

Economic and Power System Impacts of the Quad Cities Clean Energy Center in Adjacent Iowa Counties (Muscatine, Scott, and Clinton)

BACKGROUND

The Quad Cities Clean Energy Center (QCCEC) is a two-unit nuclear plant located in Rock Island County, Illinois, across the Mississippi River from Muscatine, Scott, and Clinton Counties. The two units generate energy continuously in all weather conditions and all times of day, together producing about 15.6 TWh of emissions-free energy annually to serve Illinois and Iowa's needs. That is enough electricity to power the equivalent of more than 1.4 million homes.¹

ANALYSIS

A 2026 study published by The Brattle Group estimated the impacts of renewing QCCEC's license for an additional 20 years beyond its current scheduled expiration in 2032. The analysis shows that in contrast to a retirement scenario, if QCCEC continues to operate, it would provide \$6 billion in incremental economic activity, preserve \$1.4 billion in state and federal tax revenue, avoid \$100 million in increased ratepayer costs, and help support up to 459 jobs on average in the three Iowa counties adjacent to the plant for another two decades (this is on top of the jobs at the plant held by Iowa residents; those are accounted for as Illinois jobs).²

IMPACT

Renewing the license for QCCEC will help support a reliable and affordable grid amidst surging demand and rising energy infrastructure costs; the share of QCCEC serving Iowa accounts for around 7% of Iowa's annual electricity needs. Retiring QCCEC in the near-term would reduce clean energy generation throughout the region, leading to increased emissions and heightening the challenge of meeting growing electricity demand reliably.

Relicensing QCCEC guarantees reliable, carbon-free power and will displace a significant amount of fossil generation and emissions in the near-term. Securing this clean power is pivotal to reducing emissions in Iowa and neighboring states, where fossil generation would increase in the absence of QCCEC. Additionally, Iowa customers would likely face lower electric bills with relicensing, as retail electricity prices are estimated to be 0.5% higher on average in Iowa from 2033 to 2050 in the event of plant shutdown.

Key Metrics | Continuing to operate QCCEC through 2050 will:

Add \$6 Billion in GDP (cumulative) in the three Iowa counties

Support 459 Jobs in the three Iowa counties

- This includes indirect jobs (average 2033–2050) in Muscatine, Scott, and Clinton Counties.
- This is in addition to QCCEC jobs held by IA residents (these are accounted for as Illinois jobs).

Provide \$1.4 Billion in Tax Revenue (cumulative) from the three counties

- \$340 million in Iowa state tax revenue
- \$1.1 billion in federal tax revenue

Provide Reliable, Baseload Supply, Reducing the Challenge of Meeting Growing Electricity Demand

- Losing QCCEC would require replacing 15.6 TWh of firm, emissions-free generation annually, driving up electricity prices and resulting in \$100 million in increased ratepayer costs by 2050 in Iowa.

Reduce CO₂ Emissions

- QCCEC reduces annual emissions by 4.8 MMT (average across 2033-2050); this is around 24% of Iowa's annual transportation sector emissions.³

Offer Flexibility and Foster Progress in Advancing Clean Energy in Iowa

- The 25% share of QCCEC output that serves Iowa accounts for about 7% of Iowa's annual electricity needs.⁴
- Its annual generation is equivalent to 35% of current in-state wind and solar generation.⁵

¹ According to the [Energy Information Administration](#), in 2022 the average annual amount of electricity purchased by US residential customers was 10,791 kWh.

² Reported impacts are for the three studied counties only. These impacts do not account for any policy support, environmental attribute payments, or other mechanisms that the plant may require to continue operating.

³ Emissions from Iowa's transportation sector were 19.5 MMT in 2023 ([EIA](#)).

⁴ QCCEC produces approximately 15.6 TWh/year. Actual output varies slightly from year to year, mostly due to refueling schedules. 75% of QCCEC participates in the PJM wholesale electricity market and the remaining 25% participates in MISO's wholesale electricity market as an external resource.

⁵ 2024 retail electricity sales in Iowa were 55 TWh and in-state wind and solar generation was 45 TWh ([EIA State Electricity Profile](#)).