

Maine Data Center Advisory Council Meeting

Environmental Considerations

June 23, 2026 | 2pm - 5pm



MAINE DEPARTMENT OF
Energy Resources



Maine Department of
Environmental Protection



Meeting Agenda

- Recap of public input and opportunity for additional feedback
- Guest presentation: Pacific Northwest National Laboratory
- Overview of environmental topics
- Discussion
- Next Steps



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Maine Data Center Advisory Council Executive Order



Directives Guiding the Council's Work:

- Provide strategic input, facilitate coordinated state planning, and evaluate policy tools to **address large-scale data center opportunities and related benefits and risks** to Maine.
- Evaluate issues related to large-scale data centers located or proposed in Maine, with the goals of:
 - **Minimizing environmental impacts**
 - **Protecting ratepayers and electric grid reliability**
 - **Enabling responsible economic development**
- Submit a final report with **findings and recommendations**, including any proposed legislation, to the Governor and the Legislature by January 29, 2027.



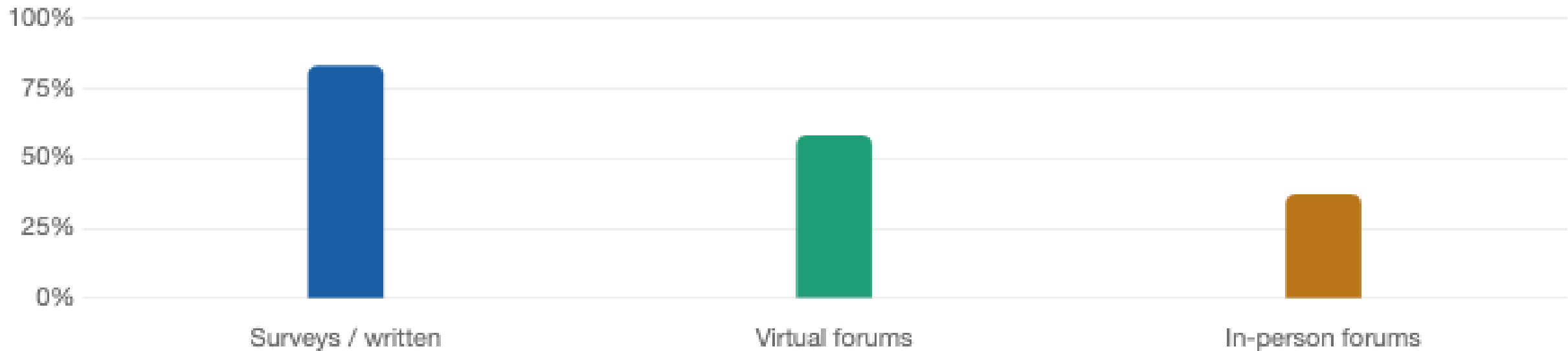
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Council Public Engagement

What we heard from you

Which public engagement opportunities are best for your participation?

Option selection rate (% of 163 respondents)



We also heard you wanted more opportunities to weigh in during Council Meetings



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Council Public Engagement

Opportunities to get involved

During Council Meetings:

- Attend public meetings and participant in live polling

Between Council Meetings

- Watch recordings on YouTube
- Share your input through surveys (results presented at next meeting)
- Sign up for the email newsletter to receive updates
- Follow Public Utilities Commission docket (2026-00142)

Dedicated Public Listening Sessions

- Planned for late Aug / early Sept

**Scan to go to the
Council webpage:**



maine.gov/energy/datacentercouncil



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Preliminary Survey Results: Questions about Data Centers

Public comment submitted ahead of the June 23 Council meeting • 37 responses



Water Use and Supply

How could large-scale data centers affect Maine's water resources, like groundwater, lakes, rivers, and municipal water systems?



Electricity Costs and Grid Impacts

What impacts could data centers have on electricity demand, grid reliability, and costs for Maine ratepayers?



Environmental and Community Health

What are potential environmental and community impacts, including noise, lighting, wildlife, land use, air quality, GHG emissions, and how is Maine prepared to regulate those?



Costs, Benefits, and Municipal Action

How should Maine evaluate the potential economic benefits of data centers alongside potential environmental, energy, and community impacts? What tools do municipalities have to manage potential impacts?

**Scan to take
the survey:**



Responses due June 30

Note: reflects the tone of submitted comments, not a scientific survey.

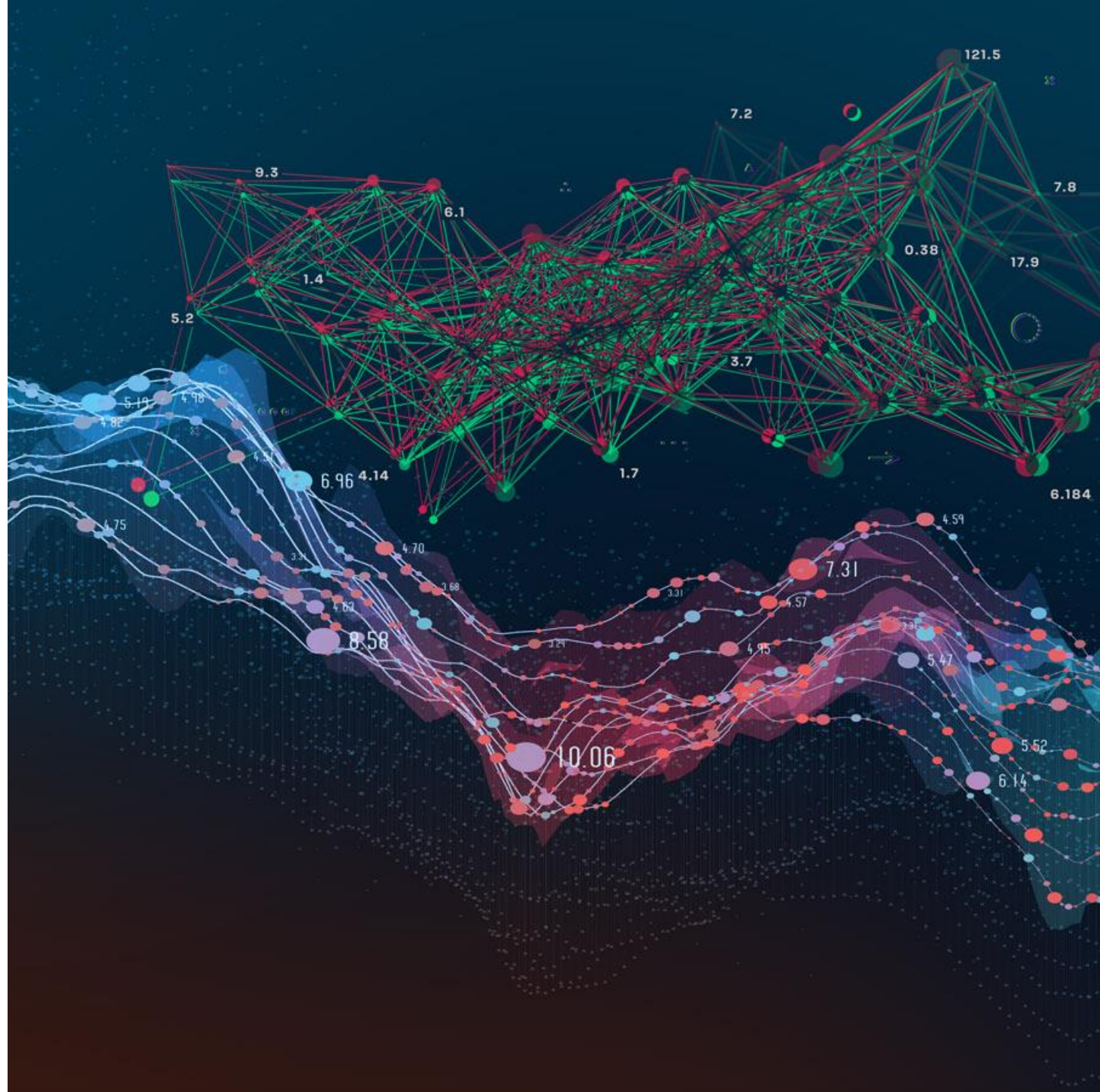
Menti Poll

Pacific Northwest National Laboratory

Data Centers 101

Juliet Homer
Chief Systems Engineer

Maine Data Center Advisory Council



Agenda

- Definitions
- Types of data centers
- How data center needs and planning are shifting
- Data center growth and trends nationally
- New England large load and electricity growth projections
- Impacts to national electricity planning and operations
- Water and energy use and tradeoffs
- Summary



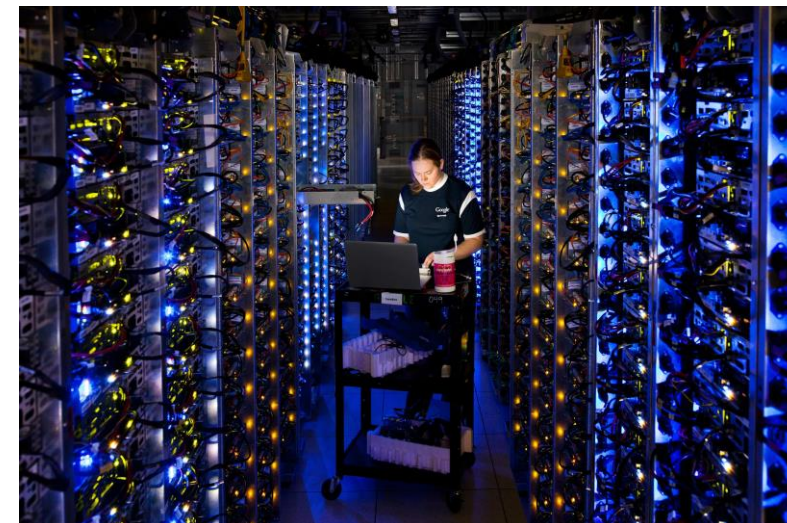
Photos from Unsplash

Definitions

- **Data centers** – Buildings or spaces that house large groups of networked computer servers used to store, process, and manage digital data.
- **Cloud computing** – Using computing services — such as storage, processing power, and software — over the internet from providers like Amazon, Google, or Microsoft instead of buying and maintaining your own hardware.
- **Artificial intelligence (AI)** – Computer systems designed to perform tasks that normally require human intelligence — such as recognizing images or speech, learning from data, solving problems, or making decisions. AI enhances our ability to analyze very large datasets that would otherwise take significantly longer to evaluate manually.
- **Hyperscalers** – Companies that operate very large-scale data center infrastructure capable of rapidly expanding to meet growing demand and delivering massive amounts of computing power and storage globally. Examples: Amazon, Microsoft, Google.

Types of data centers

- Enterprise data centers
 - Located on-site and owned and operated by a single organization
 - Used for general Information Technology (IT) services and business applications
 - Sizes vary:
 - ✓ Small: 1,000 -10,000 sq ft
 - ✓ Mid-size: 10,000 - 50,000 sq ft
 - ✓ Large: 50,000 – 100,000 sq ft
 - Electricity: Requires 1–5 megawatts (MW) (equivalent to electricity use of 750–3,700 homes) for small facilities, 20–60 MW (~15,000–45,000 homes) for large facilities
- Colocation (Colo) data centers
 - Shared facilities where organizations collocate or lease equipment
 - Size: 2,000 – 20,000 sq ft, for regional sites; can reach 100,000+ sq ft



Photos from [Google Gallery](#)

Types of data centers, cont.

