

Five ideas for California's energy future

By Karen Skelton Special to The Bee

Southern California Edison plans to build close to 1,700 megawatts of new power plants. San Diego Gas and Electric has [proposed 850 megawatts of peaker plants](#). All of them emit tons of carbon and smog-forming pollutants.

These plans are disconnected from the clean energy future that [Gov. Jerry Brown set forth in his inaugural speech last week](#) when, quoting scientist Edward O. Wilson, he proposed a bold plan to “stop destroying our birthplace.”

Brown, Senate President Pro Tem Kevin de León and Assembly Speaker Toni Atkins seem ready to expand the state's landmark law, the [“Global Warming Solutions Act of 2006,”](#) or Assembly Bill 32, which set the nation's first far-reaching standards for reducing greenhouse gas emissions.

Brown's vision would extend AB 32's goals out to 2030 by requiring that 50 percent of our electricity come from renewable sources like solar and wind, cutting gas use by cars and trucks in half, and doubling the efficiency of existing buildings. These are important goals that could become pioneering achievements, like building a world-class university system and incubating a global economic engine in Silicon Valley.

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But it has been a decade since lawmakers and staff began work on AB 32, and we live in a different world, one that is more dangerous, unpredictable and threatened. That makes clean energy goals more daunting to achieve. The state's new effort needs to be responsive to these changes, prioritizing the critical need for secure, reliable power, while also reducing destructive carbon that threatens our planet.

Lawmakers today face at least five new challenges they didn't face in 2005-06:

- Our energy appetite is poised to grow significantly, despite aggressive energy efficiency campaigns during the last 15 years. Think of all the devices and gadgets that need to be plugged in: new electric vehicles on California roads, iPhones, iHomes. All of them have their own voracious appetite for electrical recharging, as do data centers that store the gargantuan amount of information these gadgets produce. There also may be a high-speed rail system. Power to feed our digital addiction will grow as we move forward in this innovation economy we're so proud of.
- Technology that increases our resilience to severe weather change is vital. In the past, climate efforts focused on renewable energy – solar and wind – but what these energy sources give us in cleanliness, they lack in reliability. They can make the overall supply of electricity less reliable, because they are intermittent. There's also the challenge of increasingly ferocious storms, droughts, fires, and the ever-present danger of earthquakes, all of which disrupt traditional power lines and can render centralized energy sources impotent. We need to start valuing clean sources of power that add reliability and resiliency to our supply. Brown recognized this need by calling for initiatives including



distributed power and micro-grids.

- Terrorist threats from individuals and groups inspired by the likes of the Islamic State are happening all around us – at Sony studios, in Paris and Australia – and require greater scrutiny of our buildings and infrastructure. Ask PG&E about the 2013 sniper [attack on its Metcalf Transmission Substation near San Jose](#), in which gunmen fired on 17 electrical transformers. Such events underscore the need to develop secure and reliable energy.
- Compounding these problems is a rickety power grid. The American Society of Civil Engineers recently [gave the nation's power infrastructure a grade of D+](#). Some elements of the interconnected transmission and distribution systems, including 400,000 miles of electric lines, date to the World War II era, and even the 1880s.
- Price sensitivity is heightened after living through the Great Recession. Many Californians live paycheck-to-paycheck and are not willing to support policies that raise utility or gas prices, threaten jobs, or motivate businesses to leave the state, even if such policies would mean cleaner air.

Lawmakers face a daunting task: how to feed this energy-hungry state a clean, reliable and affordable energy diet while adapting energy policies to a new set of challenges. The common thread through these challenges is the need for clean energy that is reliable and resilient to new threats.

Brown's goals inspire us to think big about the way we will be living 15 and 35 years from now. And there are more goals that legislators should consider.

Use 100 percent clean energy by 2050, and by 2025, make 25 percent of it ultra-clean technology generated independent of the 19th- and 20th-century grids. This distributed generation could be more reliable, resilient, modern and price-effective: 100 percent clean by 2050; 25 percent localized by 2025.

To achieve these goals, we must think about energy the way cellphone innovators thought about the rotary phone. The future is in mobile and decentralized systems that are not based on the filthy combustion infrastructure of the past.

And just as mobile phones use apps for different needs, so too should a 21st-century energy supply include product applications depending on need, some of which might sacrifice zero-emissions solutions for low-emissions solutions that provide needed reliability. We need all greenhouse gas-reducing technologies to meet future demands, not only intermittent renewables.

Our challenges are our opportunities. California has an opportunity to expand its renowned climate policies, and be the first in the nation to envision and promote a truly 21st-century energy infrastructure that responds to the realities of how people live and work today.

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