Principles for Data Center Development and Operation

Across the United States, we are witnessing the rapid buildout of new data centers to power our virtual world, including artificial intelligence (AI). Absent strong guardrails and appropriate grid management, data center development has the potential to derail our clean electricity goals, drive up electricity rates, strain the grid, harm communities, increase air pollution, deplete water resources, and accelerate the climate crisis.

The Climate Action Campaign's (CAC) overarching goals center on reducing climate pollution and accelerating the transition to clean energy and a sustainable society in ways that support justice, jobs, improved health, and quality of life for all. Families are already facing the impacts of the climate crisis: more frequent and severe extreme weather, rising utility bills, and unhealthy air pollution that disproportionately hit communities of color and low-income communities.

CAC does not advocate for or against data centers and/or AI. However, given the climate, health, natural resource, consumer and environmental justice considerations linked to their development and operations, the coalition is focused on rigorous protections at the local, state, regional, and federal levels, including robust and meaningful community engagement, to defend against adverse outcomes. This includes positioning new, additional clean energy for any planned buildout, not fossil fuels. We strongly oppose federal pre-emption of state and local limits and rules to help achieve these goals. These principles put forward a vision for the development of data centers to minimize risk and maximize benefit.

CAC calls for all responsible entities, including utilities, data center developers/operators, regulators, and policymakers, to work toward the following outcomes:

Siting, Planning, and Community Engagement

- Early and frequent meaningful engagement with impacted frontline communities throughout the development and operation of the data centers and associated infrastructure. Robust meaningful engagement is an inclusive, equity-centered process that empowers communities to shape decisions through transparent communication, accessible participation, and shared accountability.
- Ensure community engagement and development of rigorous plans to mitigate harmful impacts, provide upfront and ongoing transparency about load size and shape, energy (both electricity usage (kwh) and efficiency (kwh/output) and water usage, air and water pollution, and the electricity rates that data centers are paying for their usage.
- No data centers, or fossil power generation for data centers, sited on protected lands. Responsible siting includes avoiding negative impacts to habitat, wildlife, water resources, recreation areas, and community services. Further, sites deemed as sacred and/or with cultural significance should be identified and avoided. Where possible, siting of data centers should prioritize disturbed, reclaimed, or brownfield sites over greenfield development.
- Responsible development and operation, including investing in noise mitigation strategies.
- Data center siting decisions must include comprehensive cumulative impacts evaluations and environmental impact analyses. Draft environmental review documents are

published and made available to the public with meaningful opportunities to comment provided.
- Efforts to bring in, incentivize and/or attract development must prioritize environmental protection, meaningful conservation mitigation, human health, and local economic benefits, including job creation.

Electricity Usage

- Data centers are powered by additional, deliverable, 24/7 clean energy to meet energy and capacity requirements during all operating hours, without resorting to new gas generation or keeping existing gas, oil, or coal generation online.
- Data centers maximize energy efficiency and participate in demand flexibility programs, in order to reduce energy demand – particularly during extreme weather events and peak demand hours.
- Ratepayers are protected from rate increases due to the addition of new data centers to the grid. Data centers pay their fair share of energy infrastructure and transmission costs.
- Data center operators regularly publicly report their energy consumption and performance.

Water Usage

- Data centers publicly report total water usage, and metrics such as water consumption and availability, water stress and climate, present and future community needs, energy sources, and local regulations, must be accounted for in the siting process to determine appropriate locations and minimize impacts on local water supplies.
- Data centers prioritize high efficiency water technologies and other water management and recycling systems to minimize water usage (e.g., dry-cooling or liquid-cooling systems, efficiency measures, water reuse, offsetting demands through localized conservation investments).
- Toxic chemicals, such as PFAS, are not used in cooling systems or component manufacturing like semiconductors.
- Data centers are transparent about removing drinking water from the local water cycle due to contamination issues.
- Data centers ensure that withdrawing from an aquifer system does not result in contamination being pulled down into drinking water supplies.

Air Pollution

- Emissions from data centers, including greenhouse gases, criteria air pollutants, and hazardous air pollutants, should be avoided where possible and otherwise be comprehensively regulated to require use of modern control technology.
- Regulatory frameworks provide adequate oversight and protective pollution standards for air pollution from data centers, whether such air pollution is generated on-site or is indirectly associated with the data center (such as from increased energy generation off-site). At a minimum, they must undergo a rigorous environmental review and comply with all applicable state and federal pollution standards – regardless of recent rollbacks.

- Data centers implement continuous local air monitoring at the fenceline employing the best available monitoring methods for air pollutants linked with cancer, asthma, neurological, developmental, and other health effects.
- Data centers do not contribute to increased local emissions such as NOx, SO2, and PM via their demand needs from the grid or on-site backup generation. Data centers maximize battery storage for onsite zero-emissions backup generation and on-site solar.
- Emergency backup generation must be covered by protective permits that require the cleanest and most efficient technologies available such as solar and battery storage, ensuring communities are not burdened by toxic emissions. Any loopholes or exemptions for these operations should be eliminated.

Chemical Safety

- All new chemicals for use in data centers or used to produce manufactured components for use in data centers, at minimum, should go through the required premanufacture notice review procedures under the Toxic Substances Control Act. Any loopholes or exemptions to this process should be eliminated.
- Data centers and the semiconductor manufacturing industry prioritize research and development of safe alternatives to PFAS and other dangerous chemicals that are now used in their facilities.
- Data centers publicly disclose chemicals used in data centers, including chemical ingredients of cooling liquids, refrigerants, fire suppressants, and degreasers, and of chemicals used to make covered components used in data centers, including semiconductors and data storage equipment.
- Require environmental health and safety plans to protect workers in data centers, including mandatory workplace monitoring for PFAS and other chemicals of concern.
- Routine monitoring to ensure that wastewater discharges to treatment plants or to the environment do not contain any PFAS and other chemicals of concern.

Supporting Organizations:

EARTHJUSTICE
BECAUSE THE EARTH NEEDS A GOOD LAWYER

LCV

NRDC

CLIMATE ACTION CAMPAIGN

SIERRA CLUB

Union of Concerned Scientists

About the Climate Action Campaign: *The Climate Action Campaign (CAC) is a vibrant coalition driving ambitious, durable, equitable federal action to tackle the climate crisis. By cutting carbon pollution and accelerating the transition to clean energy, we will improve public health and create a more resilient economy and a more sustainable future for all.*