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Data Centers and Our Communities: What We Know, What Remains Uncertain, and How Residents Can Decide

National evidence review with a Pennsylvania and Lehigh Valley focus

Prepared for PRISM AI Consultants' AI Safety Hub

Research cutoff: September 23, 2026, 4:47 p.m. EDT

This report follows the research scope supplied by PRISM AI Consultants. filecite turn0file0 The cutoff matters locally: South Whitehall Township scheduled its special Planning Commission meeting on Project Atlas for **6:00 p.m. on September 23, 2026**, after this report's research cutoff. The township also listed **October 31, 2026** as the current deadline to act on the plan. This report therefore does **not** claim that the September 23 meeting occurred, that the Planning Commission made a recommendation, or that the Board of Commissioners made a decision. [1]

Evidence labels used throughout

Documented fact means a government record, regulatory order, measured dataset, or other primary record directly establishes the point. **Attributed claim** means a developer, utility, advocate, public official, or other interested party made the claim, but the source does not independently prove it. **Estimate or projection** means a modeled historical estimate, forecast, fiscal projection, engineering prediction, or similar calculation. **Research inference** means the conclusion follows from multiple pieces of evidence but is not itself directly established by one source. **Unknown or disputed** means the available evidence is insufficient, inaccessible, conflicting, or unresolved.

Contents: Executive summary and resident brief · Background, methodology, and website audit · National findings and community impacts · Pennsylvania and Lehigh Valley assessment · Evidence register and resident decision framework · Publication and communications package · Limitations, bibliography, and final conclusions

Executive summary and resident brief

The two-page resident brief

Data centers are industrial-scale buildings full of computing equipment. They support cloud services, websites, business systems, streaming, scientific computing, artificial intelligence, and other digital services. Some are owned by a single company, some lease space and power to many customers, some are enormous hyperscale facilities, and some are optimized for cryptocurrency or AI. A large building, a large

electric connection, or the presence of specialized cooling does **not** by itself prove that a facility is an AI data center. Where the tenant and computing workload are undisclosed, the workload should be described as **unknown**, not guessed. NIST defines AI models by what the computing system does, while the physical building that hosts computers is not itself evidence of which models or workloads will run there. [2]

The strongest national evidence says data centers are becoming a significant new source of U.S. electricity demand, but the exact future load remains highly uncertain. Berkeley Lab estimates that U.S. data centers used about **176 TWh in 2023, approximately 4.4% of U.S. electricity**, up from about 58 TWh in 2014. Its scenarios span **325 to 580 TWh by 2028**, or about **6.7% to 12%** of U.S. electricity. These are modeled estimates and projections, not a comprehensive meter-by-meter census. [3] EPRI's 2026 scenarios are higher and extend to 2030: roughly **380 to 790 TWh**, or **9% to 17% of U.S. electricity**. EPRI says its new range is about 60% higher than its own 2024 forecast because the project-development pipeline accelerated. That revision is a powerful warning against treating any forecast as destiny. [4]

EIA independently concludes that data-center load is emerging as a dominant driver of long-run U.S. electricity growth. Its September 2026 short-term forecast expects U.S. electricity sales of **4,135 billion kWh in 2026** and **4,211 billion kWh in 2027**, with data centers and manufacturing driving much of commercial and industrial growth. EIA also explicitly describes its long-range Annual Energy Outlook as a set of alternative futures, not predictions. [5]

That means two seemingly contradictory statements can both be wrong: “data-center demand is trivial” is not supported by the evidence, but neither is “every announced megawatt will inevitably be built and consumed around the clock.” Forecasts depend on which projects reach construction, utility interconnection timelines, server efficiency, hardware deployment, economics, customer demand, generation and transmission availability, and cancellations. EPRI explicitly varies assumptions about how much of the construction and planning pipeline actually becomes operational. [6]

The community question is therefore not simply **“Are data centers good or bad?”** The useful question is:

> **What specific facility is proposed, what resources would it actually require, who is contractually responsible for the resulting costs and risks, what protections are enforceable, and what remains unknown?**

What the evidence says about the major impacts

Electricity: Large data centers can require electricity on a scale that matters to utility and regional grid planning. Pennsylvania regulators have responded directly. In May 2026, the Pennsylvania Public Utility Commission adopted a model large-load framework for customers at or above **50 MW individually or 100 MW in aggregate**. The Commission said upgrades that would not have been needed “but for” a large-load interconnection should be paid by that customer rather than broadly socialized. [7] PPL subsequently implemented its LP-6 large-load class with a **minimum 10-year commitment**, minimum usage obligations, financial security, upfront payments for certain upgrades, and exit protections. [8]

Those protections matter, but they should not be summarized as “residents can never pay anything because developers pay for all grid costs.” On September 14, 2026, PPL proposed an additional Customer Protection Transmission Rider precisely because, under existing mechanisms, certain transmission network costs associated with large-load growth are not as directly assignable or transparent as PPL believes they should

be. The proposal has not yet been approved and is targeted for possible implementation in 2028. [9] Direct distribution upgrades, regional transmission, generation adequacy, PJM capacity procurement, default-service supply, and retail bills are distinct cost categories. A developer paying for its dedicated substation therefore does not, by itself, establish that every system-wide cost effect has been neutralized. [10]

Conversely, it is also misleading to take a change in a PJM wholesale capacity auction and mechanically translate it into a specific household bill increase. Retail effects depend on utilities, suppliers, procurement schedules, transmission allocation, regulatory decisions, customer class, and other variables. PPL itself separates distribution and supply charges, illustrating why a wholesale price is not equivalent to a retail bill. [11]

Water: “Data centers use huge amounts of water” is too broad to be useful without specifying the design. “Closed-loop means zero water” is also too broad. Berkeley Lab's 2025 peer-reviewed review found workload-level water use varying by more than **10,000-fold**, depending on server efficiency, grid-related water consumption, utilization, cooling technology, PUE, climate, and other factors. It explicitly finds that there is no single universally best recipe. [12] Data centers can use water directly at the facility and indirectly through the electricity system, and water **withdrawal** is not the same as water **consumption**. Berkeley Lab defines consumption as the portion withdrawn that is not returned to the source. [13]

Noise and air: Data-center noise can come from cooling equipment, transformers, fans, generators, construction, and other mechanical systems. Whether it becomes a community problem depends on equipment, distance, barriers, background sound, tonal and low-frequency characteristics, nighttime operation, and enforceable limits. General research on environmental noise supports concern about sleep disturbance and other health outcomes at sufficient exposure, but it does not prove that a particular unbuilt data center will cause those outcomes. [14] Backup engines and turbines can emit regulated air pollutants, which is why EPA identifies Clean Air Act requirements applicable to data-center combustion equipment. Again, the existence of generators is not proof of a project-specific health injury without knowing engine count, fuel, ratings, testing schedule, permitted hours, emission controls, dispersion, and operating conditions. [15]

Jobs and taxes: The best evidence supports a nuanced conclusion. Data centers can generate substantial local tax revenue because they place valuable buildings and equipment on a relatively small employment footprint. Virginia's nonpartisan Joint Legislative Audit and Review Commission found that data-center revenue ranged from less than 1% to as much as **31% of total local revenue** among five relatively mature data-center localities, depending heavily on local tax structure and market size. [16] That is genuine potential benefit. It is not equivalent to proving that every proposed project's developer tax estimate is correct, nor does gross tax revenue equal net fiscal benefit after incentives, abatements, depreciation, assessment appeals, infrastructure, emergency-service costs, and opportunity cost.

Land and quality of life: Virginia's statewide review also concluded that the industrial scale of data centers is often incompatible with adjacent residential uses and that inadequate zoning or exceptions have produced adverse neighborhood effects in some communities. [16] This supports taking setbacks, buffering, noise, viewsheds, traffic and emergency access seriously. It does not establish that every data center must be remote from every residence.

