

SUFFERLESS SNAPSHOT

AI Data Centers

Full Tier 2 audit of electricity, water, air/climate, grid, labor, mineral, community, ecological and future-being impacts

Bottom line	Audit finding
Core finding	AI data centers create real digital and economic capacity, but several burdens are concentrated locally or upstream. The most important Sufferless risk is hidden transfer: diffuse AI benefit paired with concentrated electricity, water, infrastructure, pollution, land, labor or future-climate load.
Highest concern	Water-stressed host communities and poorly protected upstream workers can plausibly face high physical suffering in adverse cases. These grades are assumption-based/inferred, not measurements of a particular facility.
Main flagged transfers	Grid cost/reliability risk to ordinary customers; scarce-water load to communities/ecosystems; emissions and lock-in to local/future beings; supply-chain burdens to workers and extraction regions; habitat loss where siting is irreversible.
Evidence anchor	IEA: 485 TWh global data-center electricity use in 2025 and ~950 TWh central projection for 2030; AI-focused facilities tripling electricity use over 2025-2030. Berkeley Lab: U.S. data centers could reach 11.8% of U.S. electricity in 2030, with 9.5%-15.3% modeled range. [E1][E2]
Least-harmful viable strategy	Both: reduce stress + increase capacity. Site away from binding water/grid/ecological constraints; make large-load customers bear attributable infrastructure risk; minimize direct/indirect water and emissions; preserve operational flexibility; require community voice, supply-chain traceability, transparent monitoring and rollback triggers.
Confidence	High on rapid electricity growth and site-dependence of water/grid burden; moderate on generalized community suffering; low-moderate on long-run net effects because downstream AI benefits, efficiency gains and rebound remain uncertain.

Sufferless Filter

Do the facilities narrow stress-capacity gaps, or merely move them? A transfer may be acceptable only when it is disclosed, floor-preserving, consented/within capacity or otherwise assigned to a party able to absorb it without hidden harm. Flagged transfers cannot be described as suffering reduction. [S1][S2]

Scope note. This is a general 2026 audit of AI-oriented hyperscale data-center infrastructure, not a site permit review. No facility-specific certification is implied. External facts were re-verified on 16 September 2026.

1. Scope, method and evidence discipline

Audit route: **AI/Technology** with **Animal/Ecological** and **Institution/Policy** modules. Public audit domains are physical, psychological, intellectual and spiritual/existential; tiers include individuals, relationships, institutions/society, natural world and future beings. [S2][S7]

What is being audited

- **Facility operations:** IT electricity, cooling, water, backup/onsite generation, load shape, heat, noise and land.
- **Grid and public infrastructure:** generation, transmission/distribution upgrades, interconnection, reliability and cost allocation.
- **Upstream hardware:** chips, power electronics, transformers, batteries, copper/aluminium/silicon/gallium and associated labor/extraction.
- **Downstream capacity:** useful AI services, research, employment, taxes and potential grid flexibility.
- **Temporal effects:** construction lock-in, rebound, emissions, ecological change, stranded assets and future-being exposure.

Evidence and claim separation

Specific empirical or current claims are marked [E#] and sourced to IEA, U.S. DOE, Berkeley Lab, EPA or U.S. Census. Sufferless doctrine and method are marked [S#]. The report does not treat Sufferless doctrine as empirical proof, and it does not convert uncertain benefits into moral permission. [S2][S3]

Important methodological limit

There is no single defensible 'Sufferless score' for data centers. Grades below are per stakeholder and domain, with evidence/confidence labels. They are explanatory inputs to accountable human deliberation, never automated permissions or rankings. [S1][S3]