- Hyperscale cloud data centers
 - Serve millions of users with virtualized, on-demand compute
 - Size: 100,000 sq ft typical; several hundred thousand to millions of sq ft for large sites
 - Power: typically 100+ MW per site; large campuses can be several hundred MW
- Edge data centers
 - Typically, small facilities located close to end users of devices
 - Support real-time, data-intensive workloads (broadband routing, telehealth devices, smart traffic systems, and self-driving vehicles).
 - Size: hundreds to a few thousand sq ft
 - Power: ~100 kW to 5 MW+



Photos from [Google Gallery](#)

Additional data center types

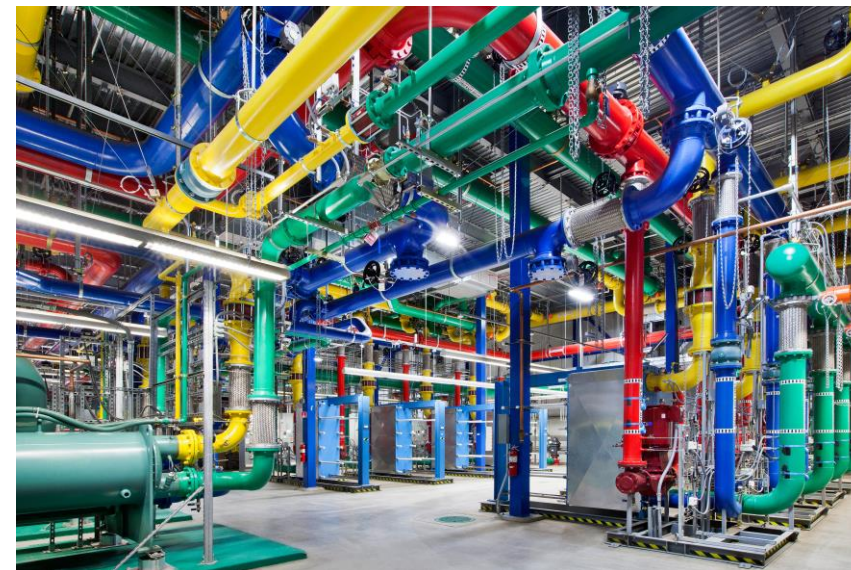


Photo from Unsplash

- Cryptocurrency (Crypto Mining) Data Centers
 - Specialized high-density compute for blockchain mining
 - Sizes range widely; many facilities are retrofit warehouses, while newer facilities are purpose-built
 - ✓ Small facilities: 5,000 – 20,000+ sq ft
 - ✓ Large industrial sites: 50,000 – 200,000 sq ft
 - Power demand can range from 5 MW to 100+ MW, depending on scale
 - Can throttle or shut down workloads easily in response to grid signals; good candidates for demand response programs
- AI Inference Data Centers
 - Data centers optimized for using a trained AI model to handle real-world tasks for real users or systems (e.g., answering queries, making recommendations, speech recognition).
 - Size: small clusters (1,000 – 10,000 sq ft) to larger metro-edge deployments
 - Located close to the large data center clusters where major cloud providers (like Amazon, Microsoft, and Google) run their core services

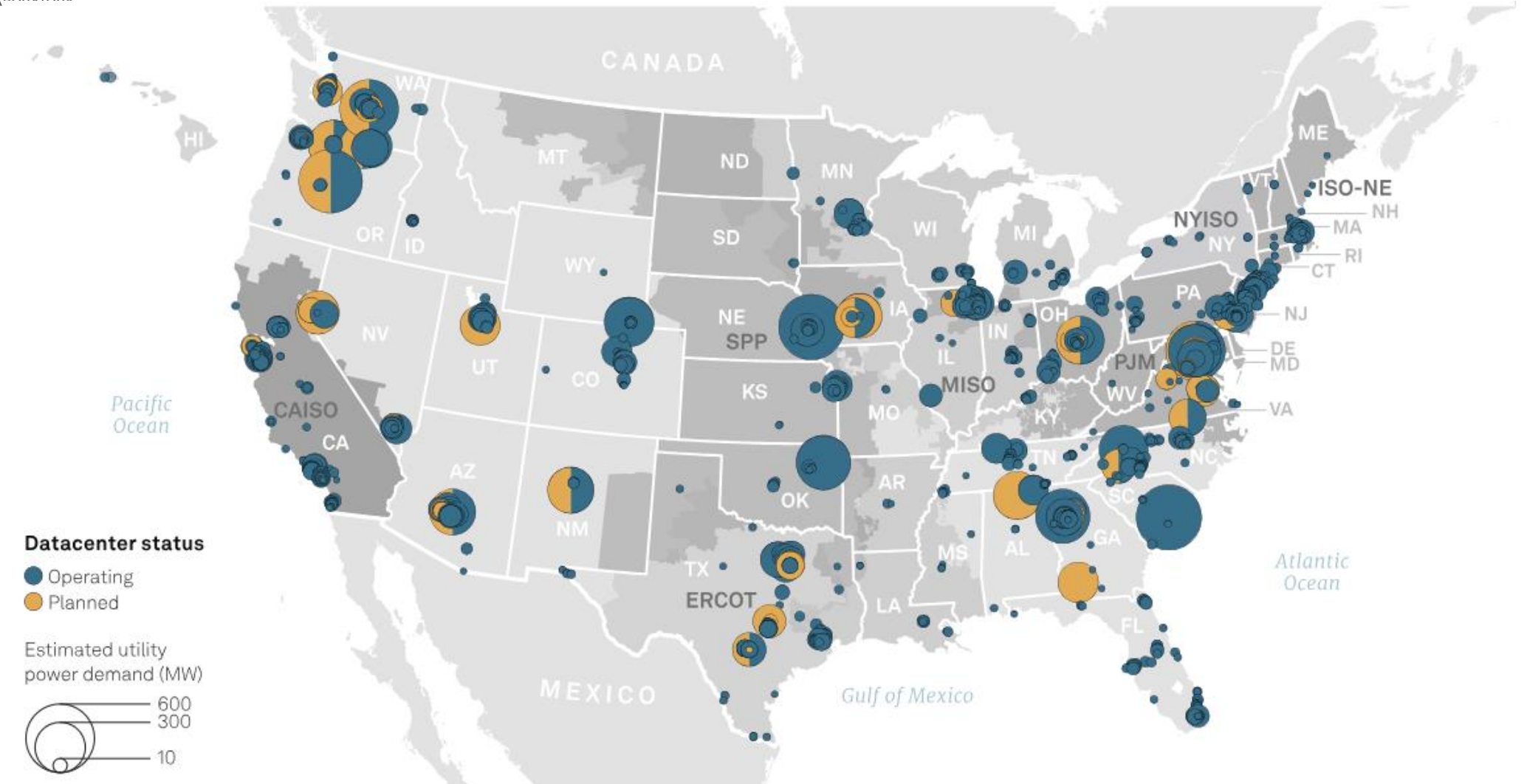
How data center needs and planning are shifting

1. **Significant growth in AI computing** - AI systems need far more computing power than traditional IT, driving much larger and more energy-intensive data centers.
2. **Power & cooling are driving planning** - Modern facilities use far more electricity and generate more heat, so power grid capacity and sustainable cooling are top considerations for planners.
3. **Faster, modular build-outs** - Instead of giant campuses built all at once, companies now deploy “modular” buildings that expand in phases and can fit into smaller communities.
4. **Hybrid infrastructure is the norm** - Most organizations spread their systems across local sites, cloud providers, and edge data centers, meaning demand is distributed rather than concentrated.
5. **Sustainability expectations are high** - Communities and regulators expect renewable power, low water use, and careful siting—making environmental impact part of early planning.
6. **Greater use of automation** - Data centers increasingly run themselves with advanced monitoring, reducing staffing needs but increasing the importance of reliable infrastructure.
7. **Need for modern, high-capacity networks** - AI and cloud workloads require extremely fast and resilient fiber networks, making broadband infrastructure a deciding factor in where facilities go.
8. **Security & resilience are front and center** - As data centers become critical infrastructure, planning now prioritizes strong cybersecurity and physical resilience.



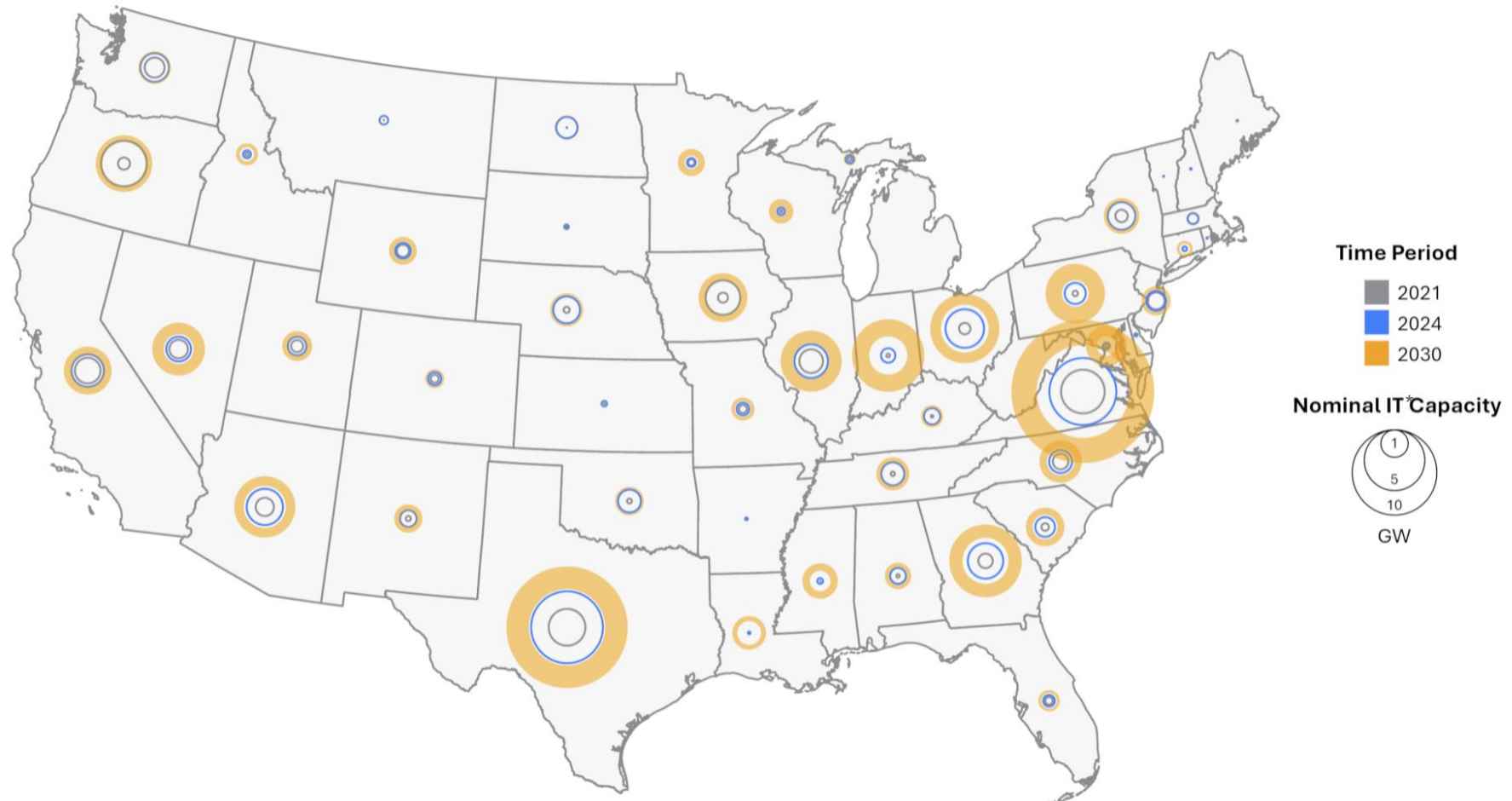
Photos from [Google Gallery](#)

Data Centers in the U.S.



