California Energy Commission
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Sacramento, CA 95814-5512

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Subject: Comments on Energy workshop topics

This communiqué concerns a suggestion as how to structure current renewable electricity power-energy systems in order to meet a level of 33% by the year 2020. A serious drawback to our current solar electric power systems is they are structured only to supply capacity factors of only 20%. At this rate we will never build enough renewable energy systems and to meet the goals of 33% renewable energy contribution.

We are constantly reminded that there is enough solar energy falling on this earth to supply the electricity needs of this country. In order to take advantage of this solar energy, it seems to me that we should provide sufficient solar panels that can supply the energy-power conversion system on a 24 hour basis. By this manner, we can achieve greater coverage of the land area, and full usage of the electric generating systems.

For example, a 500 MWe, solar power system is now fitted with about only 6,000 acres of solar panels. So we are stuck with a 20% capacity factor. If we structure the system, with about 24,000 acres of solar panels, we can heat up and store enough heat transfer medium to operate our power systems on a 24-hour basis. By this method, we could achieve an 80% or greater capacity factors for these solar systems. Moreover, this should be financially more economical, because the cost of energy by a power system is inversely proportional to its the capacity factor.

Sincerely
Donald E. Lutz

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