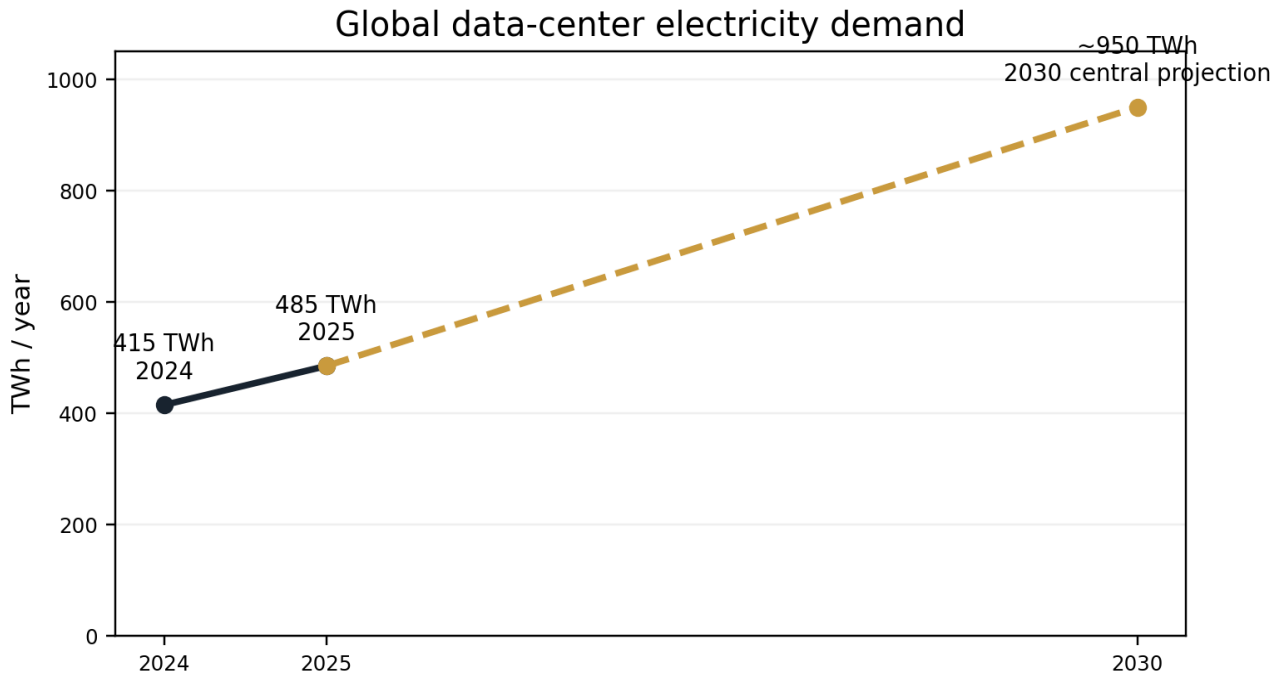
Bias and even-handedness protocol

Named prior: an environmental audit may begin with the hypothesis that AI data centers are primarily harmful resource consumers. **Consider-the-opposite:** they also create valuable digital capacity, jobs, investment and potentially flexible demand; energy impacts vary strongly by site and design. **Evidence weighting:** the report states high-confidence physical facts plainly and reserves symmetry for genuine value tradeoffs. It does not manufacture 50/50 balance where evidence is unequal. [S3]

No contested-frame graph is required here: the report does not attempt a single moral winner and the central implementation questions - water stress, cost allocation, emissions, reliability and transparency - are substantially empirical and governance-dependent rather than irreducibly value-only.

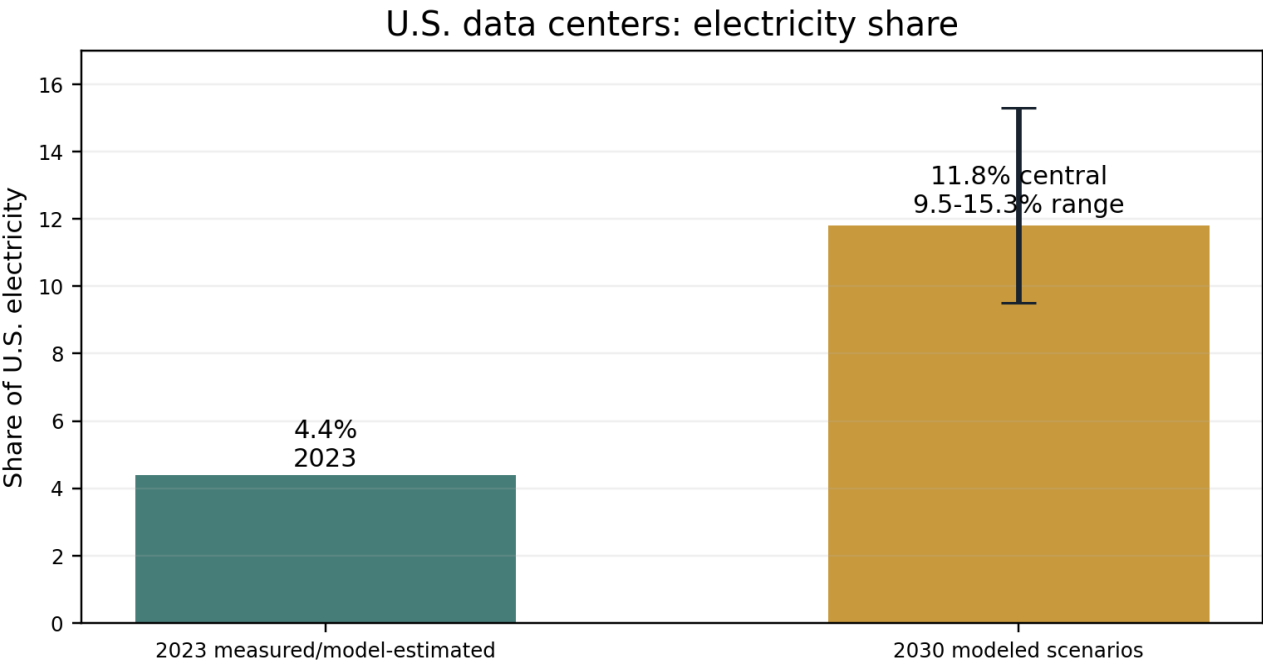
2. Electricity, grid capacity and affordability

Global data-center electricity demand grew 17% in 2025. IEA reports 485 TWh of global data-center electricity consumption in 2025 and projects roughly 950 TWh in 2030 in its central outlook; electricity use from AI-focused data centers grows much faster and roughly triples over that period. [E1]



Evidence: IEA 2025 (2024) and IEA 2026 (2025, 2030). 2030 is a projection, not a measurement.