Property values: The evidence is not strong enough to promise either “no effect” or “major collapse.” A George Mason University analysis of Northern Virginia transactions reported no evidence of lower sales

prices from proximity and, after controls, slightly higher prices nearer data centers. A 2026 Princeton undergraduate thesis using a different design reported small average effects overall but negative effects around some medium and large purpose-built facilities. These studies differ in geography, design and evidentiary weight, and the latter is not peer-reviewed. A project-specific Lehigh Valley percentage should therefore be labeled **unknown**, not asserted. [17]

The most important Lehigh Valley finding

For **Project Atlas in South Whitehall Township**, the current municipal record is materially different from some earlier public descriptions. The current preliminary-plan materials describe three principal data-center structures and approximately **1.52 million square feet** of proposed building area on parcels totaling roughly **410.65 acres**, with consolidation of approximately 406.38 acres. The municipal page identifies **Jeras Corp.** as owner and **CDE Acquisitions LLC** as purchaser/applicant. [18]

Earlier reporting described a much larger version involving roughly five million square feet and six buildings. That description should not be presented as the current plan. [19]

Edged's Project Atlas website makes several important claims: a closed-loop system with no water used for daily cooling, sound below 54 dB at property lines, roughly 250 permanent jobs, 3,390 construction jobs, no local incentives, and approximately **$16.2 million in recurring annual township, county and Parkland School District taxes**. Those figures are **attributed developer claims**, not independently established outcomes. The developer itself notes that details remain subject to permitting, infrastructure availability, customer requirements and regulatory approvals. [20]

The often-reported **725 MW** Project Atlas power figure could not be independently tied during this review to an accessible South Whitehall, PPL, PJM, PUC, applicant or interconnection document that clearly defines whether the number is requested capacity, maximum contract demand, campus buildout, energized load, IT load or something else. It should therefore **not** be presented as an established operating load. Secondary industry sources have reported it, but secondary reporting is not enough for a figure this consequential. [21]

The bottom line for residents

Residents do not need to decide whether they are “for AI” or “against AI.” The land-use question can be evaluated without knowing whether a future tenant will train frontier AI models. Likewise, supporting AI technology does not require supporting every proposed data-center site, and opposing a particular site's design does not amount to opposing digital infrastructure generally. This separation is especially important when the tenant and workload are undisclosed. [22]

The strongest decision test is **conditional**:

A project becomes easier to justify when the applicant establishes its true power requirement, firm utility obligations, local and indirect water requirements, independently reviewed sound performance, generator inventory and emissions, binding fiscal terms, emergency-service needs, decommissioning responsibility, and enforceable successor obligations before residents are asked to bear irreversible land-use consequences.

A project becomes harder to justify when those questions remain unanswered while approvals would commit scarce land, infrastructure capacity, neighborhood exposure, or public financial risk.

That is not anti-development. It is ordinary due diligence.

Background, methodology, and website audit

What data centers are, and what common terms actually mean

An **enterprise data center** primarily serves one organization. A **colocation facility** leases powered space, connectivity and related infrastructure to customers. A **hyperscale facility** is a very large installation designed for massive, standardized computing fleets. “Cloud” describes the service model more than the physical building. **Cryptocurrency facilities** can contain specialized proof-of-work computing equipment. **AI-focused facilities** contain significant accelerator-based computing used for AI training or inference. These categories can overlap, and tenants can change over a building's life.

NIST defines the **training stage** as the stage when a machine-learning model learns parameters using training data. **Pre-training** trains a general-purpose model on broad data, while **fine-tuning** adapts it for a particular domain or task. Inference is the use of the trained model to produce outputs from new inputs. [23]

For residents, the important point is that the external appearance of a building rarely establishes which computing workload is inside. A large power request may be consistent with AI, cloud, colocation or another high-density workload. Where the tenant is confidential, “AI data center” should be used only if the applicant or reliable evidence establishes that use.

Basic electrical vocabulary

Term	Plain-language meaning	Common mistake
MW, megawatts	A rate of using or delivering power at a moment	Treating MW as annual electricity consumption
MWh, megawatt-hours	Energy used over time	Comparing MWh directly to a project's connection capacity
Peak demand	Highest demand during a specified interval	Assuming peak demand occurs 24/7
Average consumption	Average actual use over time	Assuming it equals contracted maximum
Capacity	Maximum available, contracted or nameplate capability, depending on context	Treating every announced MW as energized load
Utilization	How intensively installed computing or electrical capacity is actually used	Assuming 100% continuously

Term	Plain-language meaning	Common mistake
PUE	Total facility energy divided by IT-equipment energy	Treating low PUE as proof of low absolute electricity use
WUE	A water-efficiency metric relating facility water use to computing energy, depending on defined methodology	Comparing WUE values without checking boundaries

The Green Grid defines PUE as total data-center energy divided by ICT-equipment energy. A PUE closer to 1 indicates less non-IT overhead, but a highly efficient 500 MW facility can still use far more electricity than an inefficient 5 MW facility. [24] The Green Grid developed WUE specifically because energy efficiency alone does not describe a facility's water performance. [25]

A useful arithmetic example illustrates why units matter. A facility drawing an **average 90 MW** for a year would use approximately **788,400 MWh, or 0.788 TWh**, because energy equals average power multiplied by time. A statement that a project “has 100 MW” does not reveal whether its annual use will be 0.1, 0.5 or nearly 0.9 TWh unless utilization and the meaning of that 100 MW are known.

Proposal versus reality

Residents should distinguish at least six stages:



An announced campus is not the same thing as an approved plan. An approved land-development plan is not the same thing as a signed utility-service agreement. A signed utility commitment is not the same thing as an energized facility. An energized first phase is not proof that an entire campus buildout will occur.

That distinction is particularly important today because EPRI's forecast methodology explicitly assumes different fractions of projects under construction, advanced planning and early planning actually reach operation. [6]

Methodology

This review prioritized primary federal, state, utility and municipal evidence: EIA, DOE/Berkeley Lab, FERC, PJM, Pennsylvania PUC and Pennsylvania Bulletin records, Pennsylvania executive-agency materials, municipal project pages, PPL tariffs and current utility materials, EPA resources, NIST terminology, and Virginia's legislative audit agency. Peer-reviewed research was used for water and health mechanisms, while journalism and industry publications were used primarily for local project discovery or where municipal records were inaccessible.

For consequential claims, the analysis asks four questions: **What exactly does the document establish? What period and geography does it cover? Is the figure measured, modeled or claimed? What would have to be true for the conclusion to transfer to a Lehigh Valley project?**

Developer materials were not discarded, but they were treated as interested-party evidence. A developer's site can establish what the developer is promising; it cannot, without independent support, prove that future jobs, tax collections, sound levels, water use or investment will occur exactly as projected.

PRISM website audit limitation

The requested PRISM Safety Hub homepage and its Data Center Desk, Project Atlas, source-list and verification-policy pages at `https://safety.prismaiconsultants.com/` could **not** be retrieved through the public browsing environment used for this investigation. A connected Vercel fetch also could not locate or access the custom-domain deployment. That does **not** establish that the website is offline. It means only that the pages were inaccessible from the research environment.

Accordingly, this report does **not** claim to have inspected page text that could not be retrieved.

Requested PRISM page	Existing claim reviewed	Finding	Recommended action
Safety Hub homepage	**Not retrievable**	No defensible claim-level audit possible	Compare homepage statistics against claim register DC-01 through DC-05 before republication
Data Center Desk	**Not retrievable**	Could not verify which Lehigh Valley projects PRISM currently lists	Reconcile project list against current municipal records and date-stamp every status
Project Atlas page	**Not retrievable**	Could not determine whether PRISM carries the old six-building scope, 725 MW figure, developer tax claims, or current three-building plan	Replace any stale six-building/5M-sq-ft description with the current municipal plan; label 725 MW unverified unless an original utility/application source is obtained
Source list	**Not retrievable**	Source classifications could not be audited	Separate municipal/agency documents, developer documents, peer-reviewed research and journalism
Verification policy	**Not retrievable**	Policy language could not be assessed	Adopt the five evidence labels used in this report and require “last verified” dates

The most important **provisional corrections to check immediately** are the current Project Atlas scope, the status of the 725 MW figure, any “zero water” wording, any representation of projected tax revenue as guaranteed revenue, and any statement that the Planning Commission itself provides final approval.

South Whitehall explicitly states that its Planning Commission is **advisory to the Board of Commissioners** and forwards recommendations for final disposition. [26]

National findings and community impacts

National electricity demand: what is measured and what is forecast

The national evidence is unusually consistent about direction and unusually uncertain about magnitude.

Source	Publication	Baseline	Forecast	Geography	Core assumptions / limits
Berkeley Lab, DOE-sponsored	Dec. 2024	176 TWh estimated in 2023, 4.4% of U.S. electricity	325–580 TWh in 2028, 6.7–12%	U.S.	Historical shipments and modeling plus future equipment scenarios; not facility-meter census [3]
EPRI, *Powering Intelligence 2026*	2026	177–192 TWh estimated in 2024	~380–790 TWh in 2030, 9–17%	U.S. and state scenarios	Project pipeline, with different completion assumptions; 2026 range ~60% higher than its 2024 forecast [6]
IEA, *Energy and AI*	2025	Global data-center load	~945 TWh globally in 2030	Global, with U.S. breakout	AI is largest incremental driver, but non-AI digital demand also grows; U.S. responsible for largest share of increase [27]
EIA AEO 2026	Apr. 2026	National demand already rising	Total U.S. electricity demand +0.9% to +1.6% average annually through 2050 across major cases	U.S.	Alternative futures, explicitly not predictions; AI server growth and efficiency assumptions vary [28]
EIA STEO	Sept. 9, 2026	2025 actual/ estimate	4,135 BkWh sales in 2026; 4,211 BkWh in 2027	U.S.	Near-term forecast completed Sept. 3; data centers and manufacturing both contribute [29]

Source	Publication	Baseline	Forecast	Geography	Core assumptions / limits
PJM load forecast	Jan. 2026	PJM regional system	Summer peak growth ~3.6% annually over next decade	PJM	Regional load forecast, not a data-center-only forecast; forecasts can move materially year to year [30]

The strongest conclusion is not a single percentage. It is that **demand growth is real, increasingly consequential and forecast-sensitive**.