Sources: S&P Global Market Intelligence; 451 Research; S&P Global Commodity Insights

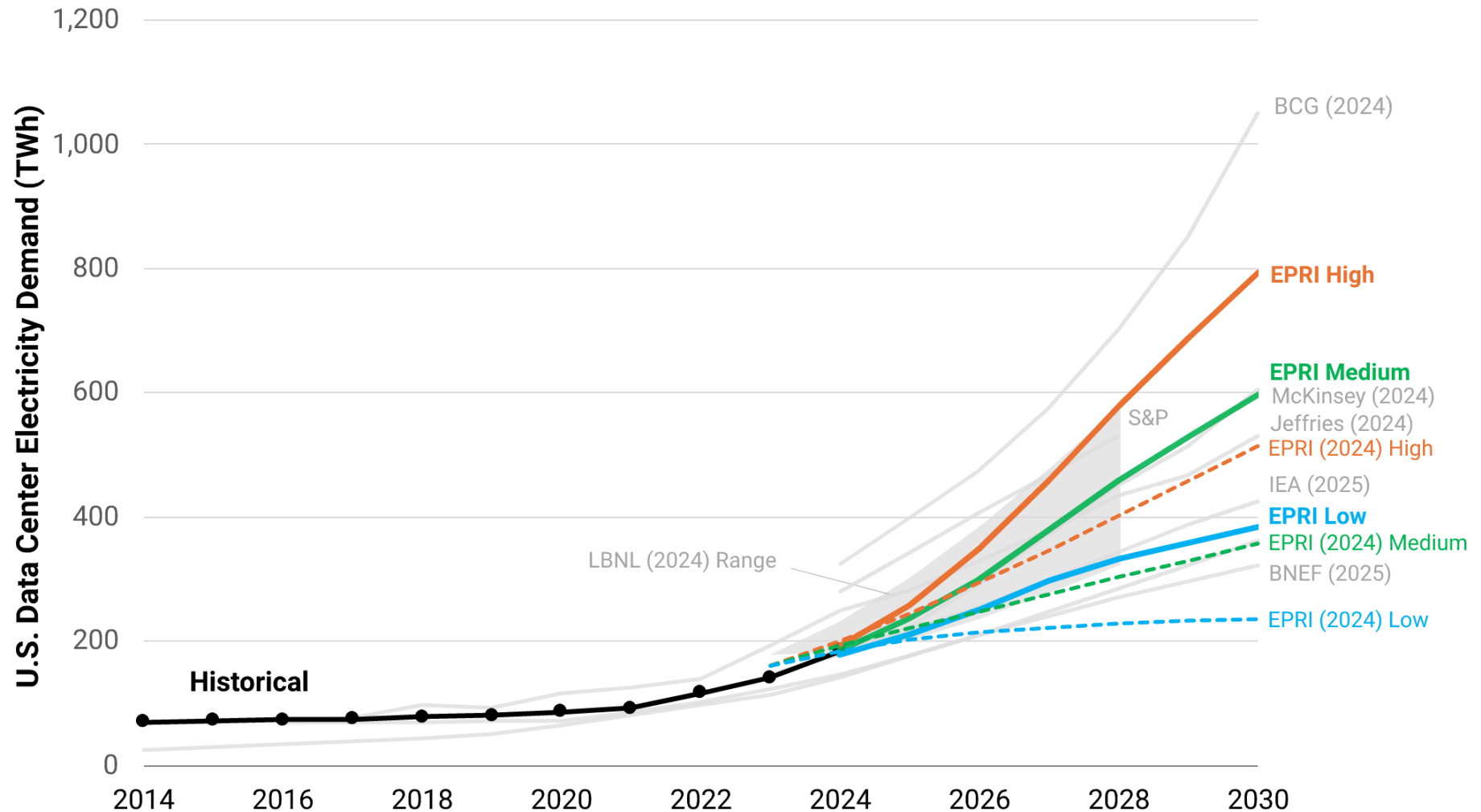
Data Center Nominal Computing (IT) Capacity by State in 2021, 2024, and 2030



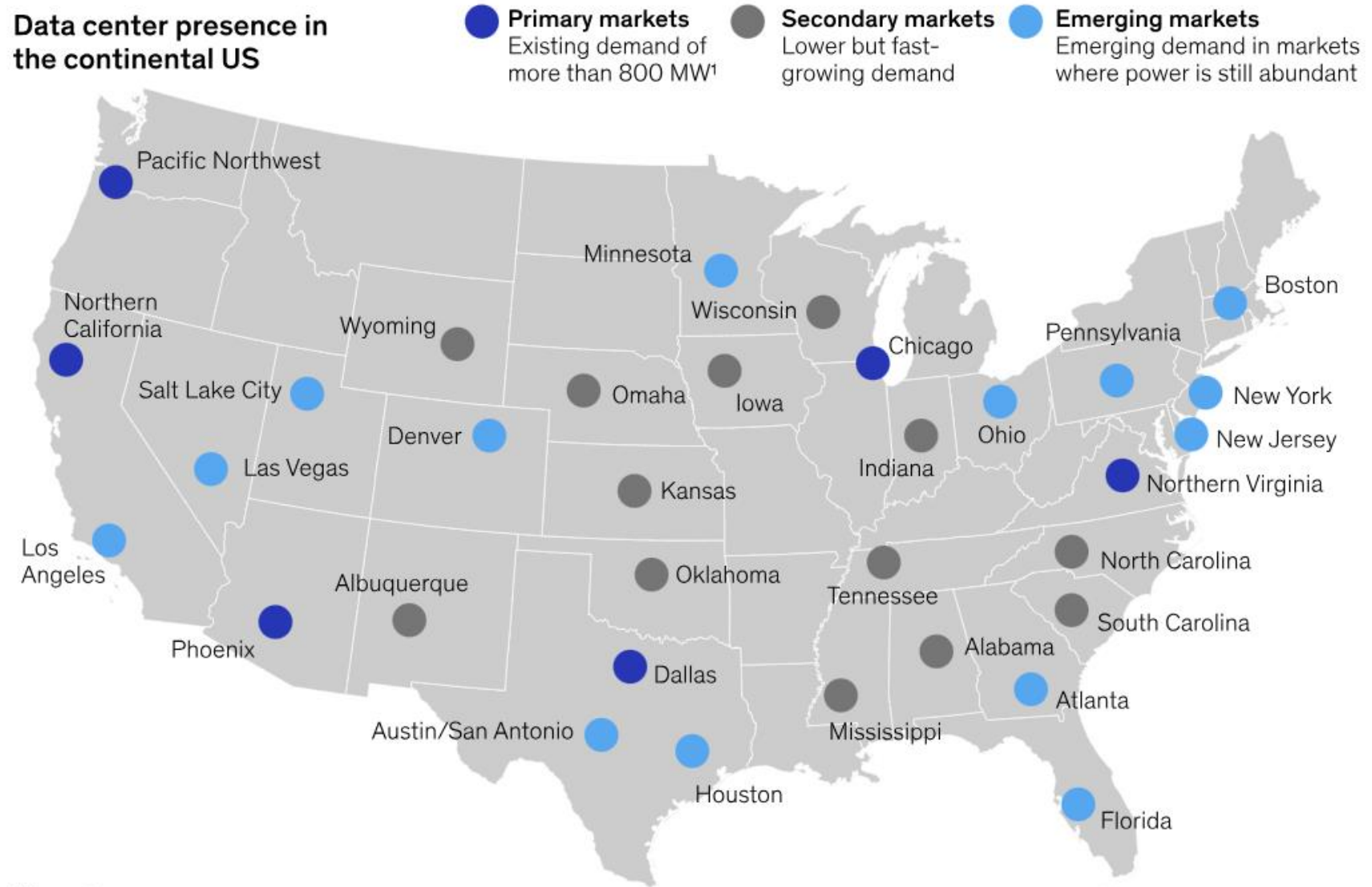
Includes small and large-scale data centers as well as cryptocurrency mining
From Electric Power Research Institute (EPRI), [Powering Intelligence 2026](#)

*IT = Information Technology; total data center energy demand includes IT load plus cooling systems and facility losses

Nationally, data centers are currently 4% of electricity demand; could go up to as high as 11% by 2030



Data center presence in the continental US



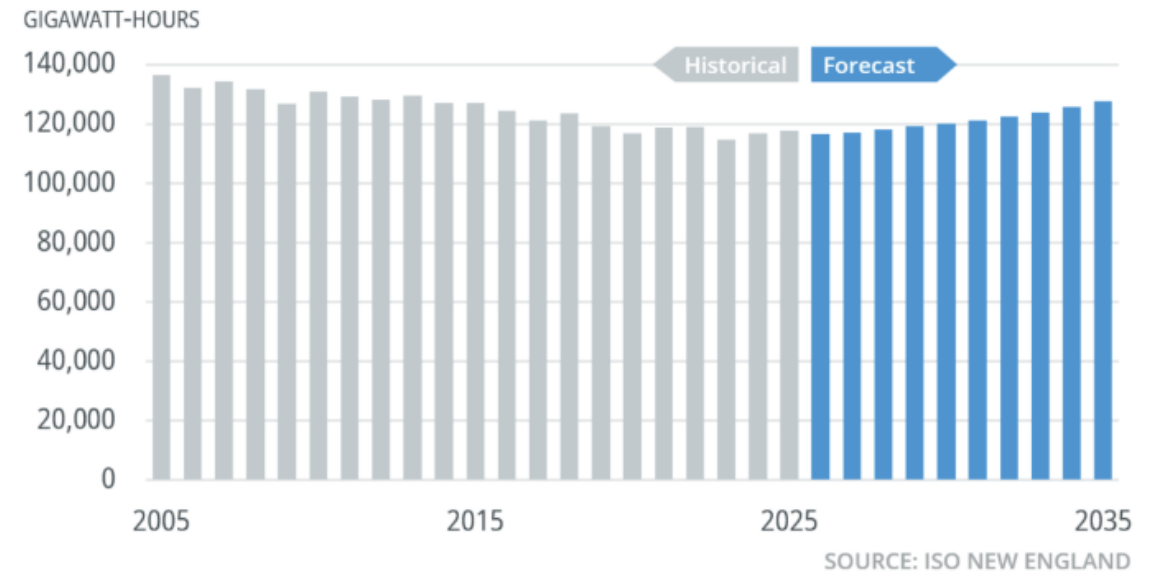
¹Megawatt.

