Emerging Trends in Data Center Tariffs and Rate Design Across the U.S.

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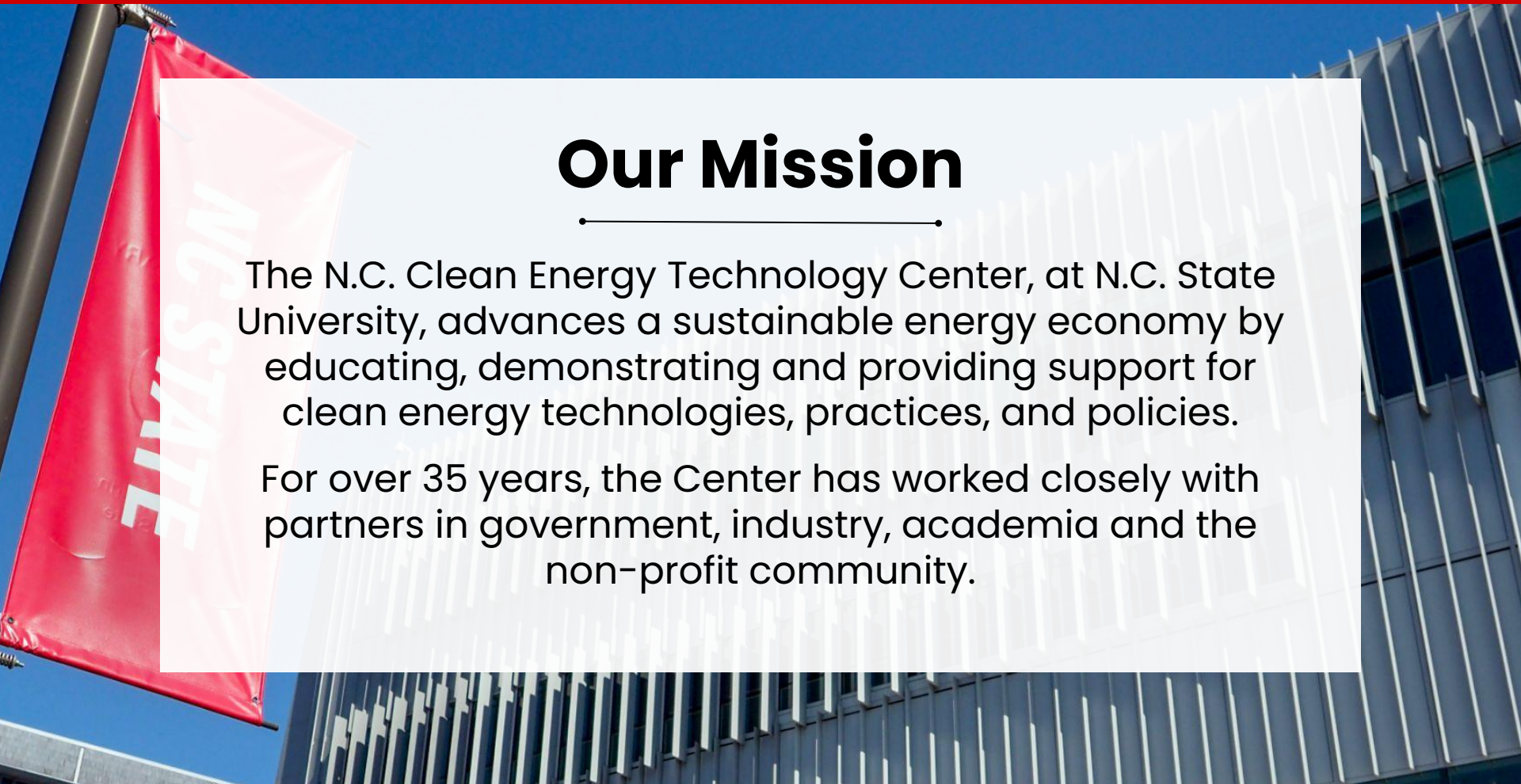
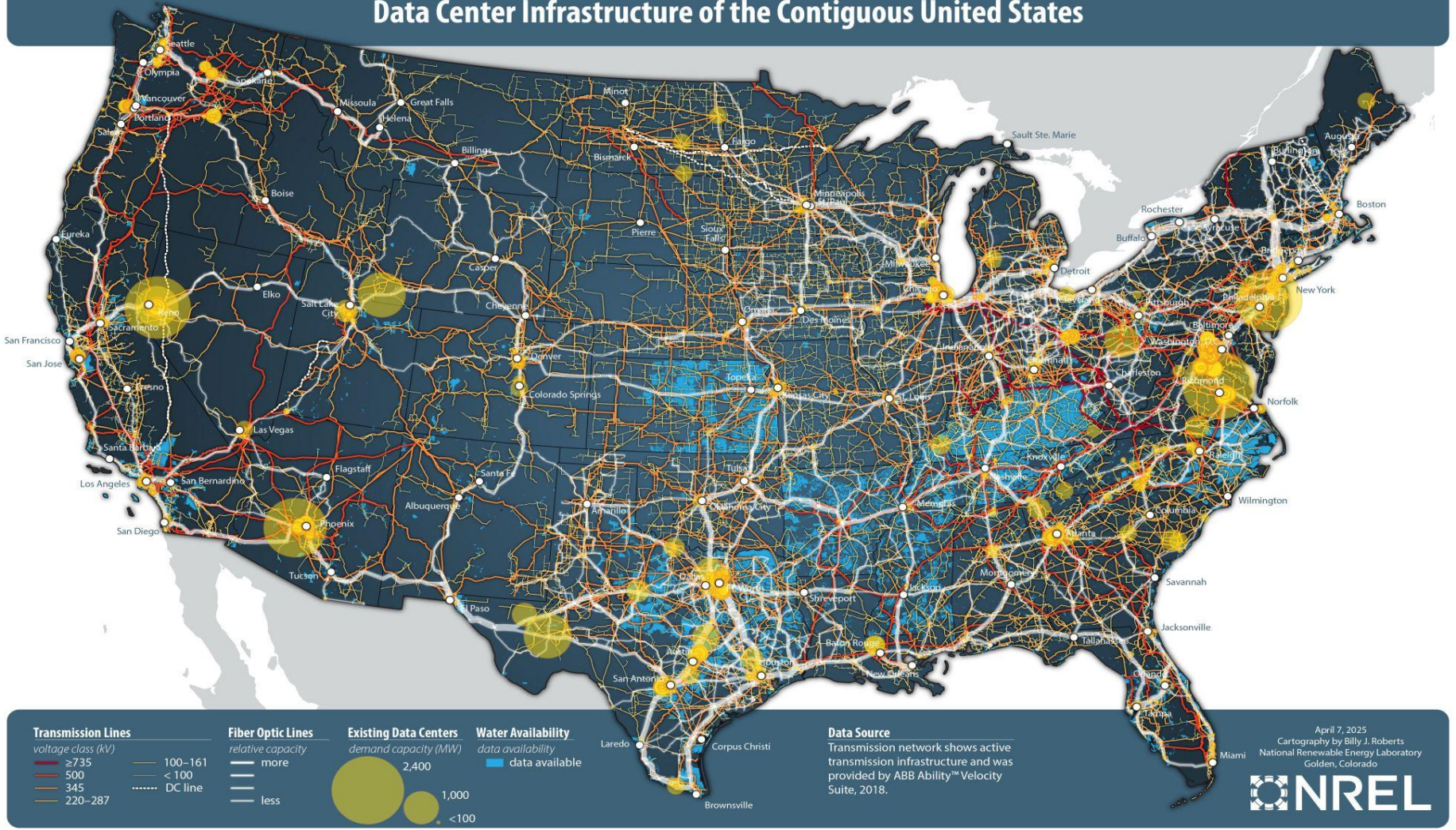


Our Mission

The N.C. Clean Energy Technology Center, at N.C. State University, advances a sustainable energy economy by educating, demonstrating and providing support for clean energy technologies, practices, and policies.