The EPRI revision is particularly instructive. A 60% upward change in projected 2030 data-center demand within roughly two years shows why communities should not design infrastructure or fiscal promises around one point estimate. [6] Downward revisions are also possible if projects are canceled, grid connections are delayed, hardware efficiency improves faster than expected, computing demand disappoints, or operators consolidate workloads.

EIA's September 2026 forecast also reports that new data-center project connections in Texas had paused, even while the West South Central region remained the largest contributor to national sales growth. That is direct evidence that project pipelines can encounter physical or administrative constraints. [31]

Electricity, bills and reliability

Mechanism. A very large load can require several layers of investment: customer-dedicated distribution equipment, substations, higher-voltage transmission upgrades, generation or capacity procurement, and reliability reserves. Those categories are governed by different tariffs and institutions.

Pennsylvania's April 30, 2026 PUC order, entered May 12, set a model threshold of 50 MW individual or 100 MW aggregated load and excluded behind-the-meter generation from the threshold calculation. The Commission reasoned that the grid may need to accommodate the gross load if onsite generation is unavailable. [32]

More importantly, the Commission adopted a “but for” cost-causation principle. If a network improvement would not have been needed but for the large load, the Commission said that customer's interconnection should bear the associated distribution and transmission upgrade cost, except for certain previously planned infrastructure. [33]

That is meaningful ratepayer protection. It is not complete insulation from every future wholesale or system cost.

PPL's present LP-6 framework adds long-term service commitments, minimum usage, upfront payments for certain upgrades, security and exit fees. [34] Yet PPL's September 2026 CPTR filing says today's cost-recovery mechanisms still limit direct assignment of **certain transmission network costs** and proposes a new mechanism to assign those costs to LP-6 customers. That filing is strong counterevidence to any claim that existing protections have already solved every possible cost-shifting issue. [9]

Reliability. Large new loads can make planning harder when development pipelines contain duplicative or speculative requests. At the same time, a load that can curtail rapidly, run approved backup generation or shift computing can potentially provide flexibility. FERC in June 2026 required all six regional transmission organizations and independent system operators to address how large loads are interconnected and how consumers are protected. [35] PJM also operated under an emergency federal order in July 2026 allowing last-resort curtailment of certain data centers and large loads with backup generation during extreme conditions. That shows flexibility can have reliability value, but emergency capability is not the same thing as evidence that every data center is a grid benefit. [36]

Resident conclusion: ask for the actual utility studies and agreements. “We pay for our own substation” answers only one part of the cost question.

Water

Four distinctions should govern public discussion.

First, **withdrawal** means water removed from a source. **Consumption** means the portion not returned. [37]

Second, **onsite cooling water** is not the same thing as the facility's total water footprint. Electricity generation can have an indirect water footprint, depending on the grid and generation technology. [13]

Third, **closed-loop** refers to recirculating cooling fluid. It does not logically imply that the whole property requires no water for initial filling, maintenance, sanitation, fire protection or other uses. The actual project design and utility application determine those quantities.

Fourth, cooling technology creates tradeoffs. Evaporative systems can reduce electricity demand at the cost of higher water consumption; dry systems can reduce water demand but require more fan energy or perform differently during hot weather; hybrid systems balance both. Liquid cooling can improve heat transfer at the server level without automatically revealing the external heat-rejection system. Berkeley Lab therefore finds huge site-to-site and workload-to-workload differences rather than one universal water number. [38]

Project Atlas application: Edged says the campus will use a closed-loop system with “zero water used for daily cooling.” That should be published as an **attributed design claim**, not shortened to “the data center uses zero water.” [39] The developer's separate claim that the design will save nearly 2.85 billion gallons annually is a counterfactual comparison whose usefulness depends on the undisclosed or incompletely documented baseline against which the savings were calculated. It should not be repeated without methodology. [39]

The evidence needed locally is straightforward: maximum-day potable demand, average annual demand, initial fill, cooling makeup, blowdown if any, sanitary demand, fire-protection requirements, source utility, drought restrictions, and the design's predicted WUE under summer conditions.

Noise, air quality and health

Noise is one of the areas where public debate tends to overreach in both directions.

A sound level below an occupational hearing-damage threshold does not mean the same sound is necessarily non-disruptive at a residence at night. Occupational standards address hearing injury in workers; community-noise evidence also considers sleep, annoyance and chronic exposure. WHO and later meta-analytic research associate environmental noise exposure with health outcomes, but most evidence comes from transportation and other environmental sources rather than data centers. [14]

Thus:

Supported: continuous mechanical sound, tonal characteristics and nighttime exposure can matter.

Not supported: a generic environmental-noise study proves that Project Atlas will make nearby residents sick.

Also not supported: a modeled property-line number by itself proves residents will never hear or be disturbed by the facility.

Edged says Project Atlas is designed for **less than 54 dB at property lines**. That is a project claim about a design target, not a post-construction measurement. [39] The meaningful review should obtain the acoustic model, assumed equipment inventory, octave or one-third-octave data, receptor locations, simultaneous full-build operation, nighttime assumptions, generator testing assumptions, tonal penalties, and enforceable post-construction testing procedures.

Backup generators require similar discipline. EPA identifies stationary combustion engines and turbines used by data centers as equipment potentially subject to Clean Air Act standards. [15] What residents need is the facility-specific inventory: number, MW rating, fuel, emission factors, controls, annual testing hours, emergency-operation provisions, stack parameters and permit limits.

Jobs, taxes and economic development

Construction can produce significant temporary employment. Permanent data-center staffing is smaller relative to capital investment because the facilities are highly automated. This can still be economically attractive if tax revenue is substantial and service costs are limited.

Virginia provides the strongest public-sector evidence reviewed here. Its legislative audit agency found that mature data-center localities receive materially different fiscal benefits depending on local tax rates and the size of the installed market, ranging from less than 1% to 31% of local revenue. [16] This demonstrates that “data centers can generate substantial tax revenue” is supported. It also demonstrates why copying a tax figure from another jurisdiction is unsafe.

For any Lehigh Valley project, residents should distinguish:

Construction jobs from **job-years**; permanent direct employees from contracted maintenance and security; Pennsylvania-resident workers from local-municipality residents; gross wages from economic-impact multipliers; projected assessed value from taxable assessed value after appeals; and gross taxes from net fiscal benefit.

For Project Atlas, the developer claims about 250 permanent jobs with average wages of $65,000 to $75,000, 3,390 construction jobs, and approximately $16.2 million in recurring local taxes, including about $11.5 million for Parkland School District. [39] Those figures could be important benefits. They remain **projections** until backed by the fiscal model, assessment assumptions, tax classification, depreciation treatment, construction phasing, incentive terms and enforceable commitments.

There is also no evidentiary basis for automatically converting a data center into a “local AI innovation economy.” A server campus can create useful infrastructure and tax base without generating a large cluster of AI researchers, startups or headquarters nearby.

Land, property, schools, climate and future risk

Virginia's JLARC review found that data centers' industrial scale can conflict with nearby residential uses and concluded that inadequate planning and zoning had allowed problematic adjacency in some jurisdictions. [16] The transferable lesson is not that all data centers are incompatible with communities. It is that setbacks, buffers and site context materially affect outcomes.

Schools can benefit greatly from a larger property-tax base, but projected school revenue should be stress-tested for appeals, depreciation where applicable, changes of ownership and any state or local incentive interaction. Project Atlas's projected Parkland revenue is currently a developer projection, not a guaranteed school-district receipt. [39]

Climate impacts likewise depend on more than the building's PUE. EPRI's 2026 scenarios find that natural gas can provide a substantial share of incremental supply under reference assumptions, while carbon-free commitments can shift the buildout toward lower-emitting generation and storage. [40] A renewable-energy contract or certificate is therefore not synonymous with the physical claim that every electron consumed at every hour is renewable.

Long-lived buildings also face commercial risk. Hardware can become obsolete faster than the building or transmission assets serving it. Large-load tariffs respond to precisely this concern through minimum commitments, collateral and exit provisions. Pennsylvania's PUC considered stranded-cost protection and concluded that customer security, contributions and exit mechanisms matter because a project can fail to reach full load or leave before utility investments have been recovered. [41]

That leads to a neglected local question: **Who removes equipment, generators, fuel systems and specialized infrastructure, and restores the site if an operator fails?** A clear decommissioning obligation backed by financial security can materially change the community-risk assessment.

Pennsylvania and Lehigh Valley assessment

Pennsylvania's regulatory landscape as of the cutoff

Pennsylvania policy changed substantially during 2026.