The aggregate percentage is less informative than local concentration. IEA's 2025 work found U.S. capacity clustered in a small number of regions, while Berkeley Lab's June 2026 U.S. update estimates data centers could account for **11.8%** of U.S. electricity in 2030, with a modeled **9.5%-15.3%** range. [E2][E11]

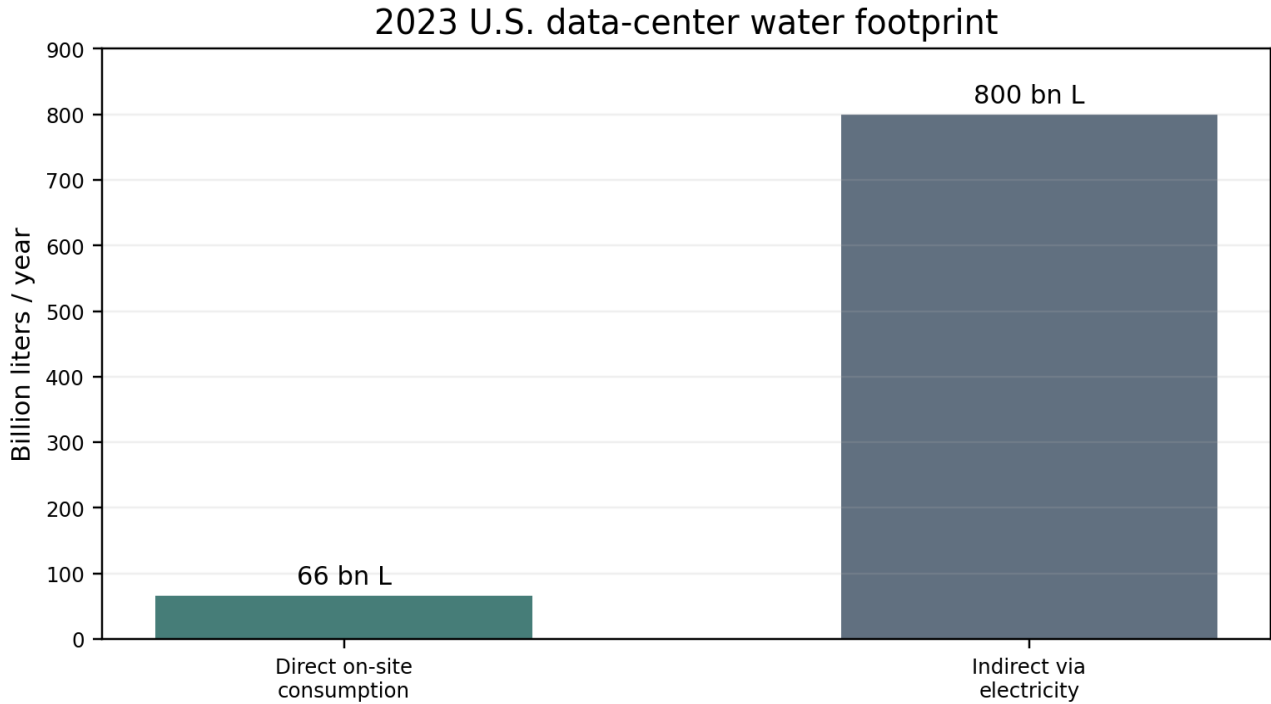


Evidence: DOE/LBNL 2024 for 2023; Berkeley Lab 2026 update for 2030 range.

Sufferless interpretation: electricity demand is not itself suffering. The concern appears when fast, concentrated load pushes grid stress above available generation, transmission, distribution, affordability or planning capacity - and when the resulting cost/risk is transferred to customers with less capacity to absorb it.

3. Water, emissions, air quality and ecological load

Berkeley Lab's 2024 U.S. report estimated that data centers consumed about **66 billion liters of water directly in 2023**; hyperscale and colocation facilities accounted for most of that total. It also estimated a much larger **nearly 800 billion-liter indirect water footprint** through the electricity supplying U.S. data centers. The same grid-mix analysis estimated 61 billion kg CO₂e associated with 2023 data-center electricity use. [E4]



Model-estimated national footprint. Indirect water depends strongly on the regional electricity mix.

Water impact is highly site- and workload-dependent. A 2025 Berkeley Lab-led review found workload-level water use varying by more than **10,000-fold**, driven by server efficiency, grid water intensity, utilization, cooling system, climate, infrastructure efficiency and refresh cycle. That result argues against simple claims that one cooling technology or one water metric is universally 'best.' [E5]

IEA's 2026 outlook projects electricity-related data-center emissions rising to around **350 Mt CO₂ by 2035**, while remaining about 2% of global electricity-sector emissions in that scenario. The global share should not be used to dismiss local air or climate burdens. [E1]

EPA's current data-center resource notes that stationary combustion turbines and engines commonly used for primary or backup power are subject to air-emission standards, and 2026 emergency conditions have included directions for large-load customers to operate backup generation as a last resort in some regions. [E6]

Water-stress floor

A low national average cannot justify a high local burden in a drought-prone basin. In Sufferless terms, a scarce-water transfer to users, ecosystems or animals with little agency/exit is flagged until site-specific evidence shows the stress remains within local capacity and distributional floors. [S1][S5]

4. Materials, labor, economic capacity and countervailing benefits

Data-center expansion depends on material and equipment supply chains extending far beyond the facility fence line. IEA identifies copper, aluminium, silicon, gallium, rare earths and battery minerals among relevant inputs. It estimated that by 2030 data-center gallium demand could equal up to about **10% of today's global supply**, illustrating concentration and supply-security risk. [E9]

The labor picture is not one-directional harm. U.S. Census reporting using federal workforce data says employment associated with data centers rose from about **306,000 in 2016 to 501,000 in 2023**. Employment, construction activity and tax base can increase local capacity, though the distribution, duration and quality of those gains are site-specific. [E8]

A complete audit also credits useful compute. AI infrastructure can enable research, accessibility, software services, scientific modeling and other applications that may reduce stress or build capacity. However, a generic infrastructure audit cannot honestly assign a quantified suffering reduction to 'AI benefits' as a whole; downstream use varies from highly beneficial to harmful. This report therefore records benefit pathways without netting them against unrelated physical harms.