For over 35 years, the Center has worked closely with partners in government, industry, academia and the non-profit community.

Data Center Infrastructure of the Contiguous United States



Transmission Lines
voltage class (kV)
- ≥735
- 500
- 345
- 220–287
- 100–161
- < 100
- DC line

Fiber Optic Lines
relative capacity
- more
- less

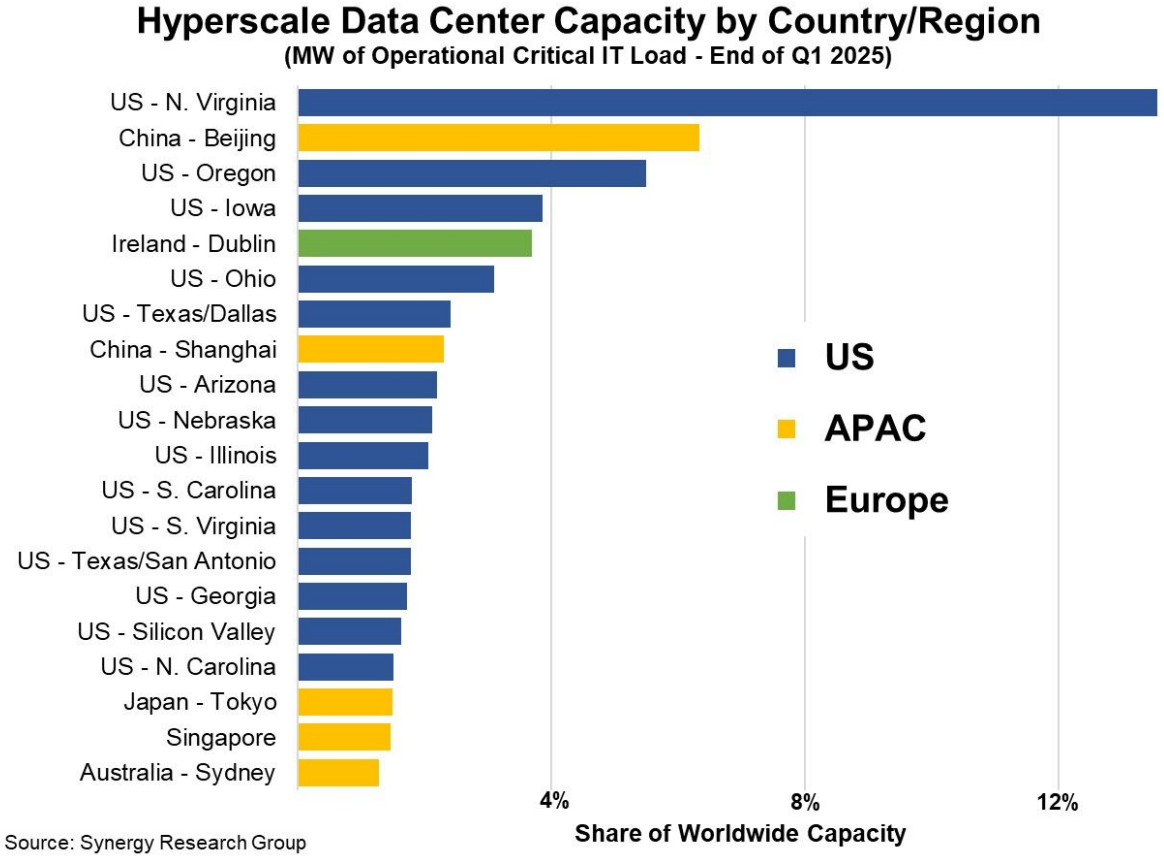
Existing Data Centers
demand capacity (MW)
- 2,400
- 1,000
- <100

Water Availability
data availability
- data available

Data Source
Transmission network shows active transmission infrastructure and was provided by ABB Ability™ Velocity Suite, 2018.