Source: Datacenters.com; S&P Global Market Intelligence 451 Research; McKinsey Data Center Demand model

New England large load and electricity growth projections

- The grid operator for New England, Independent System Operator of New England (ISO-NE), is actively surveying transmission owners about potential large load growth.
- ISO-NE's forecast is modest for New England — data centers are not currently a dominant load growth driver in the region.
- ISO-NE's 2026 Capacity, Energy Loads, and Transmission (CELT) report identifies two large data center or crypto projects in the formal study phase within New England, totaling up to 285 MW at full build-out.
 - Projects are expected to affect the system starting in winter 2027/28.
 - By the 2030s, these loads are projected to add around 110 MW to either summer or winter peak; increasing to roughly 130 MW by 2040.
 - Annual energy consumption from these large loads is projected to grow from 800 GWh (2030–35) to about 1,000 GWh in the 2040s

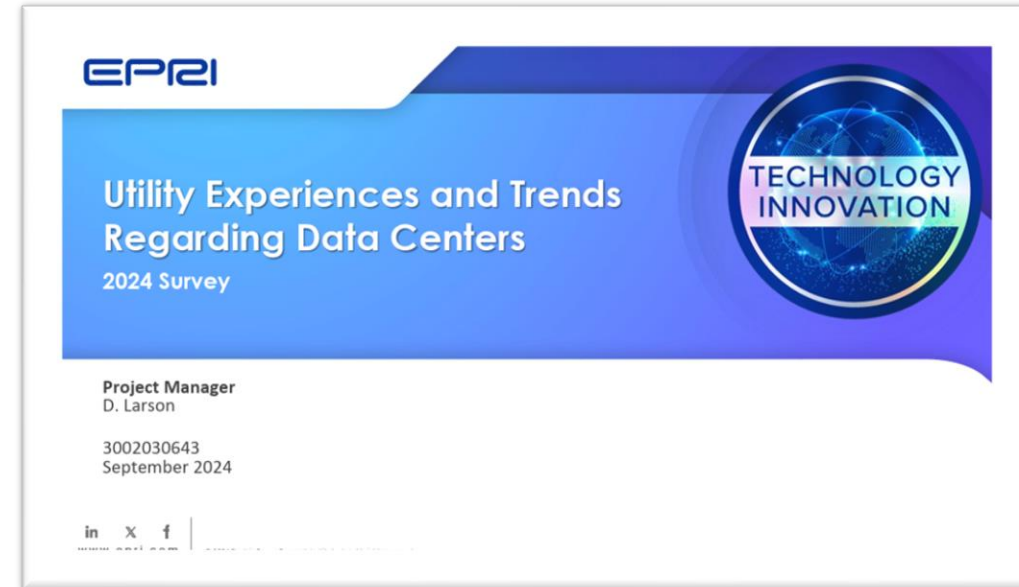
Electricity use expected to rise after two decades of decline



[2026-2035 Forecast Report of Capacity, Energy Loads, and Transmission \(CELT Report\)](#)

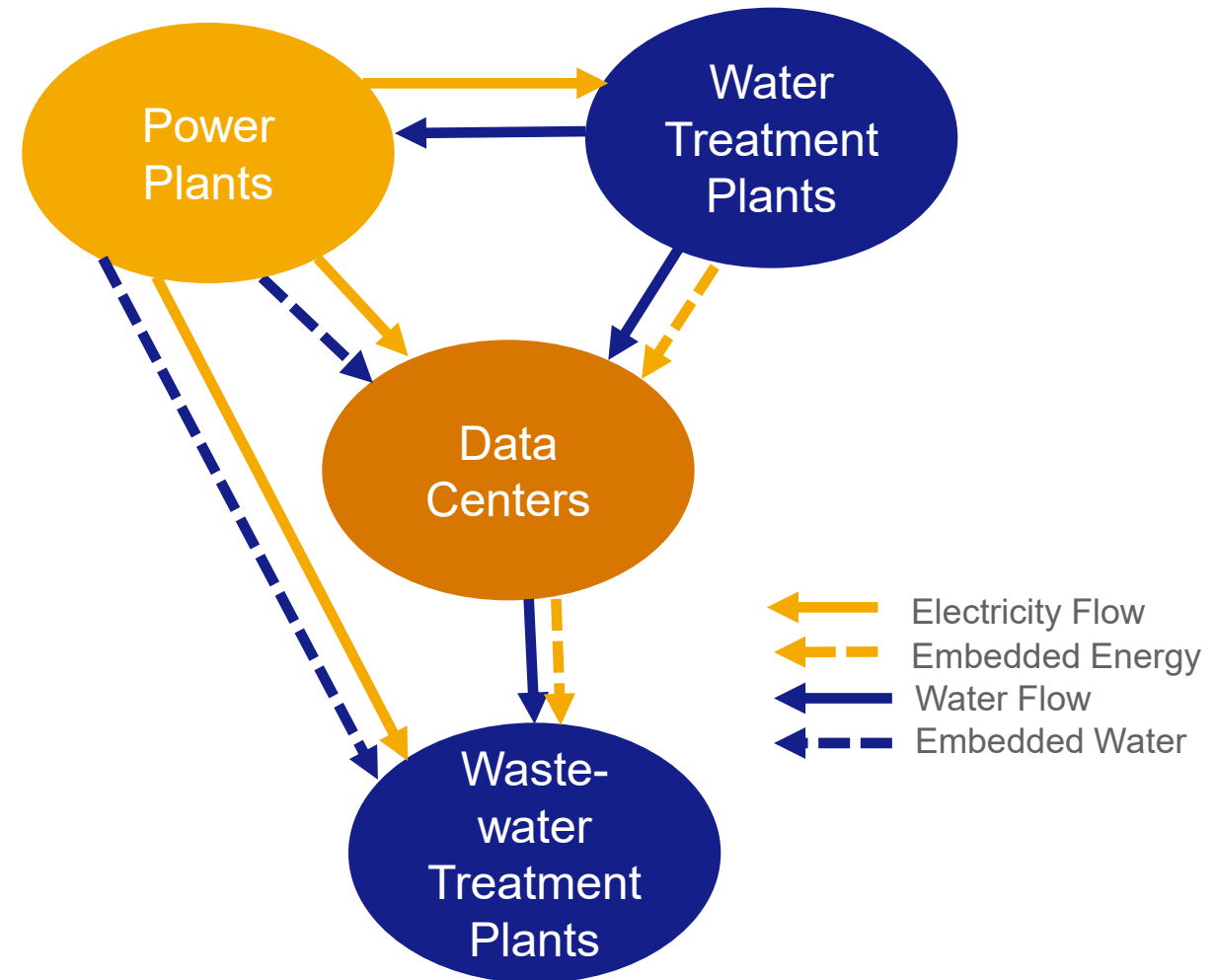
Data center impacts on utility planning and operations nationally

- Data center **interconnection requests** are increasing in size (500 MW, 1000 MW, or larger)
- Projecting future demand with data centers
 - Most utilities use **standard large load service requests** for data centers; they do not have a formal data center interconnection process
 - Most utilities use **general load models** to analyze requests; they don't have specific data center load models
 - Utilities don't have a consensus on how to include data center service requests in **load forecasts**
 - Challenges around incorporating data centers into load forecasts, given the **speculative nature of some service requests**
- Operational grid impacts from data centers include:
 - Ramp rate issues
 - Thermal violations
 - Voltage violations
 - Fault ride-through issues
- Some utilities have or are considering programs that allow data centers to provide grid services, such as during high-risk grid hours



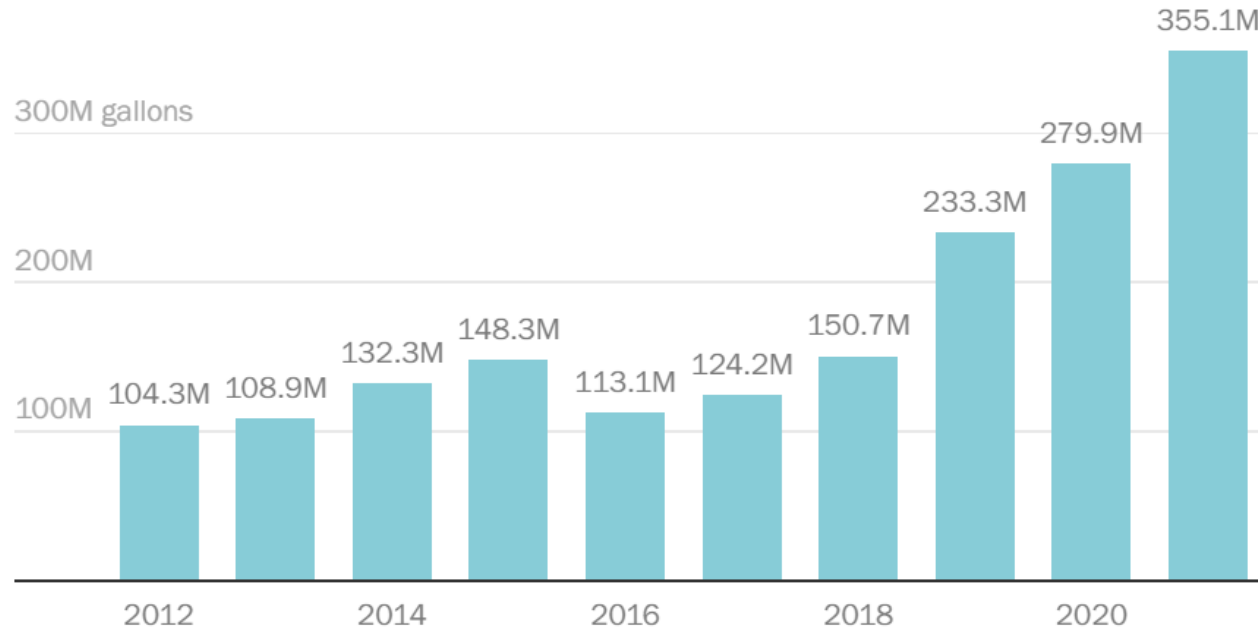
Water and energy tradeoffs for data centers

- Water is regularly used to cool microchips in data centers
- Dry cooling is possible, but is not commonly used
- Dry cooling requires more energy and is not as efficient
- Not a lot of information is available about water use in data centers
- In some cases, hyperscalers have “water positive” targets and implement water replenishment projects to “balance” their consumptive water use
- Water discharges to wastewater treatment plants can contain a lot of heat (i.e., thermal energy). Potential opportunity area..?



Google's annual water use in The Dalles, in gallons

Google's data centers in The Dalles use nearly three times more water than they did five years ago and now account for more than a quarter of all the city's water use.



Source: City of The Dalles • [Get the data](#)



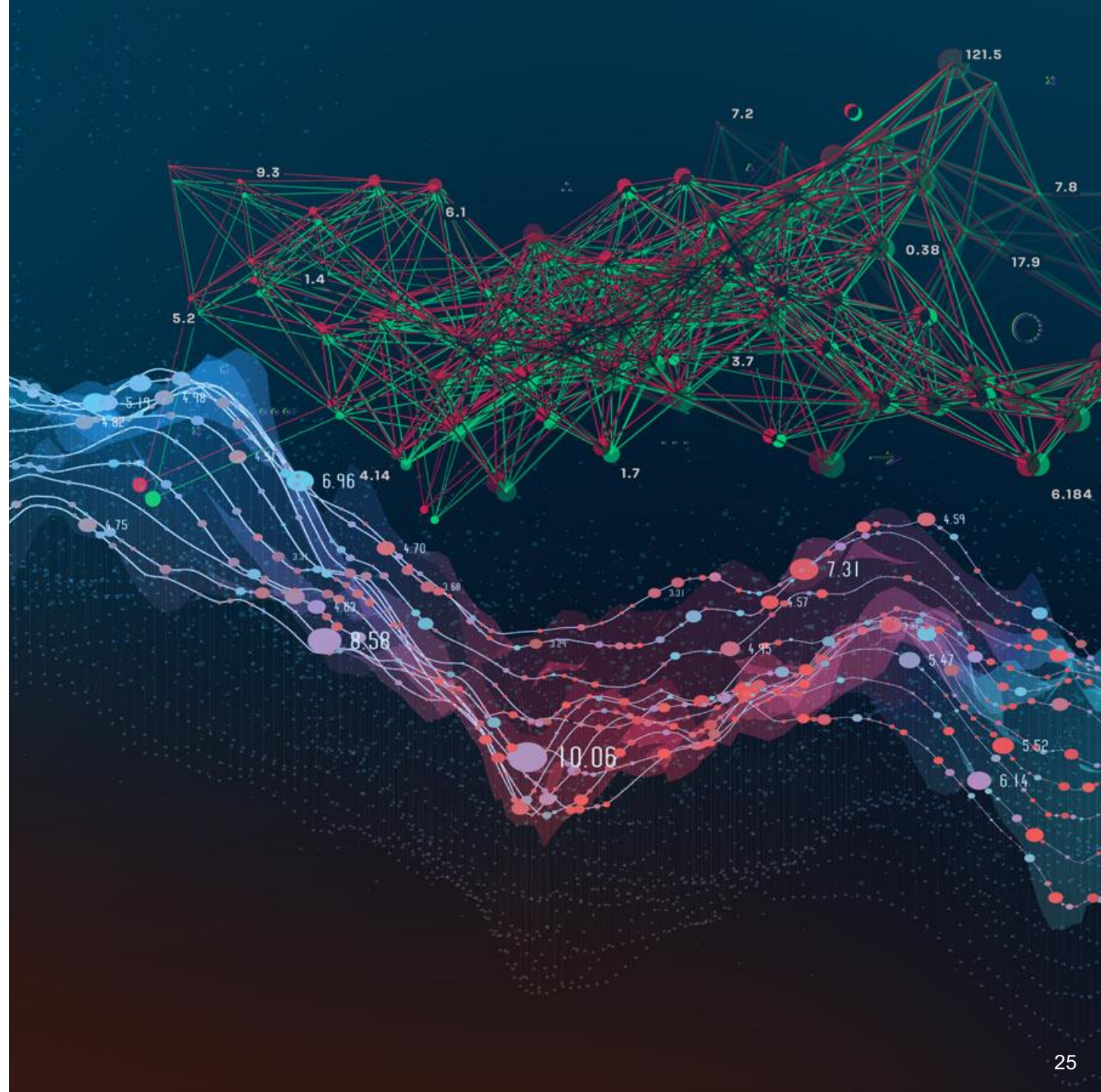
Source: <https://www.oregonlive.com/silicon-forest/2022/12/googles-water-use-is-soaring-in-the-dalles-records-show-with-two-more-data-centers-to-come.html>

- Google's 2024 annual demand was 434 million gallons; two data centers spread over four buildings.
- On average, this is 1.19 million gallons per day (MGD); 32% of total city water demand
- If summer demand is 1.5 to 2x annual average, Google's 2024 peak demand could be 1.8-2.4 MGD

- Depending on the cooling system, data centers use between 0.5 and 6 million gallons of water per year for every megawatt of computing capacity.*
- Water-efficient designs, like air-cooled systems common in colder climates, sit at the lower end.
- Evaporatively cooled systems, often used in warmer states, are at the higher end.