Grid flexibility is another possible benefit. IEA notes that substantial battery storage could be installed in data centers by 2030 and could become a grid asset if incentives align. Berkeley Lab's 2026 large-load work likewise treats operational/financial risk and cost allocation as design problems rather than inevitable outcomes. [E1][E7]

Do not double-count capacity

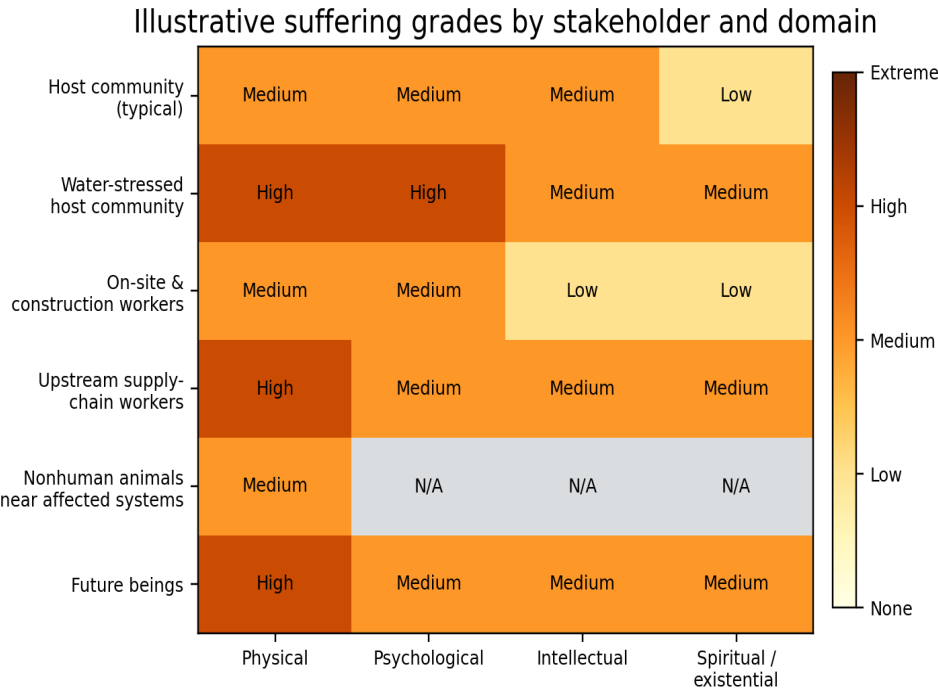
Capacity grades must be evidenced forward from resources, support, agency, time and slack - not inferred backward from whether a group appears to suffer. A community is not 'high capacity' merely because it tolerated a burden without visible protest. [S3]

Most important upstream unknowns

- Facility-specific semiconductor fabrication, mineral sourcing and e-waste chain.
- Contractor injury rates, work schedules, heat exposure and grievance/exit mechanisms.
- Whether tax revenue and promised jobs persist after construction or are displaced by abatements and infrastructure obligations.
- Whether upstream water, pollution and habitat burdens are reported with the same rigor as on-site metrics.

5. Stakeholder suffering map and grades

Grades use the Sufferless none / low / medium / high / extreme scale. They are **not measurements** of a named facility. Capacity is graded from plausible resources/agency rather than from the suffering outcome; where that evidence is weak, the grade is marked assumption-based. [S3]



Assumption-based/inferred grades for a generic audit; not measurements, not a control score. Future-being capacity is unknown.

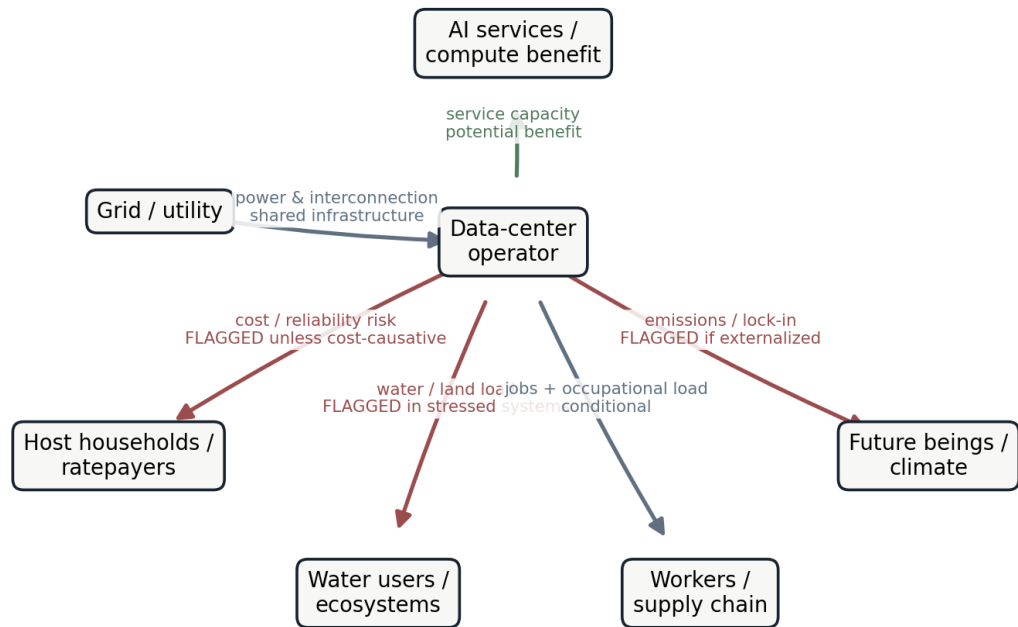
Stakeholder / domain	Stress	Capacity	Likely suffering	Label / confidence
Water-stressed host community - physical	High	Low-Medium	High	Inferred; moderate
Upstream supply-chain workers - physical	High	Low-Medium	High	Inferred; moderate
Typical host community - physical	Medium	Medium	Medium	Inferred; moderate
On-site/construction workers - physical	Medium	Medium-High	Low-Medium	Inferred; moderate
Nonhuman animals near affected water/land systems - physical	Medium	Low	Medium	Inferred; low-moderate
Future beings - physical	Medium-High	Unknown	Medium-High	Predicted/speculative; low-moderate