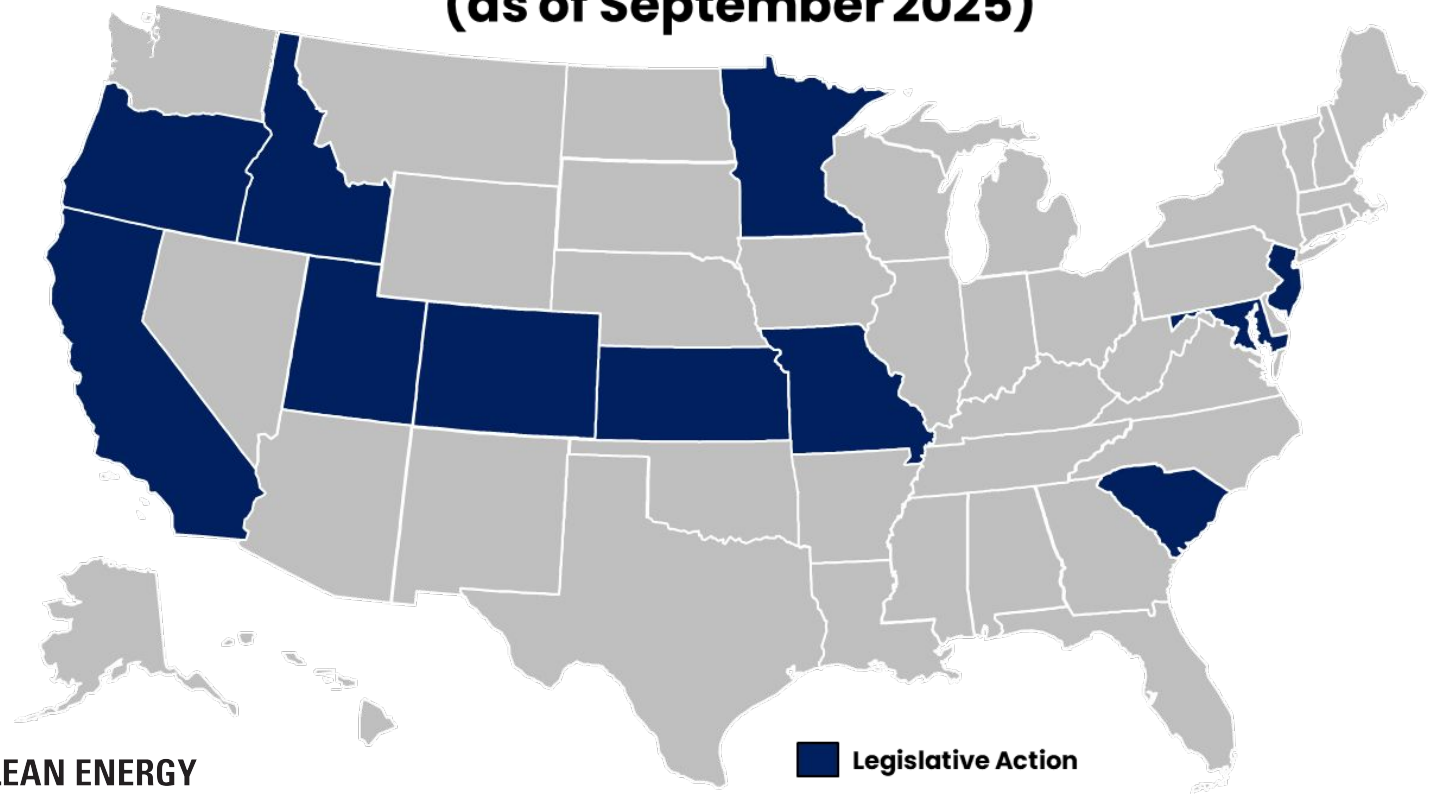
April 7, 2025
Cartography by Billy J. Roberts
National Renewable Energy Laboratory
Golden, Colorado