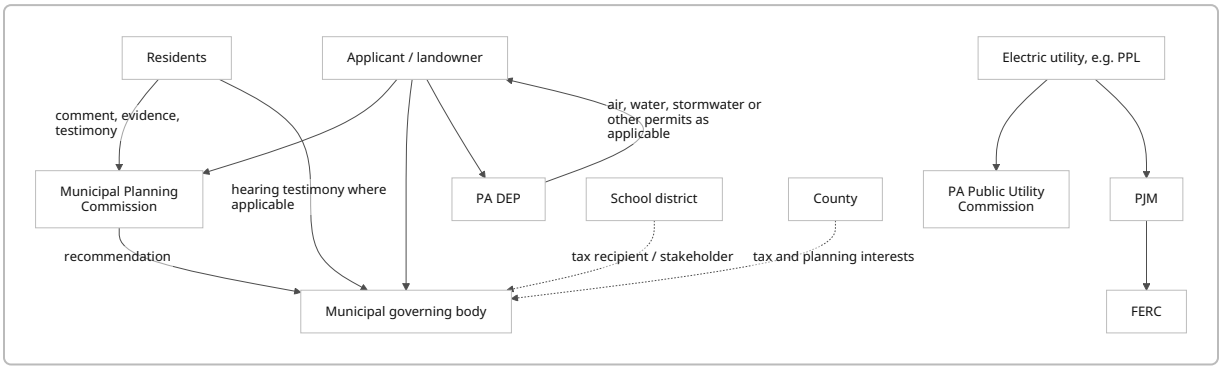
The PUC's statewide model large-load tariff establishes principles for utility-specific tariffs rather than functioning as one universal self-executing rate. It uses a 50 MW individual and 100 MW aggregate

threshold and places strong emphasis on “but for” cost causation. [42] PPL's separately approved LP-6 tariff uses a minimum 10-year commitment and additional protections for its service territory. [43]

On August 18, 2026, Governor Josh Shapiro signed **Executive Order 2026-05**, linking state data-center policy to the Governor's Responsible Infrastructure Development, or GRID, requirements. The order directs DEP to change how data-center permit applications are processed, calls for legally enforceable GRID commitments through consent agreements for participating projects, requires local approvals before DEP permit issuance under the described pathway, removes AI data centers from PA Permit Fast Track, adds reporting expectations for energy and water, addresses tax-exemption eligibility and directs state officials to pursue stronger cost and reliability protections. [44]

The administration says the GRID standards cover energy affordability, environmental protection, transparency, workforce development and community benefits. [45] Because this framework is partly implemented through executive direction, agency processes, consent agreements and existing statutory authority, residents should distinguish it from a comprehensive data-center statute enacted by the General Assembly. This review did not independently confirm final enactment of the various 2026 data-center bills discussed publicly, so no pending bill is treated here as current law.

Who decides what in Pennsylvania



In South Whitehall specifically, the township states that the Planning Commission is advisory and forwards recommendations to the **Board of Commissioners for final disposition**. [26] That means a Planning Commission vote should not be reported as though it is necessarily the final approval.

Residents can generally influence local zoning, subdivision and land-development proceedings through the procedures available for that application. They cannot use a municipal land-use hearing to rewrite FERC jurisdiction, a PUC tariff or PJM market rules. Conversely, a utility service agreement does not substitute for local land-use approval.

Pennsylvania's Municipalities Planning Code recognizes different decision makers, including governing bodies, zoning hearing boards and, where specifically empowered, planning agencies. It also makes clear that staff and consultant reports are recommendatory unless the governing framework gives a body final authority. [46] Specific appeal rights depend on the type of decision and local ordinance, so project-specific legal advice is appropriate before assuming a particular appeal route or deadline.

For records, Pennsylvania's Right-to-Know framework allows written requests to agency open-records officers and provides an appeal to the Office of Open Records when access is denied or deemed denied. Appeals generally must be filed within **15 business days** of the denial or deemed denial. Requests should identify records with enough specificity for the agency to locate them. [47]

Current Lehigh Valley project comparison

Because the PRISM Data Center Desk itself was inaccessible, this table cannot certify that it reproduces every project currently on that page. It independently identifies projects found in municipal records and current regional reporting and explicitly grades gaps.

Project	Municipality	Applicant / developer evidence	Current stage at cutoff	Scale / power evidence	Cooling / water	Jobs / taxes	Key unre points
Project Atlas	South Whitehall Township, Lehigh County	Owner Jeras Corp.; purchaser/ applicant CDE Acquisitions LLC in municipal record; Edged presents itself as developer [48]	Active preliminary land-development review; special PC meeting scheduled 6 p.m. Sept. 23; action deadline Oct. 31 [1]	~410.65 acres; ~1.52M sq ft; 3 principal data-center structures. Reported 725 MW remains unverified from accessible primary record. [49]	Developer says closed-loop and zero daily cooling water [39]	Developer says ~250 permanent jobs, 3,390 construction jobs, ~$16.2M recurring local taxes [39]	Exact ele service commitm meaning reported indepenc fiscal mo build aco model; g inventory maximur water; te decomm security
Former Air Products site data-center proposal	Upper Macungie Township, Lehigh County	Regional reporting identifies proposed data-center redevelopment; applicant/ developer identity was not sufficiently verified in accessible primary records during this review [50]	Development activity reported in 2026; exact current entitlement status needs municipal file confirmation	Secondary reporting has described roughly 2.6M sq ft; no primary power figure verified here [50]	Not verified	Not verified	Full appli utility rec water de ownersh applicant decision

Project	Municipality	Applicant / developer evidence	Current stage at cutoff	Scale / power evidence	Cooling / water	Jobs / taxes	Key unre points
Lower Mount Bethel Tech Center	Lower Mount Bethel Township, Northampton County	Secondary reporting associates Peron Development/ J.G. Petrucci; primary project file not retrieved [51]	Township has adopted Data Center Ordinance No. 2026-1; project-specific approval status remains to be verified [52]	Large campus figures have been publicly reported but should remain attributed pending municipal/ utility records	Not verified	Developer figures reported publicly, not independently verified	Applicati exact pow request, acoustic utility sta methodo
Upper Mount Bethel / Slate Belt-area proposal	Upper Mount Bethel Township, Northampton County	Regional reporting associates large data-center development with Slate Belt/ River Pointe-area interests and Talen-related power discussions [53]	Proposal/ development activity, exact current approval status not independently established	Very large power figures have been reported but remain insufficiently grounded in an accessible utility record in this review	Not verified	Not verified	Identity c customer interconn status, pl water an use appr
1024 N. Bradford Street proposal	City of Allentown, Lehigh County	Industry reporting says J.G. Petrucci submitted plans and was discussing tenants [54]	Reported application, primary city plan file not retrieved	Secondary report says ~146,000 sq ft and 100 MW; treat as attributed pending city/utility verification [54]	Not verified	Not verified	City appl electric-s evidence water, ge plan, cur approval

Project	Municipality	Applicant / developer evidence	Current stage at cutoff	Scale / power evidence	Cooling / water	Jobs / taxes	Key unre points
Emmaus Avenue concept	City of Allentown, Lehigh County	Earlier proposal reported as withdrawn with revised development anticipated	**Reported withdrawn**, not an active approved project in the evidence reviewed [55]	Earlier figures should not be treated as current	Unknown	Unknown	Whether when a r applicati filed

A geographic caution is important: **Lehigh Township is in Northampton County**, despite its name. It should not be confused with Lehigh County or with municipalities such as Upper Macungie and South Whitehall. Regional reporting in September 2026 described Lehigh Township's adoption of data-center zoning rules, but an ordinance is not itself evidence that an actual project has been approved there. [56]

Project Atlas: what is established, claimed and missing

Established in current municipal material: location at parcels associated with 2493, 2747 and 2807 N. Cedar Crest Boulevard; approximately 410.65 acres before proposed consolidation; about 406.38 acres in the consolidated tract; three principal data-center structures; roughly 1.52 million square feet of proposed building area; applicant CDE Acquisitions LLC; owner Jeras Corp. [18]

Established about process: the Planning Commission is advisory to the Board of Commissioners; the September 23 special meeting was scheduled for 6:00 p.m.; the current action deadline was October 31, 2026. [1]

Developer claims worth investigating rather than dismissing: 250 permanent jobs; 3,390 construction jobs; $65,000 to $75,000 average permanent wages; approximately $16.2 million recurring local taxes; no local incentives; sound below 54 dB at property lines; zero daily cooling-water use; roughly 160 acres of park dedication; applicant-funded power infrastructure. [39]

Material unknowns at the cutoff: disclosed tenant; binding tenant commitment; precise electric-service request and definition; PPL energization schedule; firm versus speculative phases; independent tax validation; actual post-appeal assessment; complete generator permit inventory; maximum-day water use; independent acoustic validation under full buildout; the legal form of park obligations and whether they bind successors; decommissioning security; and the Planning Commission's September 23 recommendation, because the meeting had not started at the research cutoff.

The current application is materially smaller than the earlier six-building version discussed in public reporting. Any public-facing PRISM material should date-stamp the building count and square footage rather than blending generations of the plan. [19]

Comparable jurisdictions and lessons

A fully defensible “promised versus actual” comparison for 6 to 10 individual projects requires several years of local budget, tax, utility, noise, water and employment records. This research run did not retrieve enough primary locality-level documentation to make that claim for ten discrete projects without filling gaps with anecdotes. The six comparison files below are therefore explicitly identified by type.

