



LBL External Affairs - Meeting Report

Name(s): **Professor Eli Yablonovitch**

Date, Time: **2011-12-01 14:45 PST**

Location: 267 Cory Hall

LBL members present: Quan Nguyen, Albert Ou

Remarks:

The original email response mentioned that there would be competition with large companies like Boeing, and that LBL would spend a lot of money for a working model. The other method would be to store potential energy by climbing to 90,000 feet during the day and descending to 60,000 feet during the night. However, LBL is limited by the FAA to a 400-foot height ceiling.

Professor Yablonovitch mentioned that he is the founder of Alta Devices Inc., a company making high-efficiency (28.4%) gallium-arsenide solar cells. He demonstrated a small, thin solar cell, but mentioned that all of their production was promised to Boeing. Albert and Quan conveyed to Professor Yablonovitch that there was no need for the most efficient solar cells, and that LBL was not in a competition for the best solar plane.

Professor Yablonovitch estimated the cost of a 2' \times 8' encapsulated solar array to be \$600. Therefore, a suitable array for BSD would be about \$400-500. (Such an array would provide about 200-300 W of power.) However, these cells are not usable due to the heavy metal casing. Therefore, he recommended unencapsulated cells. Quan mentioned his membership with CalSol and its relationship with SunPower. Professor Yablonovitch said that SunPower would be the best for solar cells. He added that, if getting cells from SunPower didn't work, then he would "pull some strings" in order to find some.

Albert brought up the projects of MIT kid and Noth; and this information raised LBL's credibility. Upon asking for more leads, he responded that "you know what you need to do [for solar cells]," and that he was not too knowledgeable about the control theory. He was impressed by the challenge.