NREL



Source: Synergy Research Group

Utility Tariff Legislation in 2025 (as of September 2025)



Key Characteristics in Data Center Utility Tariffs

- Minimum demand/size (Large-load vs data center-specific)
- Contract duration and termination
- Financial assurance and collateral
- Cost allocation and shifting limitations
- Various energy transition/service provisions
  - Load flexible service
  - Clean energy requirements

Notable Approved Tariffs

NV Energy CTT	VA Dominion Energy CFG	WA Chelan PUD Schedule 36	AEP Ohio DCT
Min. Demand: 5 MW	Not Specified	Not Specified	25 MW
Contract Duration/Termination: Lifespan of clean energy system	Varies	Varies	8 yrs + 4 yr load ramp
Assurance/Collateral: Not Specified	Not Specified	Demand penalty & capital charge	Credit check and collateral payment
Cost Allocation/Shifting: Customer pays for energy resource	Not Specified	Varies	Customer pays for utility study
Energy Transition/Service: Carbon-free energy source required	Carbon-free energy source required	Service interruption allowed	Service interruption allowed

NV Energy Clean Transition Tariff (CTT)

- Large loads ≥5 MW eligible
- For existing fully-bundled customers seeking dedicated clean energy
- NV Energy owns/dispatches resources; RECs retired/transferred
- Contract via energy supply agreement for new renewables
- Regulators ensure no extra costs for other customers
- Facility costs borne by large-load customer
- Contract term = facility life; early termination fees apply

Virginia Dominion Energy
Carbon-Free or Renewable Generation Supply Service (Experimental; CFG)

- Voluntary experimental tariff for non-residential customers (small–large)
- Customers can purchase clean energy + environmental attributes up to 100% of demand
- Facilities ≥1 MW from utility or third party
- Eligible resources: nuclear, solar, wind, hydro, geothermal, biomass, clean hydrogen, etc.
- Limited to 50 customers

WA Chelan County Public Utility District
Rate Schedule 36: Data Centers and Similar Loads

- Data centers & similar loads
  - Rates by demand; >3 MW needs custom contract
    - Includes load balancing, decommissioning, maintenance
- Upfront capital charge for new/increased loads
- Security deposit: 3× highest monthly bill
- Demand exceedance fee: $150 + 1.5× monthly charge/day
- Load changes require new contract
- Advance notice for termination/reduction/amendments
  - District may prioritize interruptions
  - No compensation for interruptions unless specified

AEP Ohio
Data Center Tariff (DCT)

- Applies to data centers ≥25 MW (new or expanding above 25 MW)
- 12-year contract: 4-year load ramp + 8 years
- Financial strength required (A- credit, cash/collateral/guarantee)
- Early termination: 36 months minimum charges after Year 5 or exit fee after Year 5
- Termination requires 3 years' written notice
- Service may be suspended/disconnected if load >1 MW or technical limits exceeded
- Customers must avoid load cycling that destabilizes system frequency

Notable Proposed Data Center Tariffs

- MI Consumers Energy - Amending Large General Service Primary Demand (Rate GPD) to include additional data center-specific provisions
- VA Dominion Energy - Proposed creating both a new "High Load" customer class and Rate Schedule GS-5: High Load/Load Factor Service
- SD Black Hills Power - Proposal to implement an Economic Flexible Load Service (EFLS) Tariff, to serve new interruptible loads of 10 MW or greater.
- AZ Arizona Public Service - Proposed changes to its Extra High Load Factor (XHLF) Tariff, including specific data center requirements
- FL Duke Energy - Proposed new large load customer tariff and customer policy