Summary

- **Data centers are expanding rapidly and becoming a major driver of electricity demand in some regions** - Growth in AI and cloud computing is increasing load, siting needs, and infrastructure pressures.
- **Power, cooling, and grid capacity are now the central planning constraints** - Large facilities require significant new electrical infrastructure and careful interconnection study.
- **Data center development is shifting toward modular, regional, and edge-style growth** - Not just mega-hyperscale campuses—smaller and mid-sized facilities are increasingly important for AI inference closer to users.
- **Utilities face challenges integrating large, fast-moving load requests** - Forecasting is difficult, requests can be speculative, and operational impacts include ramping, voltage, and protection issues.
- **Water use can be significant, and cooling technologies involve trade-offs** - Dry cooling reduces direct water use but increases energy needs, and indirect water use; water stewardship commitments by some hyperscalers seek to replenish water used in data centers.



Discussion

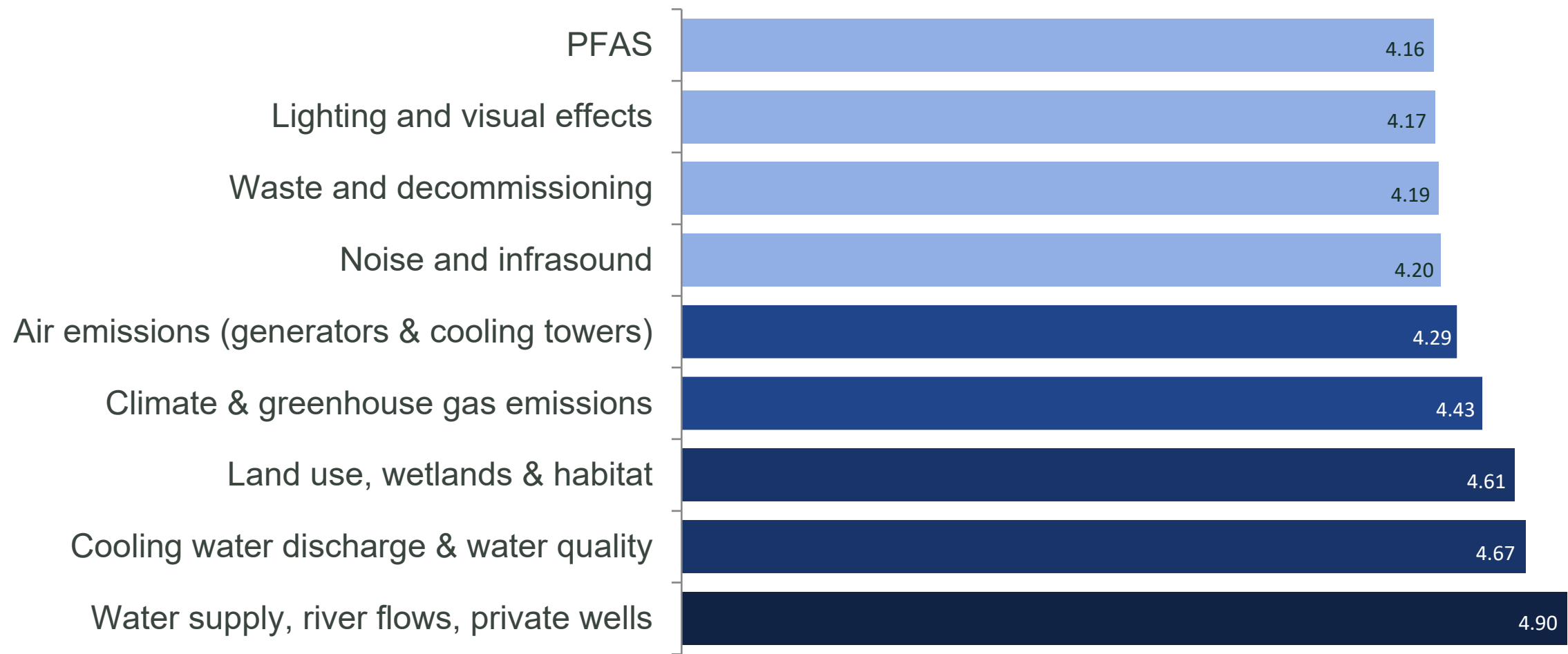
Survey Response Summary: Environmental Impacts

- **Water supply & private wells.** How will large cooling water withdrawals affect aquifers, private wells, rivers, and great ponds — especially during drought? Who monitors and who is liable?
- **Water quality, PFAS & cooling discharge.** What toxic or chemical-laden water is produced and where does it go? What are the PFAS risks? How will potential impacts from chemical additives in cooling discharge be assessed and monitored?
- **Noise & infrasound.** What are the audible and infrasound impacts and safeguards, for both construction and operation? How will they be measured and limits enforced?
- **Land use, forest clearing & habitat.** What are the limits on footprint size, forest loss, habitat fragmentation, and light pollution? Will coastal/shoreland zone protections apply?
- **Climate & GHG emissions.** How will data centers avoid negative impacts to Maine's climate goals?
- **Adequacy of existing permitting & regulations.** Are existing DEP permits, Site Law, shoreland zoning, and water regs sufficient? Should data centers trigger Site Law review? How will the impacts be assessed? How are cumulative impacts from multiple centers evaluated?
- **Decommissioning & long-term remediation.** What protections can be put in place now for when a data center closes? Can we include requirements for mandatory removal, remediation bonds, and liability for decommission construction.
- **Human health & community safety.** What health impacts could data centers have on surrounding residents, such as respiratory effects, contamination from toxic chemicals used in cooling systems, and PFAS exposure?



How Respondents Ranked Environmental Concerns

Survey rating scale 1 (low concern) to 5 (high concern) • 31 respondents



Note: every category averaged above 4.0 — respondents rated all nine issues as high concern, with water-related issues ranking highest.

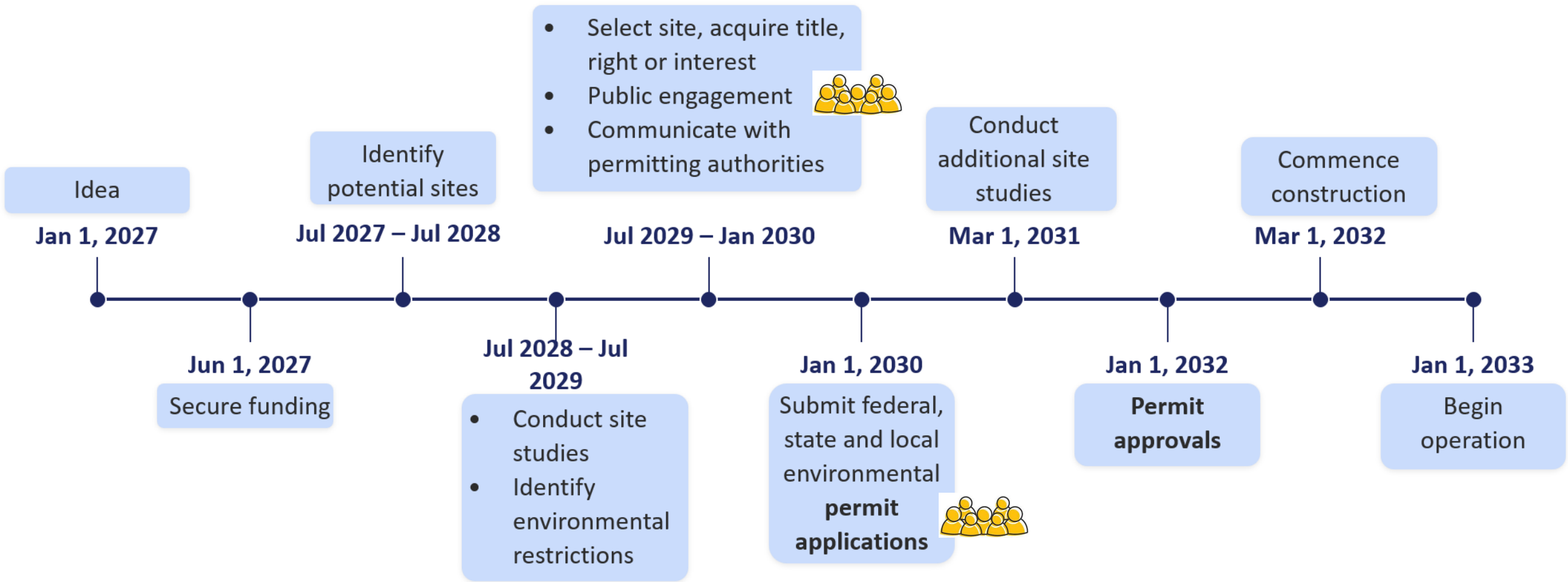
Data Center Environmental Considerations

Overview

- What are the potential environmental impacts of datacenters?
- What safeguards exist to address these environmental impacts?
- How could these safeguards be improved?
- When can the public weigh in?



