

Southern California Edison
WODUP A.13-10-020

DATA REQUEST SET A.13-10-020 WODUP ED-SCE-03

To: ENERGY DIVISION
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Title: Senior Engineer
Dated: 04/04/2014

Question PHS-04:

GENERAL

PHS-4 Please indicate if the magnetic field levels predicted in the FMP are for the location in the ROW where the conductor is closest to the ground (lowest sag point), the worst-case scenario, or if at some other location. If it is not at the point the conductor is closest to ground, please describe the rationale for using some other reference point.

Response to Question PHS-04:

The purpose of using computerized EMF models to calculate EMF levels is not to predict numerical EMF levels at any given time or at any given location. This is because magnetic field, which is associated with the amount of current flowing in conductors, varies with time and operating conditions. The CPUC's Order Instituting Rulemaking (OIR) Decision (D.)06-01-042 states that "Our review of the modeling methodology provided in the utility design guidelines indicates that it accomplishes its purpose, which is to measure the relative differences between alternative mitigation measures. Thus, the modeling indicates relative differences in magnetic field reductions between different transmission line construction methods, but does not measure actual environmental magnetic fields." D.06-01-042, Section VI, p. 11 .

The methodology that SCE used in its EMF modeling is based on an average conductor height that compares the relative difference of various designs consistent with D.06-01-042. Please also see the assumptions listed on page 99 of the FMP. The average conductor height of the lowest conductor is approximately one third of the difference between the lowest attachment point of the shortest structure in a segment and the minimum ground clearance added to the minimum ground clearance. Figure 1 (attached) illustrates how average conductor height is calculated.

Attachment to Response of West of Devers Upgrade Project Data Request #3 PHS-4

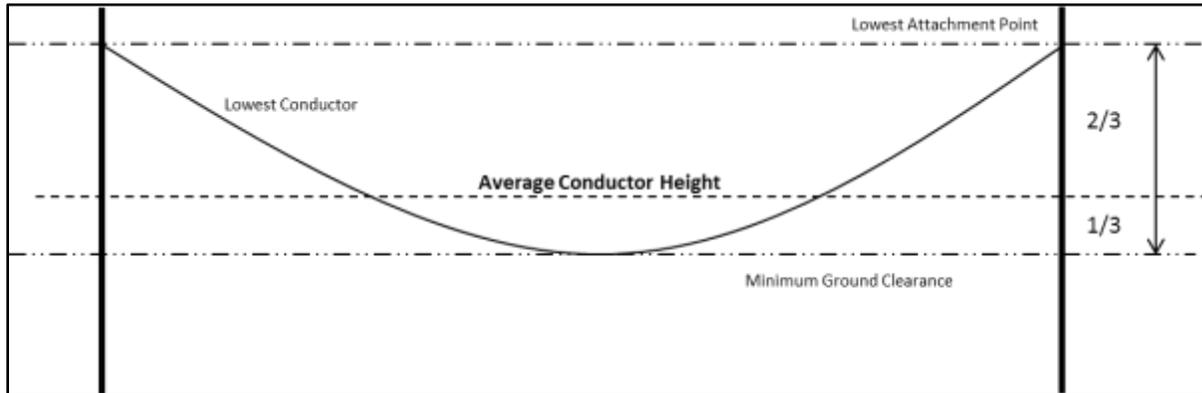


Figure 1. Average Conductor Height Calculation