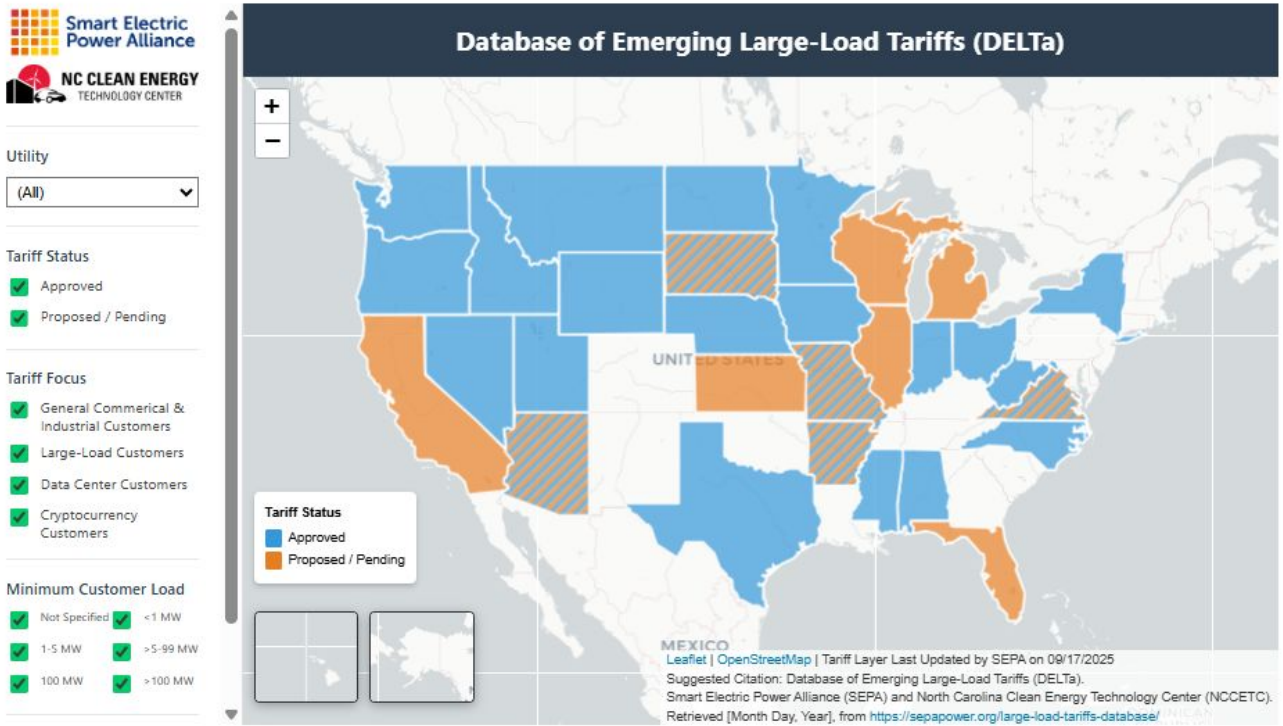
Key Tariff Trends

- Large-load neutral tariffs
- Minimizing cost shifting to non-data center ratepayers
  - Establish fair cost recovery for essential grid upgrades, new generation, and studies
- Ensuring and strengthening grid reliability
  - Strict termination and interruptible service provisions
  - Load flexibility through voluntary demand response and TOU rates
- Advancing carbon-free solutions
- Flexible and innovative contractual frameworks
- Balancing state/local economic development w/utility responsibilities

The Smart Electric Power Alliance (SEPA) and the NC Clean Energy Technology Center created the **Database of Emerging Large-Load Tariffs (DELTa)**

DELTa offers:

- An interactive map and database of large-load tariffs in the U.S.
- Case summaries and analysis of approved and proposed tariffs
- A way to compare how different utilities are refining rates for a large-load growth era



Visit: www. sepapower.org/large-load-tariffs-database/

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