Environmental Permitting Timeline

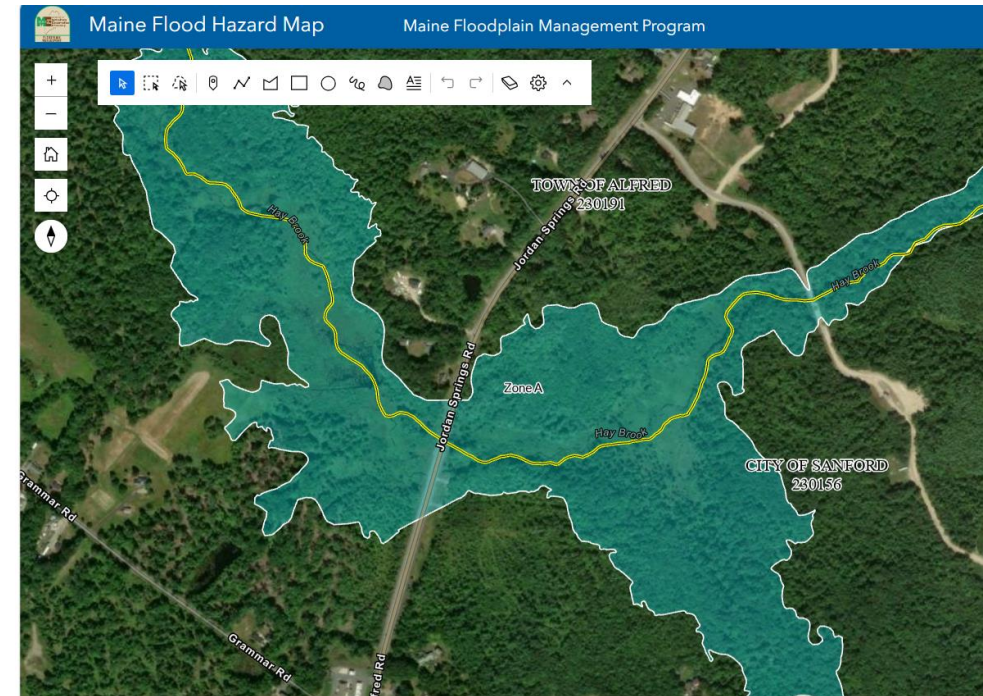


Site Selection

Developer coordinates with property owners

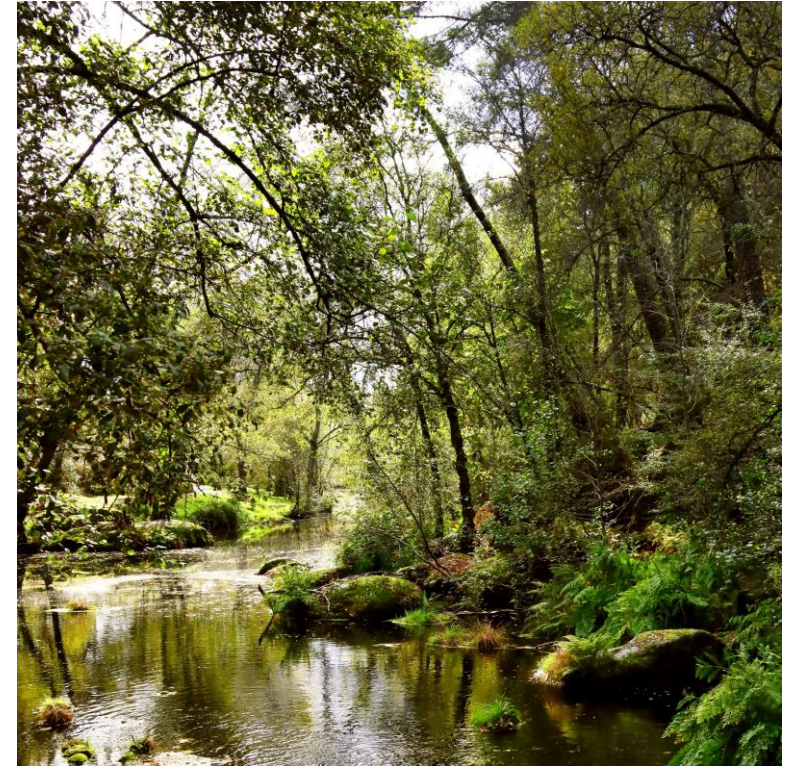
Factors:

- Access to resources – acreage, energy, water supply, workforce
- Existing infrastructure, utility services
- Protected natural resources
- Community support or opposition



Pre-Application Environmental Studies

- Streams, wetlands, vernal pools
- Significant wildlife habitat
- Water supply – hydrologic studies
- Background noise
- Brownfields contamination



Environmental Permitting



- Federal, state and local processes may be sequential or concurrent
- DEP processing timelines
<https://www.maine.gov/dep/processingtimes.pdf>
- Public review and comment opportunities
 - Public can submit comments on any license application under review by DEP
 - Draft licenses for wastewater discharges are subject to a 30-day public comment period
- Agency decisions may be appealed
 - Board of Environmental Protection reviews DEP decisions
 - All federal, state and local permits can be appealed in court



Site Location of Development Act (SLODA)

Permit required for disturbance of >20 acres or creation of >3 acres impervious surface (gravel, pavement, structures)



Permit covers:

- Erosion and sedimentation control
 - Also covered by Maine Construction General Permit (CGP) under Clean Water Act
- Stormwater management, engineered systems
- Harmonious fit
 - Ex.) Noise, visual impacts, light
- Unusual natural areas, historic sites, wildlife & fisheries (including habitat fragmentation)
- Groundwater quality and quantity
- Several additional standards (e.g., suitable soils)



Natural Resources Protection Act (NRPA)

Permit required for activities in, on or over (or adjacent to) 
protected natural resources:

- Dredging, bulldozing, removing or displacing soil, sand, vegetation or other materials;
 - Draining or otherwise dewatering;
 - Filling, including adding sand or other material to a sand dune; or
 - Any construction, repair or alteration of any permanent structure.
- US Army Corps of Engineers and Maine DEP require developers to avoid, minimize, and compensate (\$/acre) for wetland filling to prevent no net loss of wetland functions and values
 - Shoreland zoning restrictions apply within 250 of all surface waters, except only within 75 feet of streams.



Protected Natural Resources

- Coastal sand dune systems
- Coastal wetlands
- Fragile mountain areas
- Freshwater wetlands
- Community public water system primary protection areas
- Great ponds and rivers, streams and brooks
- Significant wildlife habitat (identified by ME DIFW):
 - Deer wintering areas and travel corridors
 - Seabird nesting islands
 - Critical spawning and nursery areas for Atlantic Salmon
 - Significant vernal pool habitat
 - High and moderate value wading bird habitat
 - Shorebird nesting, feeding and staging areas
 - Habitat for state endangered and threatened species



Water Usage

Licensee	MGD discharge
McCain Foods, Presque Isle	4
TimberHP, Madison	5.3
Cooke Aquaculture, Bingham (surface water)	5.7
Cooke Aquaculture, East Machias	10
Cooke Aquaculture, Bingham (groundwater)	11.25
Green Lake National Fish Hatchery, Ellsworth	13.3
Twin Rivers, Madawaska	15
Lincoln Mill, Lincoln	19.3
Nine Dragons, Old Town	24
S.D. Warren, Westbrook	24.5
Pixelle Androscoggin, Jay	26
Woodland Pulp, Baileyville	30
Great Northern Paper, Millinocket	43
S. D. Warren, Skowhegan	46.5
Nine Dragons, Rumford	81
FPL Energy Wyman, Yarmouth	543

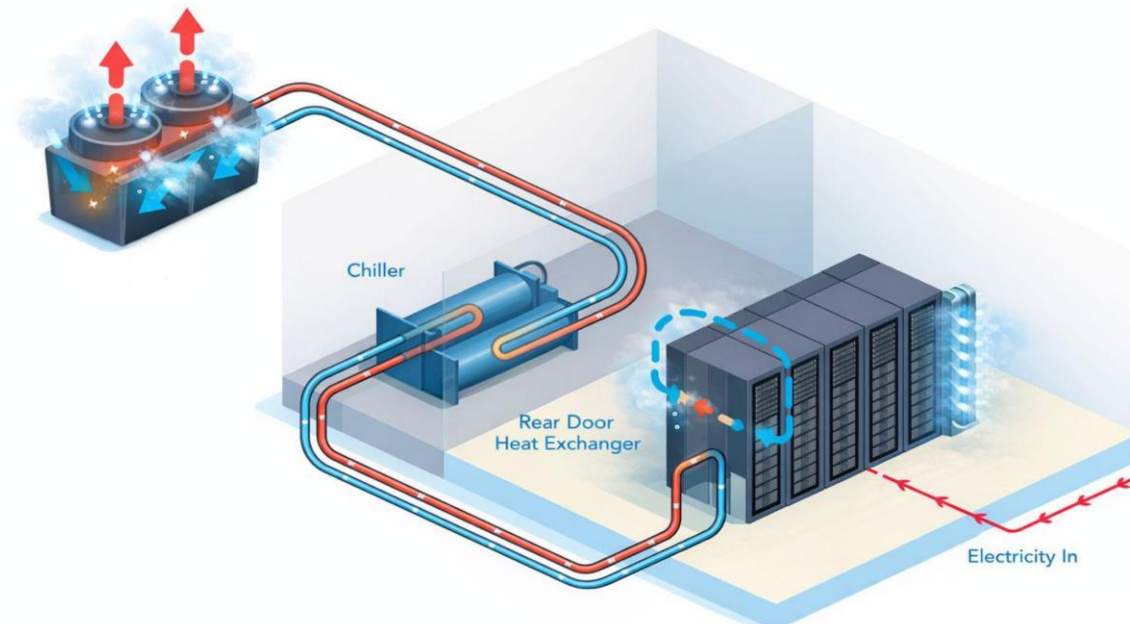
Data centers may get water from ground water, surface water, or municipal supply systems



Air Cooling with Chilled Water

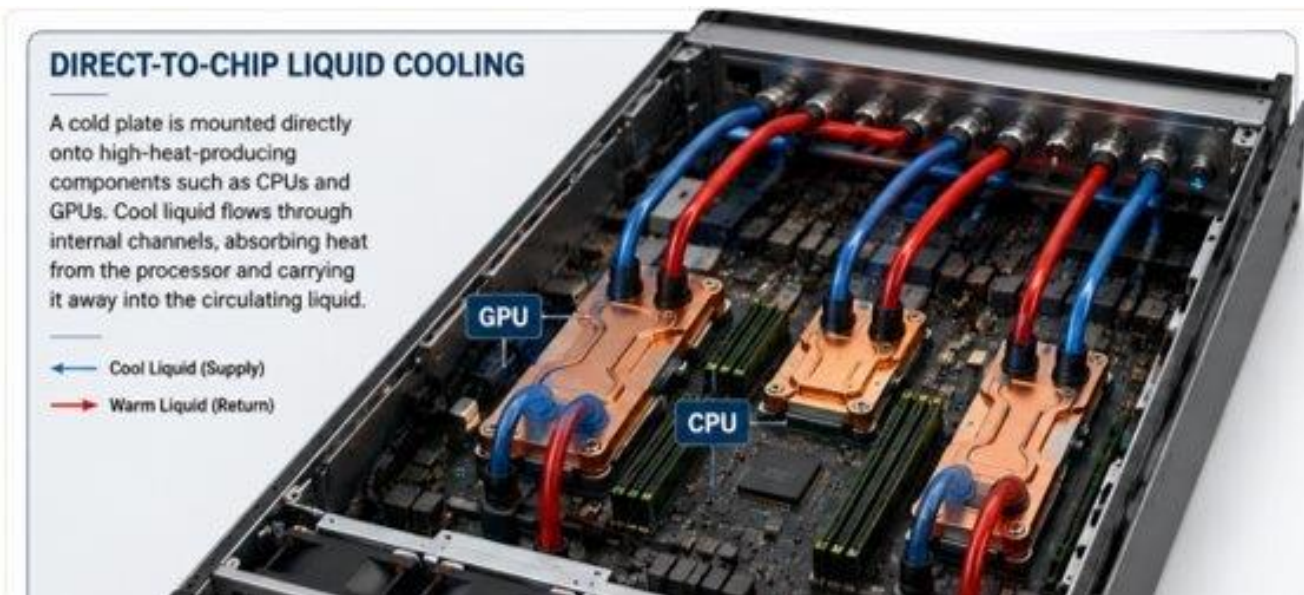
Water stays in cooling equipment such as coils, chillers, or cooling towers — the servers themselves are cooled by air.

- Closed loop system uses less water
 - Heat is dispersed by fans
- Evaporative system = highest water consumption
 - Heat is dispersed by water evaporation from cooling towers – air emissions permit required 🧑🏫
 - Cooling tower blowdown requires a permit to discharge 🧑🏫



Direct to chip cooling

- Water or a water/glycol mixture flows through sealed metal cold plates attached to CPUs and GPUs.
- The coolant is separated from the electronics by the metal wall of the cold plate; heat conducts through the metal into the coolant.
- The liquid never contacts circuit boards or chips directly.
- Heat dispersed by fans or physically separated water cooling system



Immersion Cooling

Entire servers are submerged in a special dielectric (non-conductive) fluid that directly contacts electronic components.

