STATE POLICY TOOLKITS FOR DATA CENTER REGULATION

Greenhouse Gas Emissions

THE ISSUE

Data centers are the leading driver of electric load growth in the United States. Without smart policy interventions, they are on track to drive a corresponding increase in greenhouse gas emissions. National estimates suggest data center load could increase sixfold from **2025 levels** by 2035, hitting **194 gigawatts** (GW). Furthermore, reports **indicate** that carbon emissions from U.S. data center operations could triple by 2035, contributing more than 350 million metric tons of carbon equivalent emissions annually. These emissions impacts, however, will only be felt if data centers are powered by fossil fuel generation. While increasing numbers of hyperscale data centers across the country have been **planned** or **approved** with on-site natural gas generation, there are still examples of large data centers being planned around zero emissions generation, showcasing what is possible with the right policy in place.

THE TOOLKIT

State policymakers have unique jurisdiction over the retail electric system and many tools in the siting and permitting arenas to help encourage data centers to utilize more clean power. These tools include:

Creating frameworks to enable, incentivize, or require data centers to procure clean energy. These can include mechanisms to require that data centers participate in **"bring your own" clean energy** programs or **pay for renewable projects that utilities wouldn't have otherwise built**, put **surcharges on data centers** to help pay for clean energy, or establish regulatory requirements for **data centers to purchase renewable power**.

Directing data center development toward sites with clean energy, grid, and waste heat opportunities. There are many potential sites where data centers can operate with lower emissions, including where **existing utility infrastructure can make it easier** to locate facilities alongside new renewables, where on-site **solar** or **geothermal** can be utilized, where **waste heat can be reused** by nearby facilities, and more.

Reducing emissions and air pollution impacts from on-site operations and backup generation. Data center backup generators **can be required** to run more efficiently and less often, while **restrictions can be placed** on fossil-fueled primary generators.

Taking steps to reduce the need for utility-scale fossil fuel generation. By enabling or requiring data centers to **reduce their electric load** during high demand periods, investing in energy efficiency and **waste heat reuse**, and building a **more efficient grid overall**, policymakers can help avoid the need for new utility-scale fossil fuel generation to serve data centers.

Requiring analysis and **transparency of data center impacts** on greenhouse gas emissions and clean energy goals.

FOR MORE DETAIL ON THESE POLICIES, see our complete State Policy Toolkit for Data Center Regulation on Greenhouse Gas Emissions. These tools should also be considered in tandem with the **full collection of toolkits**, addressing issues of water, transparency, electricity affordability and reliability, and taxes. This work does not assess the wider societal and economic impacts of AI. **Learn more about our approach**.