Comparator	What happened / what it shows	What transferred well	What does not automatically transfer
Mature Virginia data-center localities	JLARC found data centers can provide substantial tax revenue, with data-center revenue ranging from <1% to 31% of local revenue among five mature markets. [16]	Tax base can be genuine and consequential	Virginia tax structure is not Pennsylvania's
Northern Virginia residential siting experience	JLARC found about one-third of data centers near residential areas and concluded poor zoning or exceptions had produced adverse residential impacts in some locations. [16]	Setbacks, buffers and zoning matter	Does not prove harm at any specific PA site
Virginia water experience	JLARC found many centers use water comparable to or below a large office building while some use substantially more, illustrating cooling-design variability. [16]	Demand must be facility-specific	Virginia water availability and utility systems differ
PPL LP-6, Pennsylvania	Regulatory response created long-term commitments, minimum usage, security, upgrade payments and exit protection. [43]	Contract design can reduce stranded-cost risk	Does not eliminate every regional transmission/ generation cost
PPL proposed CPTR	September 2026 proposal would allocate certain large-load transmission costs more directly if approved. [9]	Shows protections can be strengthened as cost issues emerge	It is proposed, not yet an operating outcome
Texas 2026 connection pause	EIA reported a pause in new data-center projects/connections while regional electricity growth remained high. [31]	Announced pipelines do not equal certain energization	Texas market rules and grid differ substantially from PJM

The strongest cross-case lesson is that **contractual and zoning design matter at least as much as the generic label "data center."** The same basic industry can produce materially different outcomes depending on location, rate structure, water system, taxation, setbacks, load guarantees and enforceable conditions.

Evidence register and resident decision framework

Claim-and-evidence register

ID	Exact claim	Evidence category	Source / document location	Date / geography	Confidence and reason	Caveat / conflict	Last verifie
DC-01	U.S. data centers used an estimated ~176 TWh in 2023, ~4.4% of U.S. electricity	Estimate or projection	Berkeley Lab 2024 U.S. Data Center Energy Usage Report, summary [3]	2023, U.S.	High for modeled estimate	Not direct meter census	2026-0
DC-02	Berkeley Lab projects 325–580 TWh in 2028, ~6.7–12% of U.S. electricity	Estimate or projection	LBNL report summary [57]	2028, U.S.	High as forecast range	Forecast, not commitment	2026-0
DC-03	EPRI projects 9–17% of U.S. electricity for data centers by 2030	Estimate or projection	*Powering Intelligence 2026*, executive summary [6]	2030, U.S.	High as EPRI scenario	Depends heavily on pipeline completion	2026-0
DC-04	EPRI's 2026 2030 range is ~60% above its 2024 projection	Documented fact about forecast revision	EPRI executive summary [6]	2024–26	High	Demonstrates forecast instability, not future outcome	2026-0
DC-05	EIA forecasts 4,135 BkWh U.S. sales in 2026 and 4,211 BkWh in 2027, with data centers and manufacturing driving growth	Estimate or projection	Sept. 2026 STEO [29]	2026–27, U.S.	High	Not data-center-only growth	2026-0

ID	Exact claim	Evidence category	Source / document location	Date / geography	Confidence and reason	Caveat / conflict	Last verifie
DC-06	PA PUC model large-load threshold is 50 MW individual / 100 MW aggregate	Documented fact	PA Bulletin Final Order, Docket M-2025-3054271 [58]	2026, PA	High	Utility-specific implementation varies	2026-0
DC-07	PUC says "but-for" large-load network improvements should be allocated to that customer	Documented fact	Final Order, disposition on network improvements [33]	2026, PA	High	Previously approved upgrades may be treated differently	2026-0
DC-08	PPL LP-6 includes minimum 10-year commitment plus usage/ security/exit protections	Documented fact	PPL approved-rate materials/ current data-center page [59]	2026, PPL PA territory	High	Exact obligations depend tariff/ service agreement	2026-0
DC-09	PPL has proposed an additional transmission rider to allocate certain large-load transmission costs	Documented fact	PPL Sept. 14 CPTR filing announcement [9]	2026, PPL	High	Proposal is not approved	2026-0
DC-10	Workload-level data-center water use can vary >10,000-fold	Documented research finding	Lei et al., *Resources, Conservation & Recycling* [60]	2025, general	High, peer-reviewed	Workload metric, not any one facility	2026-0

ID	Exact claim	Evidence category	Source / document location	Date / geography	Confidence and reason	Caveat / conflict	Last verifie
DC-11	Data-center water footprint includes direct cooling and indirect electricity-related water	Documented research finding	Berkeley Lab environmental-footprint research [13]	U.S.	High	Indirect intensity varies by grid	2026-0
DC-12	Backup engines/ turbines can be subject to Clean Air Act requirements	Documented fact	EPA data-center air resources [15]	U.S.	High	Does not establish project-specific exposure	2026-0
DC-13	Data centers can generate substantial local tax revenue, but results vary dramatically	Documented fact / research inference	Virginia JLARC [16]	Virginia	High for Virginia; medium transferability	PA tax structure differs	2026-0
DC-14	Poor residential siting can create neighborhood conflicts	Documented comparative finding	Virginia JLARC [16]	Virginia	High for mechanism	Not proof of Atlas impact	2026-0
DC-15	Current Project Atlas plan is roughly 1.52M sq ft in 3 principal data-center structures	Documented fact	South Whitehall municipal project materials [18]	2026, South Whitehall	High	Plan can be revised	2026-0
DC-16	Atlas owner is Jeras Corp.; purchaser/ applicant is CDE Acquisitions LLC	Documented fact	South Whitehall project record [61]	2026	High	Corporate roles can change	2026-0

ID	Exact claim	Evidence category	Source / document location	Date / geography	Confidence and reason	Caveat / conflict	Last verifie
DC-17	Edged claims zero daily cooling water and <54 dB at property lines	Attributed claim	Project Atlas developer materials [39]	2026, Atlas	High that claim was made	Not independent operational measurement	2026-0
DC-18	Edged projects ~250 permanent jobs and ~$16.2M recurring local taxes	Estimate or projection	Project Atlas developer materials [39]	Future, Atlas	High that projection exists	Methodology not independently verified here	2026-0
DC-19	A reported 725 MW Atlas figure is not yet verified here from accessible original utility/ municipal evidence	Unknown or disputed	Secondary reporting versus accessible municipal record [62]	2026, Atlas	High confidence in “unverified” classification	An inaccessible utility/applicant document may establish it	2026-0
DC-20	Atlas PC special meeting was scheduled after this report's cutoff; no outcome is reported	Documented fact	South Whitehall calendar/ announcement [1]	Sept. 23, 2026	High	Must be updated after meeting	2026-0 4:47 PM
DC-21	South Whitehall Planning Commission is advisory to Board of Commissioners	Documented fact	Township Planning Commission page, lines 159–165 [26]	South Whitehall	High	Particular ordinances can assign specific authority, but township describes PC as advisory	2026-0

ID	Exact claim	Evidence category	Source / document location	Date / geography	Confidence and reason	Caveat / conflict	Last verifie
DC-22	PA Executive Order 2026-05 created new GRID-based data-center permit/process requirements	Documented fact	Governor/DCED sources [44]	Aug. 18, 2026, PA	High	Implementation/ legal details may evolve	2026-0
DC-23	Current research does not support a precise Atlas-specific property-value effect	Unknown or disputed	Competing GMU/Princeton analyses [17]	VA/TX evidence	Medium	Limited external validity	2026-0
DC-24	One resident reducing personal AI use is exceedingly unlikely to determine whether a specific local project proceeds	Research inference	Aggregate national demand and project-specific approval structure [63]	General/ Atlas	High as scale inference	Collective demand can affect long-run market demand	2026-0
DC-25	Earlier six-building/~5M-sq-ft Atlas descriptions are stale relative to current 3-building/ ~1.52M-sq-ft plan	Documented fact	Earlier reporting vs current municipal record [19]	South Whitehall	High	Future plan can change again	2026-0

“Claims you will hear” fact-check

Claim	Rating	Assessment
“Data centers currently use about 4.4% of U.S. electricity.”	**Supported with qualification**	4.4% is Berkeley Lab's estimate for **2023**, not a measured 2026 share. DC-01. [57]
“Data centers could use 12% or more soon.”	**Partly supported**	LBNL's 2028 upper case is 12%; EPRI's 2030 upper case is 17%. These are scenarios, not certainties. DC-02, DC-03. [64]
“AI is responsible for all data-center electricity growth.”	**Misleading**	AI is a major growth driver, but cloud and other digital services also contribute. [27]
“Every announced MW will be built.”	**Unsupported**	EPRI scenarios explicitly vary project completion; EIA has already reported regional pauses. DC-03, DC-05. [65]
“If the developer pays for its substation, residents can never pay any grid-related cost.”	**Misleading**	Project-specific upgrade protection is real, but transmission, generation and capacity are distinct. PPL is proposing additional transmission protection. DC-07 to DC-09. [66]
“A PJM capacity-price increase proves my household bill will rise by the same percentage.”	**Unsupported**	Wholesale capacity is only one retail cost component. [11]
“Closed loop means the facility uses no water.”	**Misleading**	It may mean very low or zero routine evaporative cooling water, not zero total facility or indirect water. DC-10, DC-11, DC-17. [67]
“All data centers consume enormous amounts of water.”	**Misleading**	Water intensity varies by orders of magnitude. DC-10. [60]
“Data-center noise is harmless if it is below occupational hearing limits.”	**Misleading**	Hearing-damage thresholds and community sleep/annoyance are different endpoints. [14]
“Backup generators prove a proposed facility will harm nearby health.”	**Unsupported**	Emissions require project-specific equipment, permit and exposure analysis. DC-12. [15]
“Data centers do not create meaningful economic value because they employ few people.”	**Misleading**	Permanent employment can be modest relative to capital, but tax revenue can be substantial. DC-13. [16]
“A data center automatically creates a local AI-tech ecosystem.”	**Unsupported**	No such automatic causal relationship is established by the evidence reviewed.