Worst-off screen: in the adverse generic scenarios considered here, the groups with the clearest potential for high physical suffering are water-stressed host communities and weakly protected upstream workers. Future beings may also face high physical stress, but that estimate has lower confidence because future capacity and technology trajectories are unknown.

What would change the grades: site-specific basin data, household rate effects, air/noise monitoring, worker injury/turnover/grievance evidence, binding cost-allocation contracts, verified lifecycle sourcing, habitat assessment, community testimony and measured mitigation outcomes.

6. Transfer audit: who absorbs the load?

Sufferless transfer map: where benefits and burdens move



Red pathways require redesign, accountable authorization, or a floor-preserving mitigation before being called suffering reduction.

The transfer gate asks whether a burden is disclosed, floor-preserving, consented/within capacity, reversible or otherwise assigned to a materially higher-capacity party. Flagged transfers cannot be presented as suffering reduction. [S1]

Transfer	Classification	Why	Reversibility
Grid investment / stranded-asset risk -> ordinary customers	Flagged unless cost-causative	Berkeley Lab identifies underutilized investment and cost-shifting as material large-load risks. [E7]	Medium-Low
Scarce water -> host users/ecosystems	Flagged in stressed basins	Low exit for many users/nonhumans; local scarcity can be much more important than national totals. [E4][E5]	Medium to Low
Emissions / fossil lock-in -> local & future beings	Flagged if externalized	Burden persists beyond service beneficiaries; onsite gas and backup engines can add local effects. [E1][E6]	Low for built assets
Occupational load -> workers	Conditional	May be acceptable eustress/workload when safe, compensated, consented, bounded and recoverable; flagged when exit/safety is weak.	High-Medium
Flexible demand / storage -> grid	Potentially acceptable/beneficial	Can move controllable load to a high-capacity operator and reduce system stress if contracts protect service and workers. [E1]	High
Habitat conversion -> animals/ecosystem	Flagged where loss is material	Non-consenting affected beings; restoration may be incomplete or delayed.	Low / sometimes irreversible

7. Integrity pass: disconfirmation, false balance and sedation

A strong audit must be able to falsify itself. Evidence that would weaken the 'data centers create harmful externalities' prior includes: siting in genuinely unconstrained grids/basins; additional clean generation and transmission delivered before load; binding tariffs preventing cost transfer; high verified job/tax retention; low-impact cooling; flexible demand that measurably reduces system peaks; and traceable lower-harm supply chains. The existence of these pathways is why the report does not issue a blanket anti-data-center verdict. [E1][E7]

The converse also matters: corporate renewable contracts, PUE improvements, community-benefit announcements or lower complaint rates are not by themselves proof that the underlying stress-capacity gap narrowed. Physical grid mix, total load, water condition, household bills, measured pollutants, worker outcomes and lifecycle impacts remain the relevant verification layer.

Sedation / metric-gaming test

- **PUE improves while total electricity rises:** efficiency may be genuine, but not a complete suffering-reduction claim.
- **Reported community concern falls while bills/water stress rise:** potential sedation, suppression or representation failure.
- **'Water positive' accounting improves through distant replenishment while a local basin remains depleted:** transfer, not local repair.
- **Carbon claims rely on contractual matching while local fossil generation or backup-engine use rises:** accounting may diverge from physical exposure.
- **Jobs are counted at construction peak while long-run local employment/tax capacity is lower:** temporal metric gaming risk.

Gap-change signal

Genuine reduction requires stress to fall, capacity to rise, overload duration to shorten with safeguards, or the stress-capacity relationship to materially improve. If only the expression or perception of distress improves while the physical gap stays the same or worsens, classify sedation risk - not reduction. [S4]

Reflexivity check on this report

The report itself could create false authority through polished graphs. To counter that risk, every quantitative graph is source-labeled or explicitly assumption-based; grades are non-control; no generic facility receives a certification; and implementation recommendations contain stop conditions and site-specific evidence requirements. [S3][S6]

8. Least-harmful viable path and action ladder

Bespoke strategy: BOTH. Where stress is high and local capacity limited, first reduce acute load and exposure; then build durable capacity in grids, water systems, worker protections and community governance. Where capacity is high and stress moderate, preserve useful challenge/innovation rather than eliminating it. [S3]

1. Evidence gate before siting

Publish projected hourly load, direct/indirect water, cooling design, backup/onsite generation, land footprint, expected hardware turnover, interconnection needs, lifecycle scope and uncertainty. Obtain independent basin/grid/community review before irreversible construction.

2. Site to slack, not merely price

Prefer locations with demonstrable grid, water and ecological headroom. A cheap interconnection or tax incentive is not evidence of local capacity.