- PFAS in dielectric fluid prohibited in 2032
- Used fluid must be characterized and properly disposed as hazardous or non-hazardous waste

Heat from fluid may be transferred to air (fans) or physically separate water cooling system



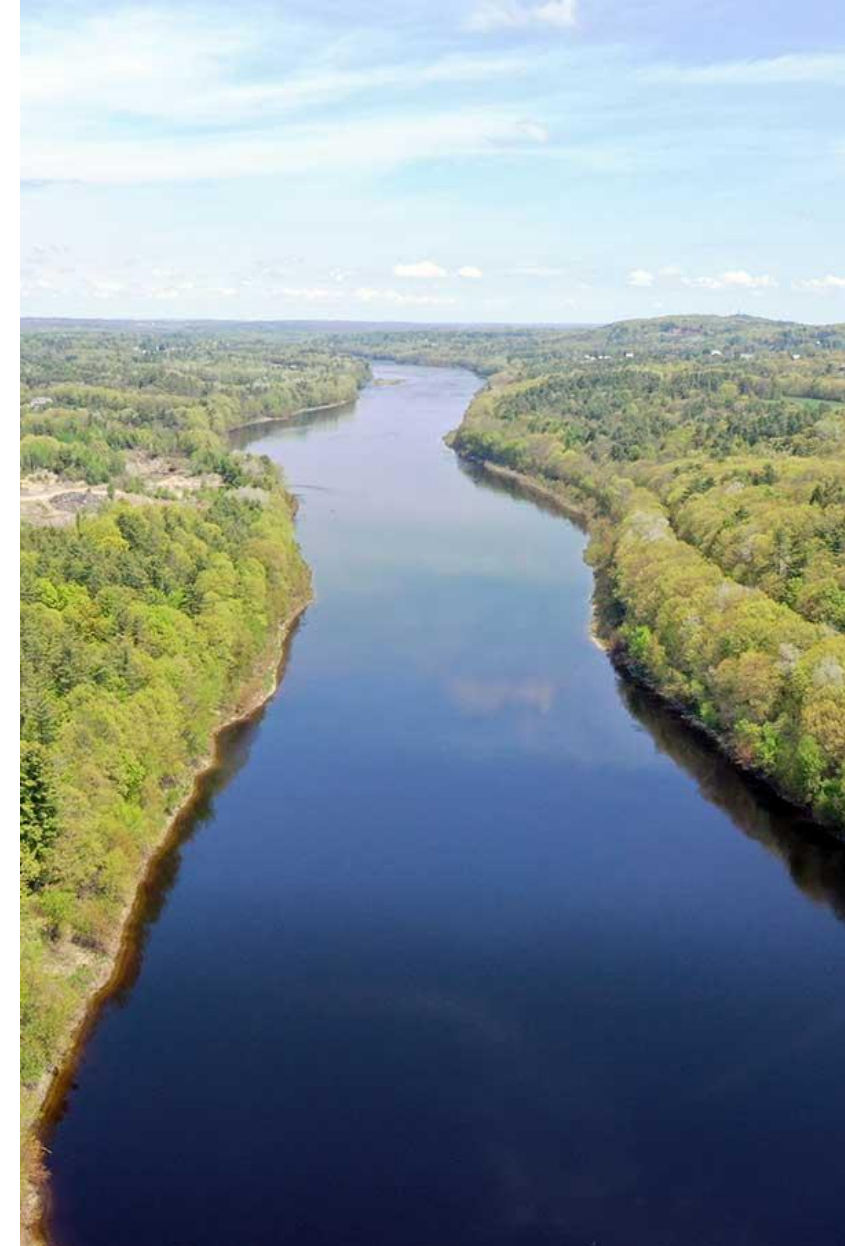
Surface water protections

Every surface waterbody in Maine is assigned a classification. The classification determines:

- Designated uses that must be protected
- Water quality criteria that must be met

Designated uses:

- Aquatic life habitat
- Fishing
- Recreation in and on the water
- Public water supply (where applicable)
- Industrial process water supply
- Navigation (where applicable)
- The higher the classification, the more stringent the protections.



Surface water withdrawals

Nonconsumptive use of water (38 M.R.S. 470-A)

- Flows in the segment between a point of withdrawal and a downstream point of return must be sufficient to maintain all other water quality standards, including all designated uses and characteristics of the assigned classification.

In-stream flow and water level requirements (38 M.R.S. 470-H and DEP Chapter 587)



- Requirements for maintaining in-stream flows and lake or pond water levels that are protective of aquatic life and other designated uses
- Criteria for designating watersheds most at risk from cumulative water use
- Withdrawal is limited to maintain seasonal aquatic base flows.



Surface water withdrawals (continued)

Surface water withdrawals are regulated to protect **water quantity** and **aquatic organisms**

- Withdrawals >2 million gallons/day (MGD) trigger additional restrictions
 - EPA Cooling Water Intake rule 
 - DEP Chapter 582

"...shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact."
- **Natural Resources Protection Act** permit  required if associated structures, intakes, dredging, or alterations occur in protected natural resources
- Monitoring and annual reporting



Groundwater withdrawals

- Permit required under Natural Resources Protection Act for “Significant groundwater well” 
 - (1) Withdrawing at least 75,000 gallons during any week or at least 50,000 gallons on any day and is located at a distance of 500 feet or less from a coastal or freshwater wetland, great pond, significant vernal pool habitat, water supply well not owned or controlled by the applicant or river, stream or brook; or
 - (2) Withdrawing at least 216,000 gallons during any week or at least 144,000 gallons on any day and is located at a distance of more than 500 feet from a coastal or freshwater wetland, great pond, significant vernal pool habitat, water supply well not owned or controlled by the applicant or river, stream or brook.
- Groundwater withdrawal also reviewed under SLODA (same standard as NRPA) 



Wastewater Discharge

Maine Pollutant Discharge Elimination System

(MEPDES) license required to discharge any pollutant to waters of the state (38 M.R.S. 413)

"**Pollutant**" means ... effluent, ...chemicals, ... petroleum products or byproducts, heat, ... and industrial... wastes of any kind.

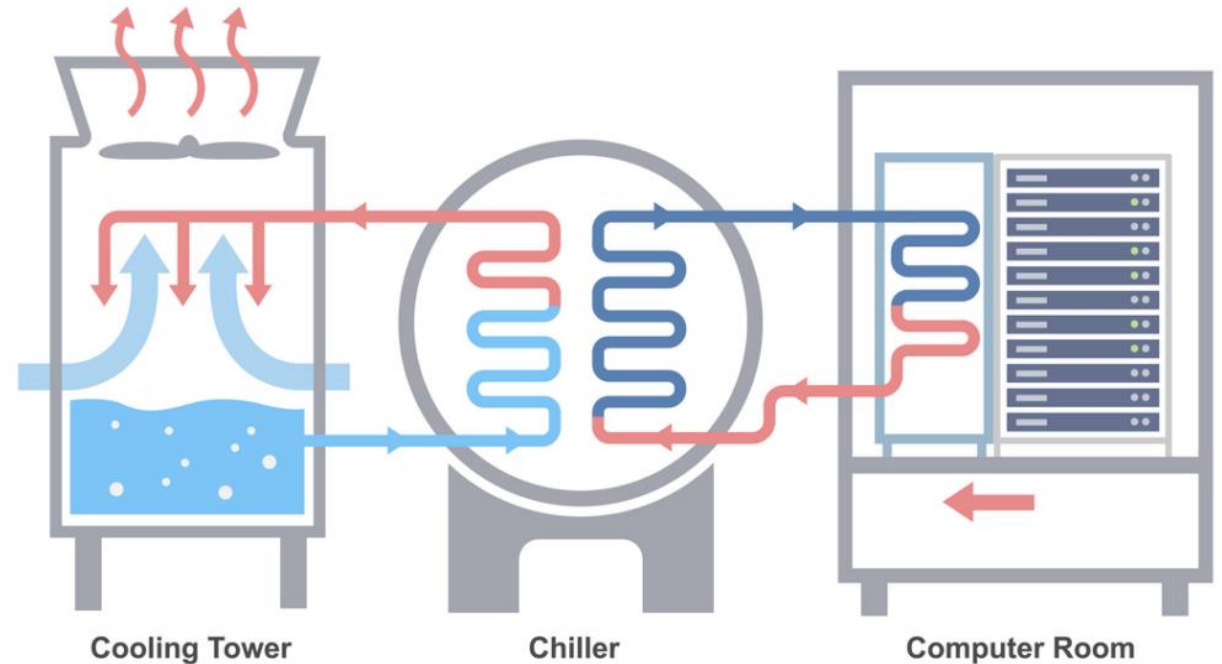
- 210-270 day license application review period 
- 30-day public comment period for all draft licenses 

Industrial Pretreatment agreement required to send industrial wastewater to a wastewater treatment plant



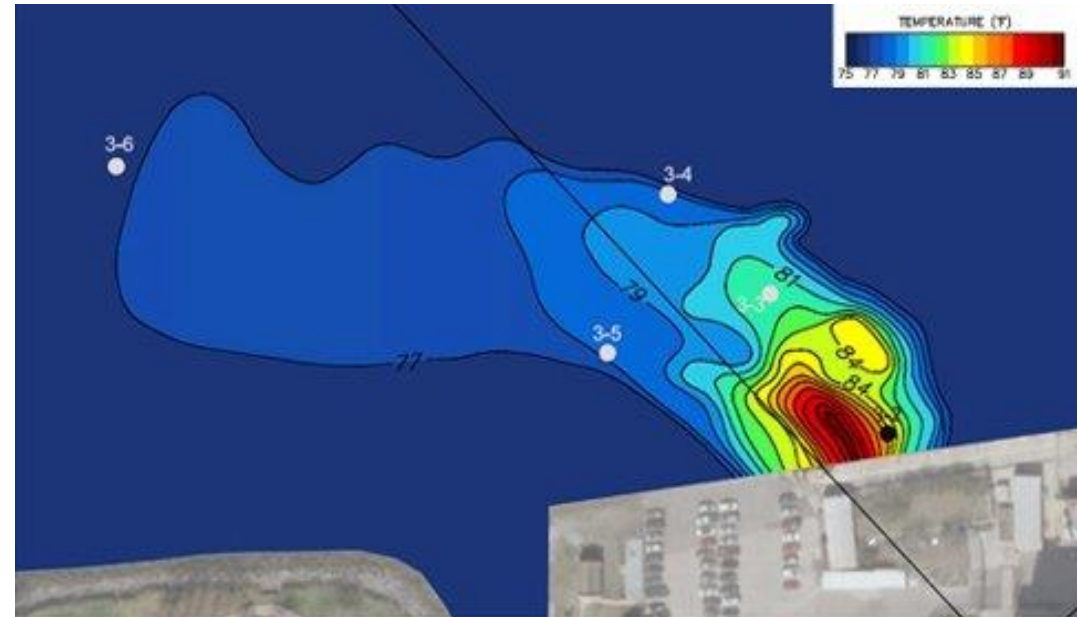
Cooling water may contain:

- Heat
- Dissolved and suspended solids
- Metals
- Chloride
- Sulfate
- Corrosion inhibitors (copper, zinc)
- Biocides (bromine, chlorine)



Cooling Water Discharge

- **To wastewater treatment plant** – pretreatment
- **To surface water** – MEPDES discharge permit 
 - Discharge cannot impair the viability of the existing aquatic population; or
 - Cause significant degradation of existing in-stream uses for recreation in or on the water, fishing, water supply or commercial enterprises that depend directly on the preservation of an existing level of water quality.
- Discharge permit conditions include:
 - Maximum discharge temperature limits
 - Maximum allowable temperature increases in the receiving water
 - Monthly discharge monitoring and reporting requirements