Claim	Rating	Assessment
“Homes near data centers always lose value.”	**Unsupported**	Current empirical evidence is mixed and limited. DC-23. [17]
“Project Atlas is definitely a 725 MW operating facility.”	**Unresolved**	725 MW has been reported, but this review did not verify its meaning from an accessible original source. DC-19. [68]
“The Planning Commission decides whether Atlas is finally approved.”	**Misleading**	South Whitehall says the PC is advisory to the Board of Commissioners. DC-21. [26]
“Approving a data-center building proves unsafe AI will occur there.”	**Unsupported**	Physical infrastructure and AI model safety are separate questions, especially when tenants/ workloads are undisclosed. [22]

Resident decision worksheet

Do **not** turn the following into a single numerical score. The tradeoffs contain value judgments that residents may reasonably weight differently.

Decision area	Evidence favoring approval	Evidence favoring caution, redesign or opposition	Material unknown
Land fit	Industrial zoning; substantial separation; effective screening; compatible neighbors	Homes/schools close to mechanical plant; large visual footprint; irreversible land conversion	Final setbacks, heights, views
Power	Firm utility studies; customer-funded “but-for” upgrades; collateral; curtailment capability	Unclear MW definitions; speculative phases; public exposure to broader costs	Actual contract capacity and energization schedule
Water	Low-WUE design; documented supply capacity; drought plan	Evaporative demand in constrained watershed; vague “closed-loop” language	Maximum-day demand and indirect footprint
Noise/air	Independent full-build modeling; enforceable nighttime limits; post-build testing	Reliance on averaged dB alone; large generator fleet without clear limits	Tonal/low-frequency results and generator permit
Fiscal	Independently validated taxable value; binding CBA; minimal subsidy; conservative projections	Heavy incentives; optimistic multipliers; no protection against assessment decline	Net fiscal benefit after appeals/ services

Decision area	Evidence favoring approval	Evidence favoring caution, redesign or opposition	Material unknown
Employment	Defined permanent jobs, local training and reporting obligations	Construction jobs presented as permanent; undefined “indirect jobs”	Actual local hires
Future risk	Decommissioning bond; successor clauses; enforceable site restoration	SPV applicant with limited balance sheet; no restoration security	Tenant/parent guarantee

Five legally plausible decision paths

Approval as proposed is strongest when the evidence is complete and current standards are satisfied without material unmitigated harms.

Approval with enforceable conditions is stronger when the use is legally allowable but specific uncertainties can be reduced through valid conditions, agreements, permits, monitoring and financial guarantees.

Redesign, reduction or relocation is rational when the economic use may be acceptable but scale, setbacks, generators, utility footprint, water design or phasing create avoidable burdens.

Delay for missing evidence, where legally available, is rational when decision-makers lack evidence necessary to apply governing standards. Statutory decision deadlines and applicant extensions matter.

Denial on legally supported grounds requires a basis in applicable law and the evidentiary record, not generalized opposition to AI or speculative harms. Pennsylvania's planning framework assigns different kinds of land-use decisions and appeals to different bodies. [46]

Public-meeting question sheet

Question	Who should answer	Meaningful answer	What an incomplete answer leaves unresolved
What is the maximum firm electric demand for each phase, and what does every MW figure represent?	Applicant + PPL	Executed/approved service documents defining contract capacity and phases	Whether public MW figures are real, duplicated or aspirational
How much power is actually committed versus requested or studied?	PPL/applicant	Queue/service status and contractual milestone evidence	Probability and timing of buildout

Question	Who should answer	Meaningful answer	What an incomplete answer leaves unresolved
Which upgrades are customer-funded, and which costs could still enter regional transmission, capacity or generation charges?	PPL/PUC expert	Tariff provisions and cost-allocation study	Remaining ratepayer exposure
What are the annual average and maximum-day water demands?	Engineer + water utility	Stamped water-demand schedule and utility capacity letter	Whether “zero cooling water” describes total demand
How much water is needed for initial fill, maintenance, sanitation and fire protection?	Mechanical/civil engineer	Design calculations	Non-cooling water footprint
What cooling technology operates during the hottest design day?	Mechanical engineer	Sequence-of-operations document	Whether water/energy performance changes seasonally
What is the modeled sound at the nearest home and school at full buildout?	Independent acoustic engineer	Receptor-specific octave-band model, nighttime/full-load scenario	Tonal, low-frequency and cumulative effects
How will noise compliance be verified after construction?	Township/applicant	Enforceable measurement protocol, correction deadline and penalty	Whether design promises can be enforced
How many backup generators, what fuel and MW, and how many testing hours are allowed?	Applicant/DEP	Equipment schedule and air-permit application	Actual air-emission potential
What tax valuation produced the school, township and county projections?	Applicant + taxing bodies	Assessor-reviewed valuation, millage, depreciation and appeal assumptions	Reliability of projected $ figures
Are construction jobs people, jobs, FTEs or job-years?	Applicant/economic consultant	Methodology and project duration	Whether employment claims are inflated by terminology
How many permanent jobs are contractually expected on site?	Applicant/operator	Staffing plan by occupation and phase	Difference between direct jobs and economic multipliers

Question	Who should answer	Meaningful answer	What an incomplete answer leaves unresolved
What obligations bind a future owner if the property or operating company is sold?	Township solicitor/ applicant counsel	Recorded covenant, development agreement, successor-and-assigns clause	Durability of current promises
What financial security covers abandonment or decommissioning?	Applicant/ township	Bond, letter of credit or parent guarantee with restoration scope	Who pays if operator leaves
Which approvals remain after municipal land-development approval?	Township + applicant	Written permit matrix covering local, DEP, PUC/PPL/PJM and other requirements	Risk of treating one approval as final project authorization

Publication and communications package

Proposed PRISM research section

The public site should separate analysis from advocacy and make the evidence trail visible.

Read the brief: The resident brief above, carrying the exact research cutoff and the five evidence labels.

Read the full report: A version of this report with expandable technical appendices for power, water, acoustics, fiscal methodology and regulatory structure.

Explore local projects: One page per project showing current status, municipality, application number, last verified date, next decision, primary documents and material unknowns.

Inspect the evidence: The claim register should be filterable by “documented fact,” “attributed claim,” “estimate or projection,” “research inference,” and “unknown or disputed.”

See unanswered questions: Maintain a live project-specific list so an unknown is not silently converted into a fact.

View updates and corrections: Every substantive change should include the previous wording, new wording, reason, source, editor and date.

Ten educational post drafts

Post: “A megawatt is not a megawatt-hour.”
A 100 MW announcement tells you a rate of power, not annual electricity use. Actual energy depends on how much of that capacity is used and for how long. That distinction matters when a proposed project's

public power figure has not been tied to an original utility document. **Claims: DC-01, DC-19. Time-sensitive:** Atlas power status.

