

Comment Set C.53: Rolf Linden

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To: Antelope-Pardee Project
Subject: EIR Ccomments

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These are comments on the environmental impact of Segment 1, specifically Alternative 5.

The proposed high voltage AC power line has a great impact on the environment through the generation of large low frequency electromagnetic fields, the wide Right Of Way (ROW) required, visual impact due to the high (200 ft +) towers and the potential for impeding the use of air tankers is fighting fires around the town of Leona Valley.

C.53-1

The technology chosen for the implementation of the power line is old and none of the alternatives reflect the possibility of using new state-of-the-art High Voltage DC technology. HVDC technology will solve all of the issues mentioned in the first paragraph:

1. HVDC technology does not generate low frequency electromagnetic fields.
2. An underground solution of HVDC will require a small ROW the size of a road and the cables could be buried under existing forest service roads in the ANF.
3. Visual impact of the underground solution is nil since it will look like an ordinary road. In segments where an overhead HVDC solution may be feasible, the tower height requirements for HVDC is less than for HVAC and thus less obtrusive to neighborhoods etc.
4. With an underground solution the fire fighting issue is non-existent. Very important for a town like Leona Valley, where many houses are difficult to reach during a fire emergency.

C.53-2

HVDC technology has been in existence for many decades. The newer technology has made tremendous advances in underground and under water technology and it should be the technology of choice for new power line construction.

The choice of an underground alternative would also meet the objectives of SEC, CPUC as well as CAL ISO and other system operators that are interesting in the potential of loss of a power line(s). The underground solution is not impacted by forest fires and many other disasters such as airplanes colliding with the power lines etc.

C.53-3

California has always been on the forefront of technology and we should be on this issue as well. SCE should be forced to stretch the imagination and come up with a solution that will satisfy everybody. ALT5 is NOT the solution.

I have enclosed a few pertinent documents on the HVDC technology and applications.

Regards,

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Response to Comment Set C. 53: Rolf Linden

C.53-1 The impacts to existing land uses and visual resources as a result of Alternative 5 have been discussed in the EIR/EIS Sections C.9.10 and C.15.10, respectively. Please also see General Response GR-3 regarding EMF emissions and the response to Comment C.2-1 regarding fire risks along Alternative 5.

As discussed in Section B.3 of the Draft EIR/EIS a range of alternatives were identified through the scoping process. The use of High Voltage Direct Current (HVDC) transmission was not a consideration for this project since for overhead and underground transmission lines HVDC systems are very similar to High Voltage Alternating Current (HVAC) transmission lines and were not seen as having attributes that warranted their use in lieu of more conventional HVAC transmission.

1. HVDC transmission lines do generate electromagnetic fields; however, as a direct current line the electromagnetic fields are static and therefore not classified as “low frequency” EMF.

2. The use of underground transmission, either HVDC or HVAC would require a smaller right-of-way than an overhead line and could be placed below roadways. However it is likely that an HVDC underground installation would require two ductbanks instead of three.

3. The Draft EIR/EIS does note that in areas where underground transmission is considered the visual impacts are reduced except in the areas where transition stations are necessary to switch from overhead to underground. Although an HVDC line would have two poles instead of three phases, the conductor size used for HVDC and the spans would be similar to the proposed HVAC line resulting in similar structure heights.

4. Fire-fighting issues were one consideration in evaluating underground transmission lines and are relevant for both HVDC and HVAC lines.

C.53-3 The use of an underground alternative would diminish potential transmission line outages due to forest fires, wind blown debris or other physical damage. However, underground transmission lines do have the potential for line outages due to dig-ins or splice/cable failures. As noted in the Draft EIR/EIS the time required to repair and replace the transmission line back into service is much longer for an underground line than for an overhead line.