3. Make cost causation explicit

Use tariffs/contracts that assign attributable generation, transmission, distribution and stranded-asset risk to the large-load customer rather than silently shifting it to smaller customers. [E7]

4. Reduce physical stress

Use efficient hardware/software, site-appropriate low-water cooling, reclaimed/non-potable water where safe/feasible, waste-heat use where credible, and clean firm/flexible supply without using accounting substitutions as a proxy for local conditions.

5. Increase system capacity

Fund the infrastructure actually needed: generation, transmission/distribution, storage, water reuse, worker training/safety and community monitoring. Capacity additions should precede or scale with load rather than arrive as promises after overload.

6. Build flexibility into operations

Contract for demand flexibility, storage and controlled curtailment where workloads allow, with service/worker safeguards. IEA notes data-center storage could become a grid asset if incentives align. [E1]

7. Protect floors

Pause expansion when attributable impacts materially worsen drinking-water security, already-burdened air quality, household affordability, grid reliability, worker safety or protected habitat without credible near-term repair.

8. Trace the upstream chain

Require auditable supplier standards for injuries, working hours, minerals, semiconductor water/energy and e-waste; disclose major missing data rather than labeling the chain 'clean.'

Smallest next step

For any proposed facility, require a public one-page load/water/grid/air/cost-allocation data sheet plus a named rollback/curtailment mechanism before the permit, tariff or infrastructure commitment becomes difficult to reverse.

9. Monitoring, stop conditions and living-institution loop

A rigorous process is not evidence that the intervention worked. Sufferless treats efficacy as unproven until outcomes are observed or measured, and requires a living audit that updates when reality diverges from assumptions. [S2][S6]

Marker	Baseline / cadence	Trigger for review	Repair / rollback path
Facility + grid load	Hourly; monthly public summary	Peak/load materially above forecast; new emergency dispatch	Curtail flexible compute; accelerate contracted capacity; revise tariff
Household / small-business rate burden	Before interconnection; annual	Material attributable increase or cost shift	Reallocate costs; revise contract; defer expansion
Direct + indirect water	Monthly + seasonal basin context	Drought stage / aquifer stress / WUE divergence	Reduce water-intensive cooling/load; alternative source; pause growth
Air / backup generation	Permit + operational logs	Unexpected runtime or pollutant exposure	Limit runtime; cleaner backup; additional controls; operational pause
Worker outcomes	Quarterly injuries, turnover, grievances	Rising injury/turnover or suppressed complaints	Staffing/schedule redesign; contractor remediation; stop-work authority
Habitat / ecological indicators	Pre-build + seasonal	Loss beyond permitted/assumed envelope	Avoidance, restoration, offset only after avoidance; halt expansion
Benefit realization	Jobs/tax/flexibility claims tracked annually	Promised capacity gains fail to materialize	Reopen incentives/agreements; clawbacks where legally provided