Post: “The national data-center boom is real. The exact size is not settled.”
Berkeley Lab estimates data centers used about 4.4% of U.S. electricity in 2023 and projects 6.7% to 12% by 2028. EPRI now projects 9% to 17% by 2030, and its own forecast moved sharply upward in two years. The honest conclusion is growth plus uncertainty, not certainty about one number. **Claims: DC-01 to DC-04.** 64

Post: “Who pays for the wires?”
Pennsylvania's PUC says grid upgrades needed only because of a very large new customer should generally be assigned to that customer. PPL's LP-6 adds long-term commitments and security. But PPL is also proposing additional transmission-cost protections, which tells us the cost question has more than one layer. **Claims: DC-06 to DC-09. Time-sensitive:** PUC decision on CPTR. 66

Post: “Closed-loop cooling does not mean zero water footprint.”
A closed cooling loop can dramatically reduce routine onsite water use. It does not automatically answer initial fill, sanitation, fire protection or electricity-related water consumption. Ask for maximum-day demand and a water balance. **Claims: DC-10, DC-11, DC-17.** 69

Post: “Noise questions need more than one dB number.”
Ask where sound was modeled, whether all buildings operate simultaneously, whether the analysis includes nighttime conditions, low-frequency and tonal components, and how compliance will be measured after construction. A design prediction is useful, but it is not an operating measurement. **Claim: DC-17.**

Post: “Jobs: permanent, construction, or job-years?”
A statement that a project creates thousands of jobs can refer to construction positions accumulated across several years. That can still be economically valuable, but it is different from thousands of permanent employees. Ask for the methodology. **Claim: DC-18.**

Post: “Tax revenue can be real without every projection being guaranteed.”
Virginia's state audit found data centers can become major local revenue sources. Project-specific projections still depend on assessment, tax rates, depreciation, incentives and appeals. A serious fiscal analysis should show all of them. **Claims: DC-13, DC-18.** 16

Post: “Project Atlas changed. Make sure the numbers you are using changed too.”
Earlier public descriptions involved roughly six buildings and five million square feet. The current South Whitehall materials describe three principal data-center buildings and about 1.52 million square feet. Date-stamp every project fact. **Claims: DC-15, DC-25. Time-sensitive.** 70

Post: “The Planning Commission is not the whole approval process.”
In South Whitehall, the Planning Commission is advisory to the Board of Commissioners. Utility, environmental and other approvals are separate again. One meeting can be important without being the final decision. **Claim: DC-21. Time-sensitive:** Project Atlas proceedings. 26

Post: “Your personal AI use and a local data center are different scales.”
Choosing to use less AI may reflect your personal values, but a single household's behavior is not a

meaningful lever over a specific large land-development application. Local influence is more direct through evidence, land-use proceedings, utility regulation and enforceable conditions. **Claim: DC-24.**

Five short video scripts

Video: “The number I would not repeat yet”
“People discussing Project Atlas may hear a number around 725 megawatts. Here is the problem: during this research review, I could find secondary sources repeating that number, but I could not verify an accessible South Whitehall, PPL, PJM or applicant document that clearly tells us what it means. Is it requested capacity? Maximum campus buildout? Contracted demand? IT load? Something else? Those are not interchangeable. The current municipal plan does establish roughly 1.52 million square feet and three principal data-center buildings. So the responsible position is not to ignore 725 MW. It is to label it unverified until the original document defines it. Good public decisions start by knowing which numbers are facts and which ones still need evidence.” **Claims: DC-15, DC-19. Time-sensitive.**

Video: “Will data centers raise our electric bills?”
“The honest answer is: some costs can be isolated, others require more analysis. Pennsylvania regulators say large customers should pay for grid upgrades that would not exist but for their project. PPL has also created a large-load tariff with long-term commitments, minimum usage and financial protections. That is meaningful. But PPL just proposed another mechanism for certain transmission costs, which shows the system-wide question is not completely solved. And a change in a PJM wholesale auction is not automatically the same percentage change on your household bill. Ask which cost category someone is talking about before accepting the claim.” **Claims: DC-06 to DC-09. Time-sensitive.**

Video: “Does closed-loop cooling use zero water?”
“Closed-loop is generally good news for onsite water efficiency, but the phrase can be misunderstood. A closed loop recirculates cooling fluid. A facility can still need water for initial fill, maintenance, bathrooms, fire protection or other uses. And electricity itself can have an indirect water footprint. Project Atlas's developer says it will use zero water for daily cooling. That is a specific claim worth verifying. It is not the same sentence as ‘the entire facility uses zero water.’ Ask for annual demand, maximum-day demand and the engineering water balance.” **Claims: DC-10, DC-11, DC-17.**

Video: “Can a data center really help a school district?”
“Yes, potentially. Data centers are capital-intensive properties, and Virginia's state audit found that they became major sources of local revenue in some established markets. Project Atlas's developer projects about $11.5 million a year for Parkland School District. But a projection is not a check already deposited. Residents should ask what assessed value was assumed, how depreciation or assessment appeals were treated, whether incentives apply and whether the number represents gross or net fiscal benefit. The right response is neither ‘the taxes are fake’ nor ‘the taxes are guaranteed.’ It is: show us the model.” **Claims: DC-13, DC-18.**

Video: “Tonight's meeting is important, but know what it does”
“As of this report's 4:47 p.m. cutoff on September 23, South Whitehall's special Project Atlas Planning Commission meeting was scheduled for 6 p.m. The Planning Commission matters, but the township itself says it is advisory to the Board of Commissioners. So do not confuse a recommendation with final disposition. And local land-use action is only one layer. Utility and environmental approvals involve different

institutions. The best public comment focuses on evidence the decision-maker can actually use." **Claims: DC-20, DC-21. Time-sensitive immediately after September 23.**

Three carousel outlines

Carousel: "Seven numbers every data-center proposal should define"
Slides: MW requested; MW contracted; MW energized; expected annual MWh; PUE; maximum-day water; permanent direct jobs. Final slide: "A number without a definition is not transparency." **Claims: DC-01 to DC-10, DC-19.**

Carousel: "Fact, claim, projection, inference or unknown?"
Slide examples: 1.52M sq ft Atlas plan = documented fact. 250 permanent Atlas jobs = projection. Zero daily cooling water = developer claim. 725 MW = unresolved in this review. One person's AI use stopping Atlas = unsupported scale inference. **Claims: DC-15 to DC-19, DC-24.**

Carousel: "Who actually decides?"
Slides: municipal staff; Planning Commission; Board of Commissioners; PPL/PUC; PJM/FERC; DEP; courts/appeals. Final slide: "Ask the right question of the body that has authority to answer it." **Claims: DC-06, DC-21, DC-22.**

Ten resident FAQs

Is every data center an AI data center? No. Without a disclosed tenant or workload, do not infer AI solely from size or electric demand. **DC-24 context.**

Are national electricity-use numbers measured facts? Some underlying data are measured, but the commonly cited national data-center totals are modeled estimates. Berkeley Lab estimates 176 TWh for 2023. **DC-01.**

Can a developer really be required to pay for grid upgrades? Yes. Pennsylvania's PUC has adopted a strong cost-causation principle, and PPL has specific large-load protections. **DC-06 through DC-08.**

Does that guarantee household bills will never be affected? No. Dedicated upgrades are only one category of electric-system cost. **DC-09.**

Does closed-loop cooling mean no water? Not necessarily. It can mean very low routine cooling consumption while other onsite and indirect water use remains. **DC-10, DC-11, DC-17.**

Will Project Atlas definitely use 725 MW? Not established by the accessible original evidence reviewed here. **DC-19.**

How many permanent jobs will Project Atlas create? The developer projects about 250. That remains a projection until realized and should not be confused with construction jobs. **DC-18.**

Will Atlas lower nearby home values? No reliable project-specific percentage can currently be stated. Research elsewhere is mixed. **DC-23.**

Who makes the final South Whitehall decision? The township describes the Planning Commission as advisory to the Board of Commissioners. **DC-21.**

Would stopping my personal AI use stop a local data center? A single person's consumption is extremely unlikely to determine a project of this scale. Aggregate market demand matters over time, but local land-use decisions are influenced much more directly through the municipal and regulatory processes. **DC-24.**

Five chart concepts with underlying data

Chart	Data	Claim IDs	Source
U.S. data-center electricity: history and forecast range	2014: 58 TWh; 2023: 176 TWh; 2028: 325–580 TWh	DC-01, DC-02	Berkeley Lab [57]
How forecasts move	EPRI 2026 says its 2030 projected range is ~60% above its 2024 forecast; 2030 = ~380–790 TWh	DC-03, DC-04	EPRI [6]
National electricity sales near term	2026: 4,135 BkWh; 2027: 4,211 BkWh	DC-05	EIA Sept. 2026 STEO [71]
Project Atlas: old public description vs current plan	Earlier: ~6 buildings/~5M sq ft; current: 3 principal buildings/~1.52M sq ft	DC-15, DC-25	South Whitehall + earlier reporting [70]
What "who pays?" actually contains	Dedicated distribution; network transmission; generation/supply; capacity; customer-specific security	DC-06 to DC-09	PA PUC/PPL [66]

Maintenance plan

Frequency / trigger	What to check	Why
Weekly while Atlas is active	South Whitehall agendas, project page, resubmissions, staff/engineer reviews, Board agenda, meeting recordings	Scope and status can change quickly
Weekly across the region	Upper Macungie, Lower/Upper Mount Bethel, Allentown planning and zoning calendars	New or revised applications
Monthly	PPL tariff filings; PUC docket developments; PJM load forecast/interconnection announcements; DEP data-center map; GRID guidance	Utility and state protections are evolving
Monthly	Developer pages	Capture changed promises, jobs, taxes, water, noise and project scope

Frequency / trigger	What to check	Why
Quarterly	EIA short-term outlook, PPL supply rates, PJM market developments	Keep electricity context current
Annually or on release	EIA AEO, EPRI, LBNL/DOE, peer-reviewed water/ noise/economic research	Forecast and evidence base
After a municipal meeting	Minutes, recording, exact motion, vote and whether action was recommendation or final disposition	Prevent status errors
After a revised plan	Acreage, square footage, buildings, generators, utilities, stormwater, traffic, acoustics	Prevent mixing project generations
After PUC/FERC/ PJM decision	Effective date, who is covered, cost allocation, grandfathering	Avoid describing proposals as enacted rules
After sale/ operator change	Assignment clauses, recorded conditions, permits and guarantees	Determine whether promises survive the transfer

A public correction log should never silently overwrite a significant factual change. The old statement, new statement, source and date should remain visible.

