The white papers keep coming. Today, UC Berkeley and UCLA Schools of Law released a new report, "The Power of Energy Storage: How to Increase Deployment in California to Reduce Greenhouse Gas Emissions," to examine policies that California and federal leaders can implement to increase the state's energy storage capacity.

As California seeks to expand solar and wind power, storage of that energy for use at any time, day or night, becomes critical. The many energy storage technologies that exist today, from multiple battery types to machines that make ice at night to cool offices during the day, improve our ability to integrate significant amounts of intermittent renewable energy into the grid.

Energy storage offers multiple benefits. It can enhance the value of renewable energy by dispatching that energy when it is needed rather than when it was originally generated. It can also decrease reliance on power plants called "peakers" – often the dirtiest and most expensive – that exist solely to meet peak energy demand during the hottest hours of the hottest days. Finally, energy storage can eliminate some of the need for new transmission lines and power plants and make blackouts less disruptive by improving recovery time.

The paper finds that large-scale deployment of energy storage is currently stymied by regulatory and utility processes that discourage investment in energy storage technologies, high costs of producing many of these technologies given their small scale of commercialization, and a lack of awareness among decision-makers about the benefits of energy storage.

To overcome these challenges, the report recommends that state and federal leaders:

- allow utilities to include investments in energy storage in their electricity ratebase;
- launch proceedings and studies at California's key energy agencies to quantify the full value of energy storage and explore policies needed to stimulate its deployment; and
- extend tax credits and loan guarantees to energy storage projects.

Like the other white papers in this series, the recommendations result from a climate change workshop convened by UCLA and UC Berkeley law schools with energy storage manufacturers, renewable energy developers, policy-makers, academics, and other experts.