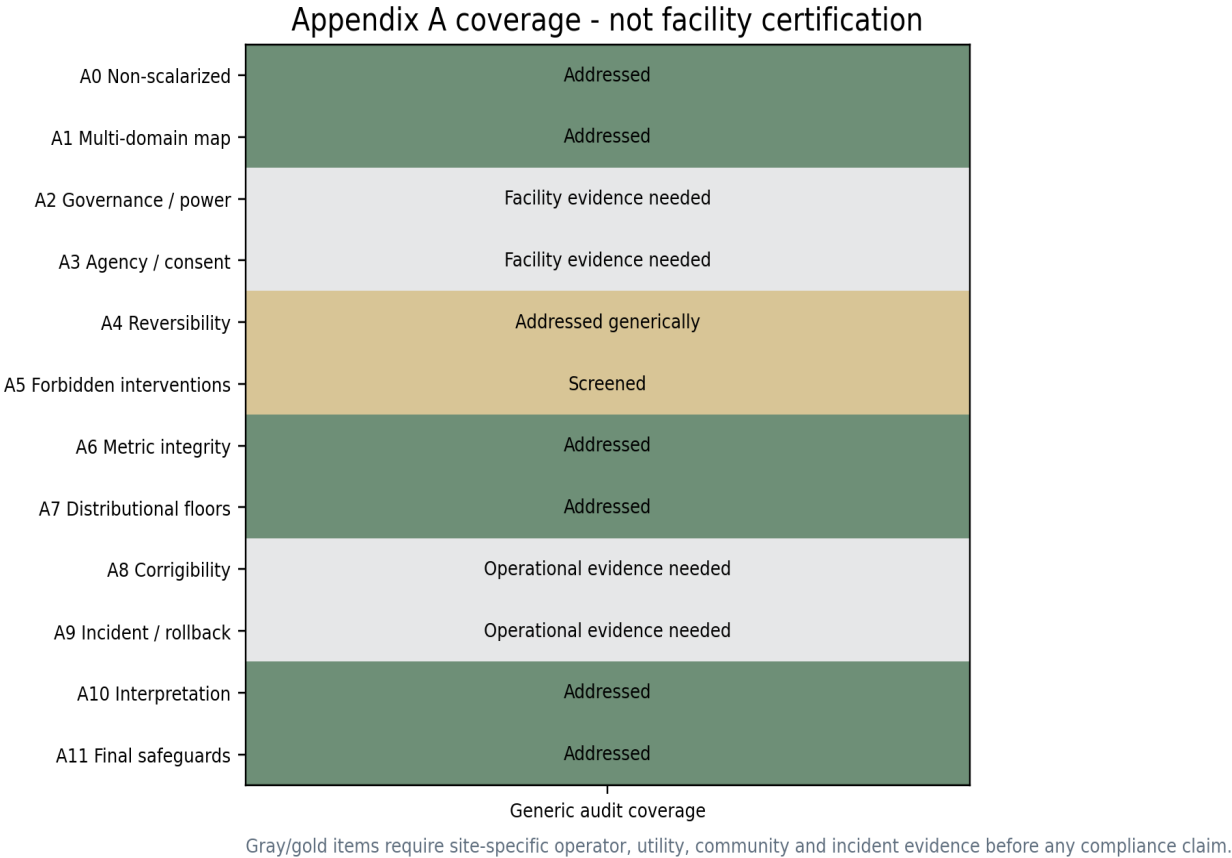
Efficacy / outcome register

For each significant mitigation, record: predicted stakeholder/domain effect; predicted stress and capacity direction; transfer classification; baseline metric; review date; observed result; divergence explanation; repair action. Label effectiveness **unproven** until follow-up, **observed** for informal follow-up, and **measured** only where a defined before/after or counterfactual exists. [S2]

Update triggers include severe drought, new fossil generation dedicated to the site, material attributable rate effects, repeated emergency backup operation, failure of promised capacity additions, new worker/ecological evidence, or rapid hardware/cooling efficiency shifts that invalidate the baseline.

10. Appendix A control coverage

This visual shows what the *generic audit* addressed. It is **not** a facility compliance score or certification. Site-specific evidence is still required for governance, consent/representation, operational rollback and incident controls. [S5]



Facility-level evidence still required

- A2: decision provenance, independent oversight, conflicts of interest, community/Tribal representation and resource-control limits.
- A3: meaningful participation, grievance paths, non-retaliation and consent/authorization where applicable; communities cannot be presumed to consent from silence.
- A4/A9: concrete operational rollback, curtailment and incident response; sunk capital must not become a reason to ignore new harm.
- A6: independent measurement of physical conditions, not only operator-selected sustainability metrics.
- A7: worst-off and unrepresented groups retained in the record even when average economic indicators improve.
- A11: public/accountable authorization where rollback costs are extreme; qualitative testimony supplements quantitative metrics.

No single-score control

Stress, capacity and suffering grades - and any graph/dashboard derived from them - must never be collapsed into one number used to rank projects, allocate rights, suppress dissent or claim moral permission. Floors and accountable human judgment remain binding. [S1][S5]

11. Facility decision template

Use this as a pre-commitment checklist before a project becomes difficult to reverse. A 'no' does not automatically reject a project; it identifies a gap that must be repaired, independently reviewed or explicitly authorized without hiding the transfer.

Question	Evidence required	Stop / redesign condition
Is local electricity capacity real and timely?	Interconnection studies, resource plan, delivery dates, hourly load forecast	Load precedes capacity in a way that risks reliability or involuntary cost transfer
Is water use compatible with basin capacity?	Seasonal source, consumptive use, indirect water, drought sensitivity, alternatives	Scarce-water burden falls on low-capacity users/ecosystems without repair
Are air/climate burdens physically reduced?	Local grid mix, onsite/backup generation, runtime, emissions controls	Accounting improves while physical exposure or fossil lock-in worsens
Are households protected from cost transfer?	Tariff/contract, stranded-asset protections, security/collateral terms	Attributable infrastructure risk is socialized without accountable approval
Are workers and suppliers within capacity?	Safety, scheduling, turnover, grievances, sourcing, e-waste chain	High load + low agency/exit, hidden injuries or unverifiable sourcing
Are nonhuman/future impacts represented?	Habitat, water/ecology, lifecycle emissions, long-term lock-in	Irreversible loss is excluded from the decision because it lacks a market price
Can the system stop or scale down?	Curtailment design, decommissioning, incident/rollback owner and funding	Low-reversibility expansion proceeds under high uncertainty with no authority to pause

Decision language

Prefer: *'This project currently has flagged transfers in X and Y; here is the evidence required to repair or authorize them.'*
Avoid: *'This project has a good/bad Sufferless score.'* The framework is a map for deliberation, not a moral autopilot.

12. Evidence sources

External empirical/current sources

- E1.** International Energy Agency (IEA), *Key Questions on Energy and AI*, 16 Apr 2026. Global 2025/2030 electricity, AI-focused growth, emissions, affordability conditions, storage and onsite gas context.
<https://www.iea.org/reports/key-questions-on-energy-and-ai>
- E2.** Lawrence Berkeley National Laboratory, *United States Data Center Energy Usage Report: 2025 Update*, Jun 2026. U.S. 2030 electricity share central estimate and scenario range.
<https://bies.lbl.gov/publications/united-states-data-center-energy-2025>
- E3.** U.S. Department of Energy, release on LBNL 2024 report, 20 Dec 2024. U.S. 2023 electricity use: 176 TWh / 4.4%; 2028 range context.
<https://www.energy.gov/articles/doe-releases-new-report-evaluating-increase-electricity-demand-data-centers>
- E4.** Lawrence Berkeley National Laboratory, *2024 United States Data Center Energy Usage Report*, Dec 2024. 2023 direct water, indirect water and grid-mix emissions estimates.
https://eta-publications.lbl.gov/sites/default/files/2024-12/lbnl-2024-united-states-data-center-energy-usage-report_1.pdf
- E5.** Lei, Lu, Shehabi & Masanet, *The water use of data center workloads: A review and assessment of key determinants*, Resources, Conservation and Recycling 219 (2025).
<https://datacenters.lbl.gov/publications/water-use-data-center-workloads>
- E6.** U.S. Environmental Protection Agency, *Clean Air Act Resources for Data Centers*, current page retrieved 16 Sep 2026.
<https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-resources-data-centers>
- E7.** Berkeley Lab, *Electricity Rate Designs for Large Loads: Evolving Practices and Opportunities - 2026 Update*, Aug 2026.
<https://eta.lbl.gov/publications/electricity-rate-designs-large-0>
- E8.** U.S. Census Bureau, *Employment in Data Centers Increased by More Than 60% From 2016 to 2023*, 6 Jan 2025.
<https://www.census.gov/library/stories/2025/01/data-centers.html>
- E9.** IEA, *Energy and AI - AI and energy security*, 2025. Critical-mineral and grid-connection analysis.
<https://www.iea.org/reports/energy-and-ai/ai-and-energy-security>
- E10.** Berkeley Lab, *Speed to Power: Solutions for Accelerating Large Load Connections*, Jun 2026.
<https://eta.lbl.gov/publications/speed-power-solutions-accelerating>
- E11.** IEA, *Energy and AI - Executive summary*, Apr 2025. 2024 global electricity and geographic concentration context.
<https://www.iea.org/reports/energy-and-ai/executive-summary>

