across La Jolla Reservation").

Figure 14: Alternative 5, Option 1B (HVDC Overhead and Underground)



Source California Energy Commission, 2014