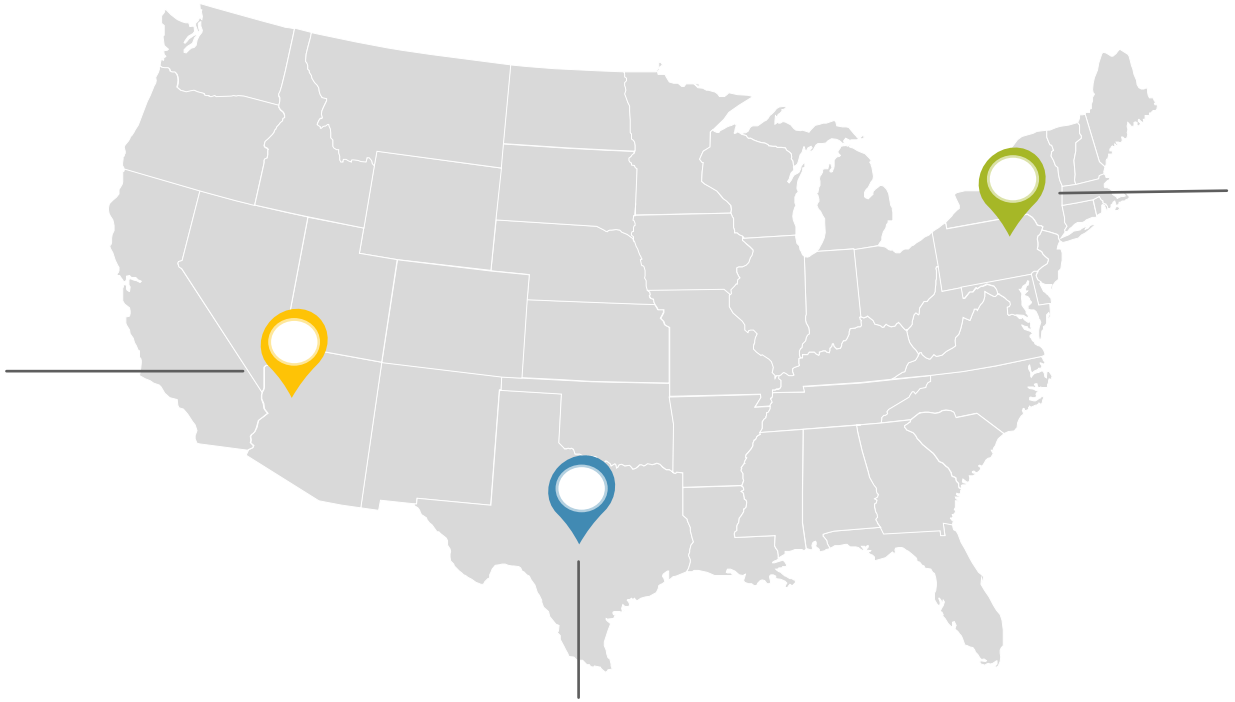
Reliability: The Power of Averaging

EPA's proposed carbon pollution standards for existing gas power plants would apply only to large plants running at annual capacity factors higher than 50%. Annual averaging of capacity factors provides signficant flexibility to these plants to ramp output to meet operational needs while still staying below proposed thresholds for pollution standard coverage.

Summer Extreme Heat (2023)

- Parts of the U.S. experienced 30 to 40 days of sustained above-average temperatures in late June and July.
- An existing gas plant could run at 100 capacity factor during all peak hours of those 40 days (from 4-7pm), 80% for the remainder of all hours during those days, and 46% the rest of the year and remain under the proposed 50% capacity factor threshold.



Polar Vortex (2014)

- This event spanned the northeastern and north central U.S. and lasted roughly 6 days (January 3 through 8, varying by region).
- If an existing gas plant ran at 100% capacity factor for the duration of this event, it could still run over 49 percent capacity factor for the remainder of the year and stay below the proposed 50% capacity factor threshold.

Winter Storm Uri (2021)

- This storm, in addition to two others spanning 11 days (February 10 – 20, 2021) across the south central U.S., had large effects on the Texas grid
- If an existing gas plant been called on to run for this entire 11 day period at 82% capacity factor, it could run at 49% capacity factor for the remainder of the year and still fall below the proposed 50% capacity factor threshold.

Center for Applied Environmental Law and Policy