Limitations, bibliography, and final conclusions

Research gaps and uncertainties

The largest limitation is the inability to retrieve PRISM's Safety Hub pages, meaning the requested line-by-line site audit could not responsibly be completed. The current report should be used as the evidence baseline against which those pages are manually checked, not as proof of what they presently contain.

The second major limitation is local primary-document access. South Whitehall's website exposed the current Project Atlas document index and several highly useful facts, but the September 2 Planning Commission memo packet returned a **403 Forbidden** when the research browser attempted to retrieve the PDF. Because a PDF must be visually reviewed rather than inferred from search snippets, detailed claims allegedly contained in that packet were not treated as verified. [72]

The third limitation is the absence of an original, accessible Project Atlas utility document establishing the widely repeated 725 MW number. That missing record is among the highest-priority follow-ups.

The fourth is fiscal verification. Developer tax and employment projections were available, but this review did not retrieve an independent Parkland School District fiscal analysis, Lehigh County assessor model, binding payment agreement or final community-benefits agreement validating the projected collections.

The fifth is environmental specificity. General research explains mechanisms for water, noise and air emissions, but general evidence cannot substitute for the final Project Atlas water balance, generator permit, acoustic model and full-build equipment schedule.

The sixth is comparable-community depth. Virginia provides unusually strong statewide evidence, but this edition does not contain 6 to 10 fully reconstructed multi-year project-level case histories with original "promise versus outcome" records. Producing such a table without those records would create a false appearance of precision.

Prioritized records still needed

The highest-value next evidence is:

1. **Project Atlas electric-service evidence:** PPL application, service agreement or authoritative utility letter specifying maximum requested, approved and committed demand by phase; energization milestones; transmission needs; collateral and minimum-load terms.

2. **Current Project Atlas municipal review packet:** September 2026 staff, engineer, traffic, environmental, fire, landscape, stormwater and acoustic review documents, including all unresolved comments.

3. **September 23 meeting record:** video, minutes, motions, vote and exact Planning Commission recommendation after it becomes available.

4. **Project Atlas water documentation:** utility will-serve letter, annual and maximum-day demands, initial fill and maintenance assumptions, fire flow and any drought plan.

5. **Air documentation:** generator count, engine/turbine specifications, fuel, testing schedule, emergency-operation limits and DEP permitting status.

6. **Independent fiscal analysis:** taxable value by phase, property and equipment treatment, appeals/depreciation assumptions, incentives, school/township/county receipts, service costs and sensitivity cases.

7. **Acoustic study:** full-build receptor map, equipment inventory, frequency-band results, nighttime background assumptions and compliance protocol.

8. **Recorded obligations:** park dedication, traffic improvements, community-benefit terms, successor clauses, decommissioning and financial security.

9. **Primary project files for Upper Macungie, Lower Mount Bethel, Upper Mount Bethel and Allentown:** current applications, decisions and utility evidence.

10. **Expert review:** independent utility-rate counsel or power-system engineer, acoustic engineer, water-resource engineer, municipal-fiscal analyst and Pennsylvania land-use attorney for questions falling outside ordinary public-document interpretation.

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Recommendations

For PRISM: publish evidence status as prominently as the headline statistic. Every local project page should display an application/version date, last-verified date, current stage, next decision, original-source links, and a visible list of unknowns. Developer claims should be labeled as developer claims even when they appear reasonable.

For South Whitehall residents: focus first on the specific evidence that can change the project assessment: electric service commitments, acoustic results, generator permits, fiscal assumptions, enforceability, water balance and decommissioning. General arguments about whether AI is good or bad are much less useful to a land-development record.

For public officials: require that important promises survive changes in operator and ownership. A promise is materially stronger when it is incorporated into a permit condition, recorded land-development agreement, deed restriction/easement where appropriate, tariff obligation, bond, letter of credit or agreement expressly binding successors and assigns. The exact legal instrument requires municipal counsel.

For supporters of a project: the strongest case is not “trust the developer.” It is to make the claimed benefits verifiable and contractually durable.

For opponents: the strongest case is not a worst-case scenario borrowed from another state. It is project-specific evidence showing that an applicable standard is not satisfied, a material risk has not been mitigated, or an asserted benefit is unsupported.

For everyone: insist on symmetry. A developer's projected tax benefit deserves the same scrutiny as an opponent's projected health harm. A utility's customer-protection tariff deserves credit where it genuinely protects residents, without pretending it answers every regional-cost question.

What could change the assessment

The case for Project Atlas would become stronger if original utility evidence showed firm, financially secured demand with comprehensive cost allocation; an independent acoustic review showed acceptable full-build nighttime performance at sensitive receptors; the water authority documented ample capacity with very low maximum-day use; DEP records showed manageable generator emissions; an independent fiscal model confirmed tax projections under conservative assumptions; and legally durable agreements protected the community through sale, vacancy or abandonment.

The case would become weaker if the true electric load were substantially larger or more speculative than currently demonstrated; system upgrades exposed other customers to material unrecovered costs; full-build sound exceeded enforceable standards; generator emissions or operating hours were materially greater than represented; water requirements proved significant under drought conditions; tax projections depended on aggressive valuation assumptions; or important commitments disappeared on sale or operator change.

The **strongest counterargument to caution** is that delaying or burdening a project can cost a community significant tax revenue, construction activity and economic investment, especially where modern tariffs and engineering controls can mitigate many externalities. Virginia's experience shows that the fiscal benefit can be real. [16]

The **strongest counterargument to rapid approval** is that land-use decisions can be difficult to reverse once an enormous industrial campus and associated electrical infrastructure are built, while several of the project's most consequential variables can still be uncertain during preliminary review. Virginia's experience likewise shows that poor residential siting can create durable conflicts. [16]

Both arguments are legitimate. The answer depends on the evidence for the particular site.

What residents can reasonably conclude now

Data-center electricity demand is already significant nationally and is growing. The exact future amount remains uncertain, with reputable forecasts spanning wide ranges and changing quickly. [64]

Pennsylvania has materially strengthened large-load protections through the PUC, PPL tariffs and the state's 2026 GRID policy, so it would be wrong to discuss data-center power costs as though no consumer safeguards exist. [73] It would be equally wrong to say those mechanisms have conclusively eliminated every possible transmission, generation, capacity or stranded-cost effect, particularly while PPL is proposing additional transmission protections. [9]

Data-center water use varies enormously by cooling design and electric supply. Neither “all data centers consume vast water” nor “closed-loop means zero water” is an adequate project analysis. [69]

Data centers can produce substantial tax benefits, while their permanent direct employment is not necessarily commensurate with their capital scale. Local fiscal results depend on the tax regime and enforceable project details. [16]

Residential compatibility is a legitimate planning issue. Other jurisdictions have documented problems when industrial-scale facilities were located too close to residential uses without sufficient planning or mitigation. [16]

Project Atlas's **current** municipal scope is approximately 1.52 million square feet in three principal data-center structures, not the older roughly five-million-square-foot, six-building concept. [70]

Project Atlas's jobs, tax, daily cooling-water and sound figures are currently best described as developer projections or claims, not operating results. [39]

What residents cannot yet conclude

Residents cannot yet conclude from the accessible evidence that Project Atlas will actually operate at 725 MW, because the underlying primary document defining that figure was not verified in this review.

They cannot conclude that “zero daily cooling water” means zero total onsite or lifecycle water demand.

They cannot conclude that the developer's projected tax collections will equal eventual net fiscal benefits.

They cannot conclude that nearby property values will rise, remain unchanged or fall by a particular percentage.

They cannot conclude from general environmental-noise or air-pollution research that a specific unbuilt facility will cause a particular illness.

They cannot conclude that developer-funded local electrical upgrades eliminate every potential regional electricity-cost effect.

They cannot conclude that approval of the buildings proves frontier or unsafe AI will be trained there.

They cannot conclude that the South Whitehall Planning Commission had approved, rejected or recommended Project Atlas at this report's **4:47 p.m. September 23, 2026 cutoff**, because the special meeting was scheduled to begin later, at 6:00 p.m. [74]

What evidence should be obtained next

The single most consequential missing document is an original utility record defining Project Atlas's requested, studied, contracted and phased electric load.

Immediately after that come the September 23 Planning Commission record; the current township engineering review packet; the full-build acoustic analysis; the water-demand and utility-capacity documentation; DEP generator and air-permit records; an independently reviewable fiscal model; and legally enforceable documents covering community benefits, successors, decommissioning and financial security.

Those records would move the public discussion away from slogans and toward the question that ultimately matters:

Given this particular site, this particular design, these particular contracts and these enforceable protections, are the expected benefits worth the remaining risks and uncertainties?

That is a judgment residents can reasonably disagree about. The purpose of the evidence is not to tell them what to think. It is to make sure the reasons for their judgment are real.

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