



California Wind Energy Association

FACT SHEET: AB 1584 (QUIRK)

Context

- **Increasingly fragmented electricity system.** There are now over 40 retail suppliers (“load-serving entities” or LSEs) operating in a shared electrical system managed by the California Independent System Operator (CAISO).
- **Limited CPUC oversight authority.** By law, the CPUC has little to no authority to shape the resource portfolios of non-utility LSEs, i.e., community choice aggregators and direct-access providers.
- **Unbalanced portfolios with mismatched supply and demand.** LSEs can assemble resource portfolios (energy supplies) that do not match their customer demands (loads). For example, they can rely primarily on blocks of Northwest hydro power and solar energy to match their customer demand on an annual basis, and shift responsibility onto the CAISO to match supply and demand on an hourly and daily basis using “system power” (comprised of natural gas, hydro, and renewable resources and imports from other states).ⁱ
- **Need for integration resources.** The CAISO matches supply and demand in part with flexible “system integration” resources, which are now primarily flexible natural-gas power plants. The more unbalanced LSE resource portfolios are, the more we will need to rely on these gas units to ensure system reliability. Gas units will gradually be replaced by storage resources in the coming decades to achieve California’s greenhouse gas (GHG) reduction goals. Minimizing the need for storage will reduce the costs of achieving our GHG goals.
- **Long-term contracting activity.** LSEs are required to have 65% of their renewable resources under long-term (10-year +) contracts by 2021. As LSEs assemble their resource portfolios, these near-term contracting decisions will strongly influence the need for system integration resources.

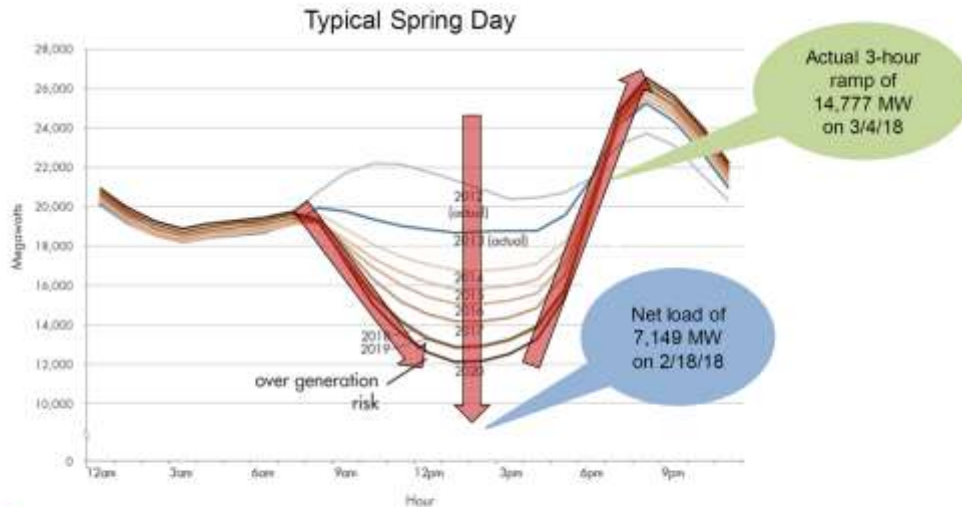
What AB 1584 Would Do

- **Send cost signals to encourage LSEs to make decisions that reduce the need for system integration resources.** AB 1584 would require the CPUC to allocate system integration resource requirements, or associated costs, to LSEs based on the degree to which they create a need for these resources. LSEs with resource portfolios that are better matched to their customer loads will pay less for system integration resources than LSEs with portfolios that are mismatched to their customer loads.

More specifically, AB 1584 would allocate flexible resource adequacy (“Flex RA”) requirements (which address system “ramping” requirements, primarily in the evening hours) and storage requirements (which can address minute-to-minute, hourly, daily and seasonal resource imbalances, including capturing renewable energy that would otherwise be curtailed) based on the degree to which each LSE causes the need for these resources.

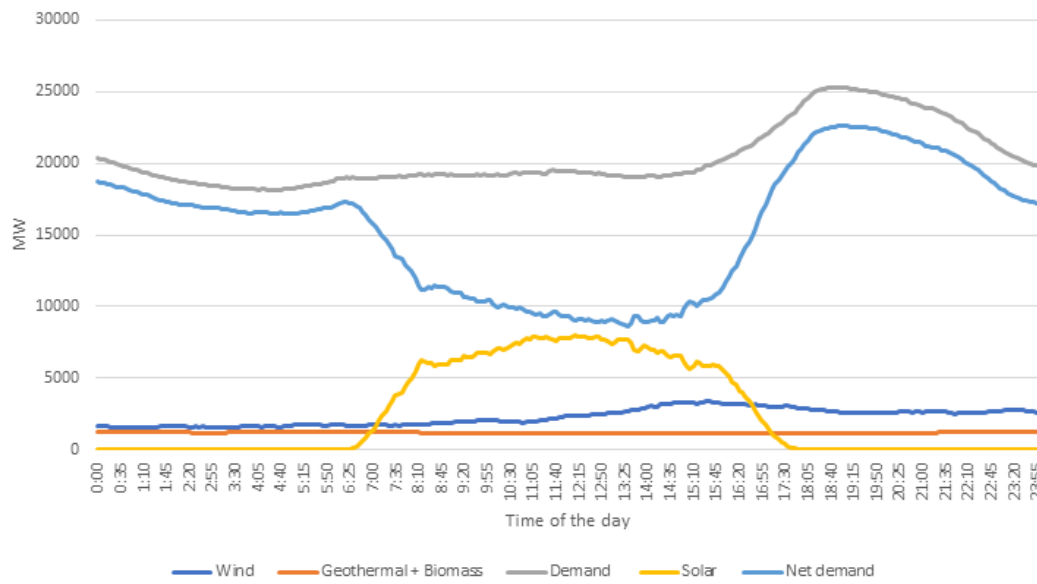
These system integration needs are depicted in the graphics on the next page.

The duck turns 10 years old: Actual results are approximately four years ahead of original estimates



The CAISO's "Duck Curve" depicts system integration needs when there is excess generation on the system (the "duck's belly") and when extra "ramping" resources are needed in the evening as the sun goes down while customer demand is rising.

Demand & Renewable Generation 3/3/2019



Renewable resource production profiles are juxtaposed against customer demand and demand net of renewable energy production.

ⁱ Under the Energy Commission's Power Content Label disclosure requirements, an LSE may report its power supply on an annual basis, thereby avoiding any disclosure of its reliance on system power on an hourly basis. As the CPUC has stated, "[w]hile LSEs may be fully compliant with the RPS program and purchasing enough GHG-free energy to serve its load on an average annual basis, unless an LSE is purchasing GHG-free energy to perfectly match its own load profile, it is almost certain that the physical reality of grid operations is that such an LSE is actually causing some GHG emissions." (CPUC R.16-02-007, May 25, 2018, at p 13.)