Reliable solar: powering communities

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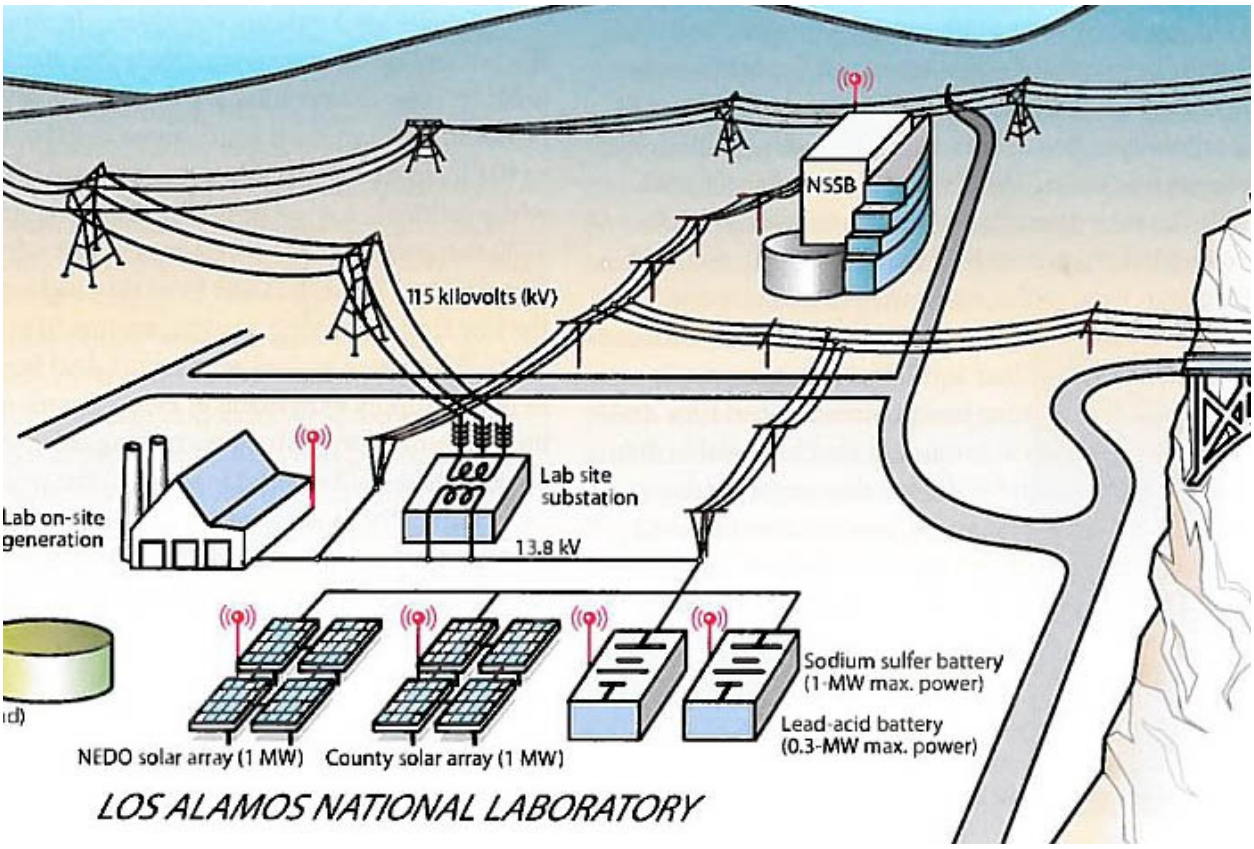

How to supply communities with renewable energy without expensive grid fluctuations?

Power fluctuations cost the nation about $100 billion annually. How to keep the grid stable yet utilize renewable energy sources? How to reduce fluctuations (say, from a cloudy day) and efficiently distribute the power?

In the first international R&D effort of its kind, the Laboratory collaborated with Los Alamos County and Japan to providing affordable ways to get reliable renewable power on the electric grid.

The group converted a county landfill to house two solar arrays connected to a battery system, creating enough stable power to energize 2,000 homes in the community.

The study includes a “smart home” constructed to test appliances and systems that work with the grid to optimize energy use and efficiency.

The Lab is also developing a simulator to determine ways to incorporate wind power into the grid and guide better distribution

Our solutions are attracting worldwide attention by integrating innovative energy system applications into a working utility company; these real-world innovations could lead to development of international standards that would enable adoption of renewable energy sources globally.

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