Jerry Brown was inaugurated today for his record fourth term as governor of California, and his address offered refreshing specifics on his environmental and climate goals:

> In fact, we are well on our way to meeting our AB 32 goal of reducing carbon pollution and limiting the emissions of heat-trapping gases to 431 million tons by 2020. But now, it is time to establish our next set of objectives for 2030 and beyond.
>
> Toward that end, I propose three ambitious goals to be accomplished within the next 15 years:
> 1. Increase from one-third to 50 percent our electricity derived from renewable sources;
> 2. Reduce today's petroleum use in cars and trucks by up to 50 percent;
> 3. Double the efficiency of existing buildings and make heating fuels cleaner.

The 50% renewable standard by 2030 is the most striking of these recommendations, putting California on pace to lead the nation in renewable deployment (with Hawaii as a possible rival, given that state's expressed goal of 65% renewables by 2030). As Berkeley and UCLA Law discussed in the November 2013 report Rewable Energy Beyond 2020: Next Steps for California, such a standard should be accompanied by a policy to ensure actual greenhouse gas reductions from the power sector. Otherwise, an increase in renewables could be offset by an increase in fossil fuel-based power, which might be needed to balance the intermittent renewables when the sun isn't shining and the wind isn't blowing — but demand remains high.

Governor Brown seems to acknowledge that risk when he called for specific measures to help ensure proper integration of these renewable power sources:

> I envision a wide range of initiatives: more distributed power, expanded rooftop solar, micro-grids, an energy imbalance market, battery storage, the full integration of information technology and electrical distribution and millions of electric and low-carbon vehicles. How we achieve these goals and at what pace will take great thought and imagination mixed

> with pragmatic caution. It will require enormous innovation, research and investment. And we will need active collaboration at every stage with our scientists, engineers, entrepreneurs, businesses and officials at all levels.

Battery and other energy storage technologies (also detailed in this 2010 Power of Energy Storage report) are vital to balancing renewables on the grid by storing surplus renewable power for later dispatch. California is making great progress on deployment so far. And an energy imbalance market, linking renewable sources across the Western United States, as well as “demand response” technologies that encourage energy usage during times of peak renewables, will also help decrease greenhouse gases from the power sector as well as increase grid reliability and decrease costs.

Finally, the governor’s electric vehicle and energy efficiency goals represent the two other critical pieces in the effort to reduce greenhouse gas emissions without having to return to the stone age. After all, it’s not enough just to clean our electricity sector — we need to electrify our transportation and be much more efficient with the energy we do use. All told, Governor Brown is reinforcing through policy the critical initiatives we need to grow the economy without overheating the planet beyond repair.

The next stage will be the administration’s goal for greenhouse gas reduction legislation for 2030 — a sequel to the AB 32 2020 goals. The governor set a timetable of March 2015 to unveil those targets, so we’ll stay tuned for that next big speech on the environment.