August 17, 2023

California Air Resources Board

1001 I Street

Sacramento, CA

**Re: Utility Cost Management LLC (UCM) Comments on the Cap-and-Trade Workshop (July 2023)**

To the Air Resources Board:

Utility Cost Management LLC (UCM) appreciates the opportunity to provide comments on the July 27th, 2023 Cap-and-Trade Program Workshop. The Cap-and-Trade Program is a key component of meeting California’s climate goals. One important element of the program deals with the problem of “emissions leakage” for industry and manufacturing by using tools like the California Industry Assistance Credit (CIAC), offset credits, and allowances.

Currently, the CIAC offers electricity customers of the investor-owned utilities (IOUs) a once-per-year credit if their business operations are classified under certain NAICS codes, primarily in Fossil Fuels & Energy, Cement and Building Materials, Food Production, Metal/Glass/Paper/Chemicals, and Other Industrial Facilities. While these classifications cover *most* of the large facilities in California that are both emissions-intensive and trade-exposed (EITE), there is a significant EITE industry that is not included. Data centers (NAICS code 518210) should be added to the list of CIAC-eligible industries because they consume enormous amounts of power comparable to industrial and manufacturing use, and represent a high leakage risk. Additionally, to ensure that the CIAC helps CARB to meet its goals, UCM supports the expansion of the CIAC program to customers served by publicly-owned utilities (POUs) and cooperatives.

**About Utility Cost Management**

Founded in 1991, Utility Cost Management is a California-based consulting service that helps large utility customers lower their energy bills. UCM identifies cost-savings opportunities for our clients, which often involves analyzing utility tariffs, participating in regulatory proceedings, and identifying special programs that will benefit both the client and the entities administering these programs.

**The Data Center Industry consists of large consumers of electricity and significant contributors to GHG emissions**

Data centers use enormous amounts of electricity, making the industry one of the largest contributors to emissions. A 2021 Virginia Tech study[[1]](#footnote-1) estimated that data centers are responsible for about 2% of all energy consumption and 0.5% of all GHG emissions in the United States, and have power densities per floor area 15-100 times larger than those of commercial buildings. According to S&P Global market research, California ranks as the second largest data center market in the country, with a capacity of about 2.3GW (or 2,300MW) and 31 million square feet of data center space[[2]](#footnote-2). In addition to powering servers and IT equipment, data centers require complex water-cooling systems that typically constitute about half of the facility’s power use. Specialized equipment like batteries and backup generators also contribute to the power use necessary to keep the data centers reliable. All this energy use creates GHG emissions, both directly and indirectly.

Data centers’ share of total electricity consumption will only grow as rapidly expanding technologies like AI and machine learning move into new industries and require the processing of greater amounts of data. The global data center market is expected to grow 11.3% annually through 2026, and demand is currently outstripping supply[[3]](#footnote-3).

**Data Centers are at high risk of emissions leakage because of the lower cost of electricity in neighboring states**

Silicon Valley and Los Angeles are two of the largest data center markets in the United States, connecting businesses to large metropolitan centers on the west coast of the United States, and to Asia, South America, and Canada through long range cables. Despite the advantages of remaining in California, electricity prices in the state are among the highest in the nation, which creates a challenge for data centers.

According to a 2017 report by the U.S. Chamber of Commerce, electricity represents data centers’ largest operating cost, constituting 40%-80% of annual expenditures[[4]](#footnote-4). Nevada, Arizona, other western states, and even Mexico offer data centers access to California cities with the crucial added benefit of reduced electricity prices. These alternative locations generally produce more GHG emissions in generating electricity, and therefore represent a significant leakage risk.

CBRE Group, a large commercial real estate firm, released a 2022 “State of the Market” Report for Data Centers and found that the Silicon Valley market in particular is facing power supply issues, driving up energy prices. “Power supply constraints will be the biggest impediment to new development in some primary markets like Northern Virginia and Silicon Valley. As a result, hyperscale demand will grow in secondary markets with cheaper land, greater power supply and favorable tax incentives.” In addition, Silicon Valley was the only primary data center market in the U.S. that saw an increase in vacancies over the last year[[5]](#footnote-5). Meanwhile, the Phoenix area data center market saw a decrease in vacancies from 11.9% to 8.5% in the same period[[6]](#footnote-6). This creates an emissions leakage risk for the entire industry as data center operators pursue lower annual energy costs.

**The CIAC can be applied to the Data Center Industry through an energy-based allocation methodology**

The CIAC is provided to EITE industries to minimize leakage risk, and CARB uses three methodologies to do so: A product-based allocation, an energy-based allocation, and an allocation specific to refineries. While the product-based allocation is the preferred methodology and is annually adjusted based on facility output, it may not be feasible or appropriate for data centers because of the nature of their “product.”

While data centers don’t produce a tangible, physical product like the manufacturing industries included in CARB’s list of eligible NAICS codes, they nonetheless deliver a product essential to nearly every industry – computing power. The “product” of data centers is essentially their capacity – or the amount of electricity converted into computer processing power. In fact, electricity is so critical to the operation of data centers that the facilities are often measured in terms of their maximum kW or MW capacity, or how much power their servers and other equipment can use at any one time (although they very rarely, if ever, reach this level). Because the product of data centers is uniform and their operation is so heavily tied to electricity consumption, they are a suitable candidate for an energy-based allocation methodology.

**The Cap-and-Trade Program and CIAC should be expanded to non-IOU territory to fully impact the Data Center Industry**

While many California data centers are located in the territory of investor-owned utilities, many facilities are not. According to datacenterjournal.com, of the 94 largest data centers in California (>50,000 sq. ft.), only 42, or about 45%, are located within IOU territory. In order to impact data center GHG emissions by adding data centers to the list of CIAC-eligible NAICS codes, publicly owned utilities (POUs) and Cooperatives (COOPs) need to be included as part of the territory eligible for the CIAC. Without doing so, only a fraction of data centers would be incentivized to stay in California and reduce their emissions.

**Conclusion**

Utility Cost Management thanks CARB for the opportunity to comment on the proposed changes to the Cap-and-Trade program. We look forward to participating in the upcoming rulemaking process in support of incentivizing data centers to stay in California, and more importantly, helping the state achieve its emissions reduction targets.

Thank You,

Michael Kerkorian, Managing Member

Utility Cost Management LLC.

1. https://iopscience.iop.org/article/10.1088/1748-9326/abfba1 [↑](#footnote-ref-1)
2. https://www.spglobal.com/marketintelligence/en/news-insights/research/datacenter-companies-continue-renewable-buying-spree-surpassing-40-gw-in-us [↑](#footnote-ref-2)
3. https://www.forbes.com/sites/markzettl/2023/05/22/thinking-inside-the-box-data-centers-offer-creative-revenue-streams-for-some-stressed-office-buildings/?sh=bfc990247234 [↑](#footnote-ref-3)
4. https://www.uschamber.com/assets/archived/images/ctec\_datacenterrpt\_lowres.pdf [↑](#footnote-ref-4)
5. https://www.cbre.com/insights/reports/north-america-data-center-trends-h2-2022 [↑](#footnote-ref-5)
6. https://www.cbre.com/insights/local-response/north-america-data-center-trends-h2-2022-phoenix [↑](#footnote-ref-6)