Synoptic temperature mapping of cooling water discharge plume from the Robert E. Ginna Nuclear Power Plant in Ontario, New York



Ambient Heat

- **No Unreasonable Alteration of Climate** – SLODA, DEP Ch 375 
 - "Applications for approval of large-scale, heavy industrial developments, such as power generating plants, shall include evidence that affirmatively demonstrates that there will be no unreasonable alteration of climate"
- NRPA may apply if heat impairs functions of significant wildlife habitat
- Heat capture options?
 - Colocation with heat consumers – institutional facilities, indoor agriculture



Noise and Infrasound

DEP Ch. 375 **Control of Noise** or Local zoning



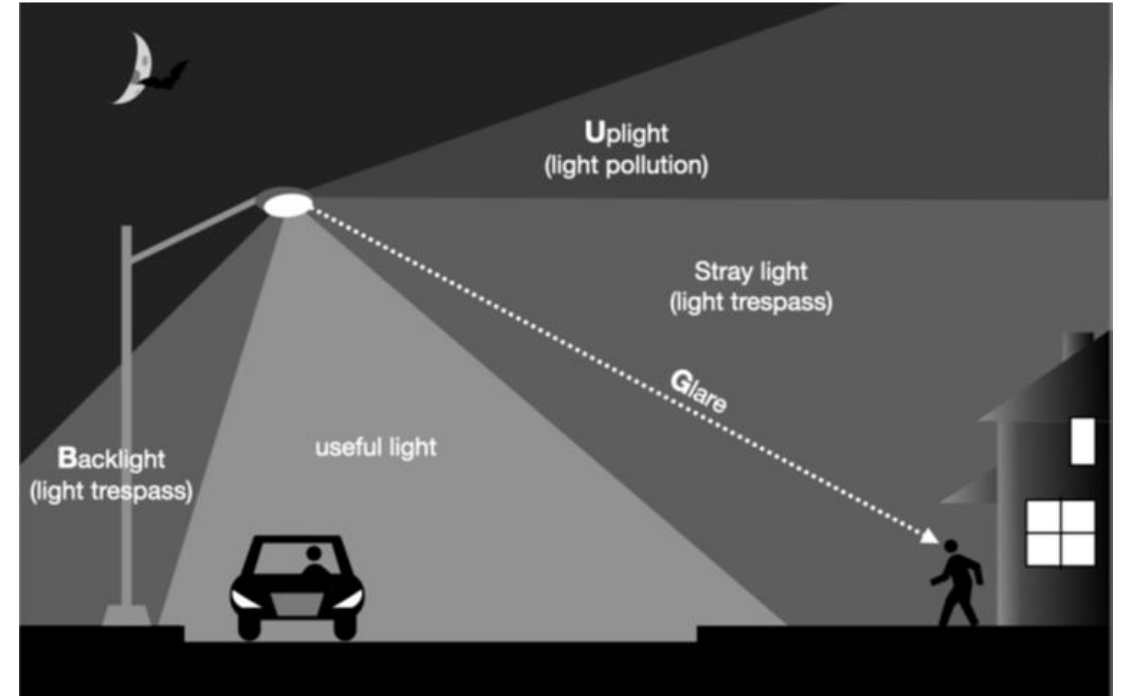
- Building design, acoustic materials
- Equipment enclosures
- Solid barriers – wall, berm
- Setbacks
- Limit decibels (noise) and 1/3 octave band levels (infrasound)
- Monitoring and reporting



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Lighting

- **No Unreasonable Effect on Scenic Character**
 - SLODA - DEP Ch. 375 
 - limits if the lighting would affect nearby residences, scenic resources, public viewpoints, parks, or other sensitive receptors
- Local zoning
- Mitigation measures:
 - Vegetative buffer
 - Shielded lighting fixtures
 - Limit illuminance by purpose



Air Emissions

- Permit required based on heat input of fuel burning equipment or if potential emissions exceed thresholds for criteria and hazardous air pollutants 
- Emission control equipment required for certain source categories (e.g. reciprocating internal combustion engines) or if uncontrolled emissions would cause local area to exceed ambient air quality standards
 - Emissions modeling includes cumulative impacts from other emission sources
- Stack testing and/or continuous monitoring
- Annual emission reporting, inc greenhouse gases



Emergency Generators



Air emissions license, testing and reporting

- Limits depend on fuel type and facility-wide emissions
 - Tier 4 required for diesel generators

Noise – may be limited by SLODA permit or local zoning



On-site Power Generation

- Fossil fuel (liquid or gas)
- Biomass
- Solar, battery storage
- Hydropower
- Nuclear
- NRPA, SLODA, Air emissions, and other licenses required depending on project details



- **Fuel supply and storage**

- Registration and spill plan for oil – underground tanks (DEP), aboveground tanks (Fire Marshal's Office)
- PUC review for natural gas; liquified natural gas – Maine Fuel Board
- Biomass – stormwater, solid waste



Greenhouse Gas (GHG) Emissions

- Maine statutory goals: reduce Gross GHG and Net GHG emissions
 - Gross GHG emissions includes only emissions that occur within Maine's territorial borders
 - Net GHG emissions subtract carbon sequestered within Maine from the gross emissions total
- Any facility required to have an air emission license must annually report GHG emissions to DEP
- Potential GHG emission sources at datacenters:
electrical generators, fuel combustion equipment, fuel cells

Technology	CO ₂ Emission Factor
Natural Gas Fuel Cell	679–833 lb/MWh
Combined-cycle gas plant	~800–1,000 lb/MWh
Coal-fired generation	~2,000+ lb/MWh



Spill Prevention

- Handling and storage requirements depend on characteristics of the fluid
 - Spill plan and clean-up
 - Recycling filter residuals – solid or hazardous waste
- Refrigerants must be recovered by certified personnel before equipment is scrapped.
- Waste oils and liquid coolants may be subject to hazardous waste or special waste requirements depending on their composition



Electronic Waste

Owners must determine if their waste is hazardous or non-hazardous under the federal Resource Conservation and Recovery Act (RCRA).

- Electronics can contain hazardous constituents (such as lead, mercury, cadmium and lithium)
 - Limits on amount and time of storage
 - Requirements to track hazardous waste "cradle-to-grave" (manifests submitted to EPA and DEP)
- Some equipment can be recycled and managed as Universal Waste
 - e.g. intact batteries, data and power cables
- Non-hazardous wastes must be tracked and reported to DEP



Facility Closure

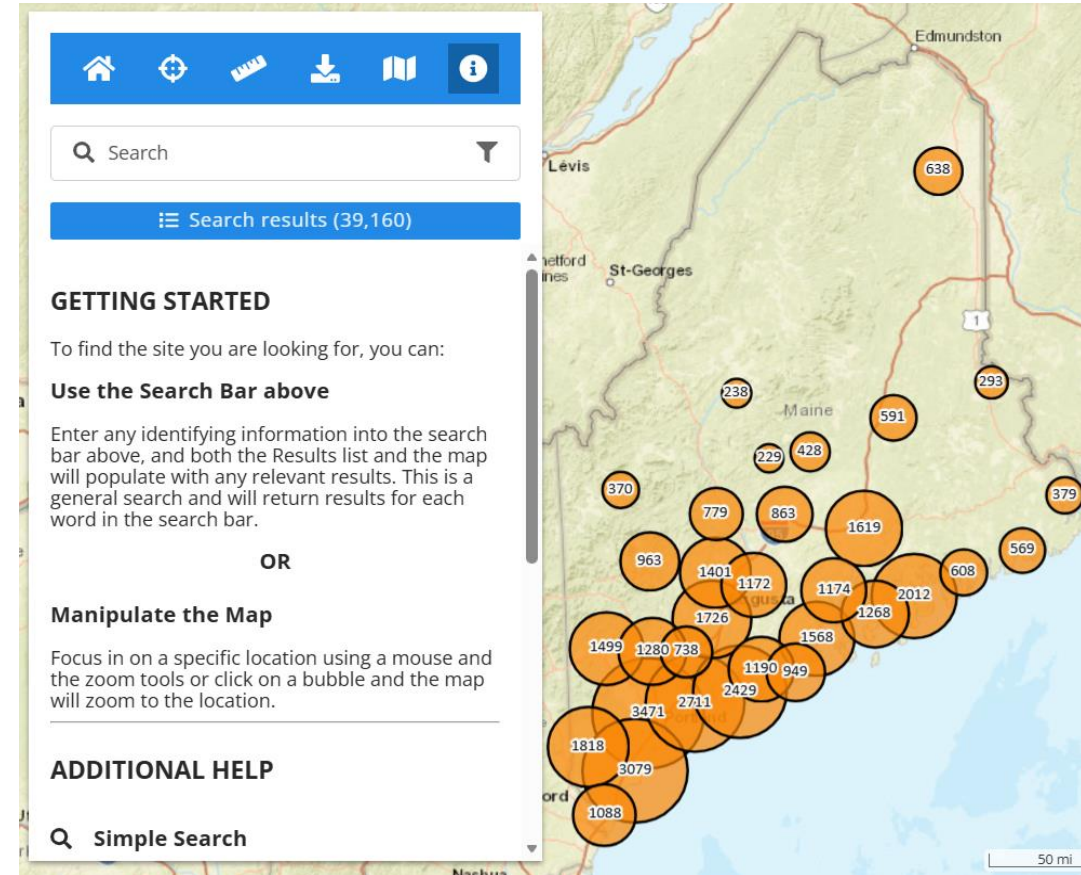
- Remove all wastes
- Drain fluids
- Maintain stormwater systems
- Report to licensing agencies





Maine Enterprise Licensing System

- **Online public access to:**
 - Submissions, applications
 - Licenses, registrations
 - Public notice, public comment 
 - Interagency reviews
 - Data and reports



Impacts specific to Data Centers

- Evaporative cooling (water consumption)
- Heat loss
- Continuous operation (24/7)
- Noise and Infrasound
- # of back-up generators



Break

We will be back in 10 minutes.

Menti Poll

Discussion

Discussion questions

1. **Questions:** What clarifying questions do you have for subject matter experts?
2. **Priority gaps:** Where do you see the gaps or considerations needing attention (e.g., other areas where state policy is needed to specifically address the potential impacts of data centers)?
3. **Initial policy ideas:** What initial ideas do you have about policy responses to the gaps identified?
4. **Data needs:** What additional information is needed as you craft recommendations?

Menti Poll

Council Virtual Public Meeting Dates

- Tuesday **June 23**, 2:00-5:00 (Today)
- Wednesday **July 9**, 9:30-12:00
- Thursday **August 13**, 9:30-12:00
- **TBD August/September listening session**
- Wednesday **September 9**, 9:30-12:00
- Wednesday **October 7**, 9:30-12:00

Council meetings will be open to the public. Council agendas, meeting recordings, materials, and meeting summaries will be posted at maine.gov/energy/datacentercouncil.



STATE OF MAINE
**Data Center
Advisory Council**

Next Meeting July 9–Energy Considerations

- Maine Public Utilities Commission investigation into process, transparency, and any necessary safeguards for ratepayers on the electricity or gas distribution systems
- Local and regional energy trends and considerations for data centers
- Existing processes and cost allocation for new large loads on the grid
- Recent action by the Federal Energy Regulatory Commission on large loads and next steps related to transmission and regional markets
- Other energy considerations related to large data centers including generation (and back-up generation) resource requirements; grid connection; energy efficiency and load flexibility

Next Steps

- Today's webinar **recording, slides, and meeting summary** will be available online.
- The **current survey** will stay open for one more week, with more to be released soon
- **Next Council meeting: July 9, 2026, from 9:30am-12pm** via Zoom, focused on energy impacts
 - Registration links are online at: maine.gov/energy/datacentercouncil
- Be sure to sign up for **data center council email updates** to receive all of this in your inbox
 - QR code on next page





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