Sufferless doctrine / runtime sources

- S1.** Sufferless Shared Snippets v2.4.1 - canonical fine print, no-single-score rule, transfer-acceptability gate and floors.
- S2.** Sufferless AI Runtime Constitution v2.4.1 and Evidence/Retrieval/Evaluation Protocol v2.4.1 - Tier 2 workflow, evidence separation, monitoring and efficacy.
- S3.** Sufferless Analysis Integrity and Grading Protocol v2.4.1 - bias mitigation, grades, anti-circular capacity rule, stress x capacity matrix, bespoke strategy and reflexivity.
- S4.** Sufferless Anti-Sedation and Gap-Change Protocol v2.4 - genuine reduction vs metric/sentiment divergence.
- S5.** Sufferless Appendix A Compliance Matrix v2.4 - A0-A11 controls, distributional floors, reversibility, metric integrity, human oversight.
- S6.** Sufferless Graph-Enhanced Report and Rendering Specification v2.4 + Graph Schema v2.4 - required report flow, rendered graph artifacts, cell/text QC.
- S7.** Sufferless Manual Part Bridges v2.4 - Part V Society and Part VI Applied Practice.
- S8.** *Sufferless: The Science & Philosophy of Reducing Suffering* (2026), especially Part V Society and Chapter 54 AI Alignment; AI footprint must include energy, water and minerals and guard against hidden transfer.

13. Limitations, caveats and fine print

Generality. This is not a site-specific environmental impact statement, utility rate case, engineering design, labor audit or permitting opinion. The report deliberately avoids claiming that all data centers have the same water, emissions, grid or community profile.

Attribution. Several external sources report on all data centers, not only AI workloads. AI-focused facilities are a fast-growing subset, but facility-level AI share and workload mix are often not publicly measurable. Do not attribute sector totals to a single AI service or company without additional evidence.

Scenario uncertainty. 2030/2035 electricity and emissions values are modeled projections. Hardware/software efficiency, AI uptake, energy supply, financing, permitting, interconnection bottlenecks and rebound can materially change the trajectory. [E1][E2]

Grades. Stress, capacity and suffering grades in this report are assumption-based or inferred generic estimates. They are not survey results, clinical measures, environmental thresholds or legal findings. Capacity for future beings is especially uncertain. [S3]

Nonhuman representation. Ecosystems are not treated as one sentient being; the suffering grades refer to plausible nonhuman animal impacts, while ecosystem condition is treated as a separate stressor/capacity pathway. Missing species- and habitat-specific data remain an important gap.

Benefits. The report credits plausible digital, research, labor, tax and grid-flexibility capacity without assigning a blanket net suffering reduction to AI. Downstream benefit depends on the actual application and distribution of access.

Professional boundary. This audit is a structured reasoning and governance aid, not legal, engineering, financial, medical, psychological or permitting advice. Qualified utilities, engineers, hydrologists, air-quality specialists, labor experts, ecologists, regulators, Tribal/community representatives and legal counsel should review real projects.

Canonical Sufferless fine print. This Sufferless document is a structured reasoning and governance aid, not final moral authority, legal advice, medical advice, financial advice, psychological advice, emergency support, or a substitute for accountable human judgment. It depends on available information, stated assumptions, evidence quality, stakeholder representation, and moral uncertainty. Scores, grades, dashboards, graphs, curves, and net suffering estimates are provisional explanatory tools; they are not objective measurements and must never be used as single-score control mechanisms. A lower or higher estimated suffering grade does not justify violating autonomy, consent, dignity, rights, due process, safety, reversibility, privacy, distributional floors, or Sufferless Safety Guardrails. Missing facts, unrepresented beings, animal suffering, ecological impacts, future effects, hidden transfers, or new evidence may change conclusions. Treat each analysis as a living document: monitor outcomes, gather feedback, repair harm, update assumptions, and revise recommendations when reality changes. [S1]

Completion status

Full Tier 2 generic audit completed with rendered graph artifacts, source labels, grading, transfer classification, anti-sedation/integrity pass, Appendix A coverage, action ladder, monitoring and fine print. This completion statement applies to the report process, not to any facility's compliance or moral status.

Prepared 16 September 2026 | Evidence last checked 16 September 2026 | Sufferless stack v2.4 / v2.4.1 as active