CLOUDS ON THE RANGE

REAL QUESTIONS
CLEAR INFORMATION
STRONGER RURAL
COMMUNITIES

BEFORE THE DATA CENTER ARRIVES

SAME LAND. NEW QUESTIONS.

A field guide for the people already here.

Know what's being proposed. Know what has to be built around it. Ask where the numbers come from.



LAND • WATER • POWER • COSTS • COMMUNITY

2 WHY THIS GUIDE?

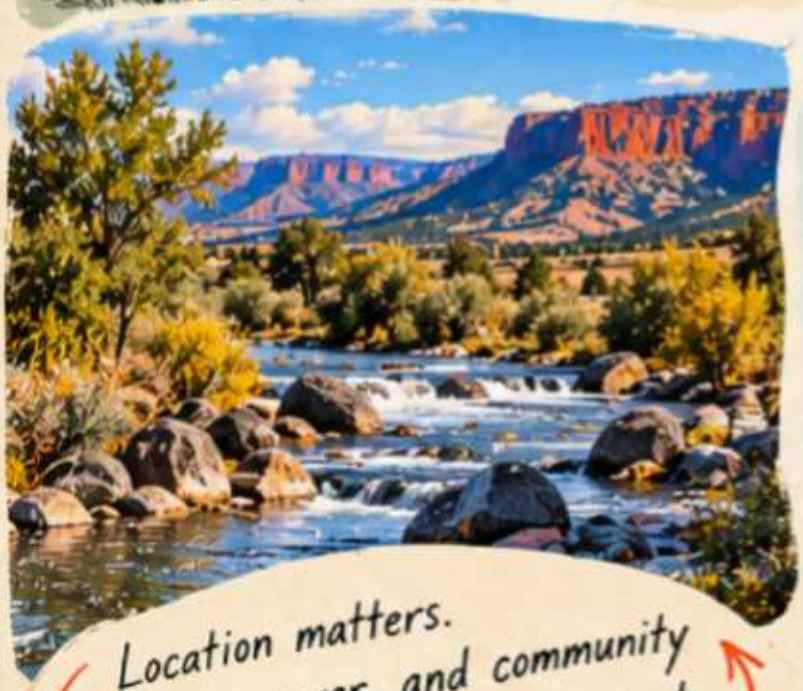


Data centers are coming to rural communities across the West. They can bring jobs and investment, but they also use large amounts of water, power, and land. This guide helps you ask the right questions early, understand what's being proposed, and find reliable information so your community can make informed decisions.



COMMON TERMS

Hyperscale → very large data center (often 100+ acres)
Colocation → shared data center space
Load → amount of electricity used (measured in megawatts)
Cooling → systems that remove heat (often use water)
Interconnection → connection to the electrical grid
Enterprise zone → state program with potential tax incentives



Location matters. Water, power, and community context all shape the impact.

WHAT YOU'LL FIND HERE

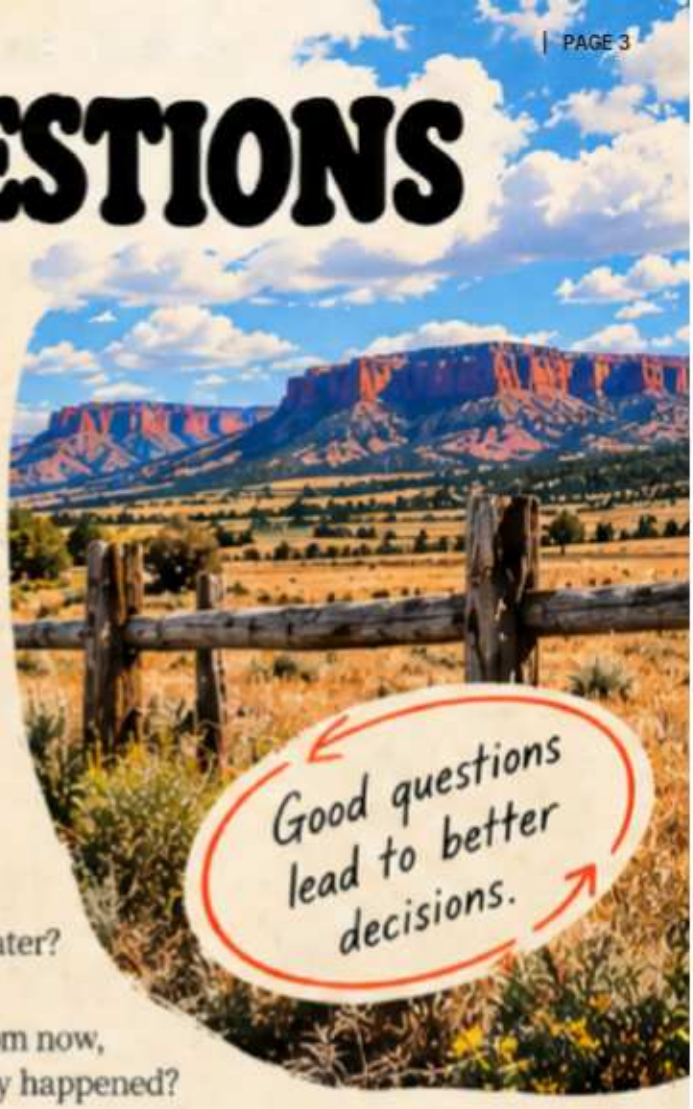
1. Plain-language explanations
2. Key questions to ask
3. Checklists for documents and information
4. Tools to track and compare proposals
5. Real examples from Oregon where available
6. A field sheet and records request guide

For ranchers. Neighbors. Tribes. Small towns. And anyone who cares about what comes next.

3 KEY QUESTIONS

Every proposal is different, but the same core questions apply. Start here:

1. How big is this eventually supposed to get?
2. What has to be built outside the property to make it work?
3. Where does the water come from, and where does it go afterward?
4. Who pays for the infrastructure now, and could somebody else be paying for it later?
5. How will we be able to check, five years from now, whether what we're being told today actually happened?



ASK FOR THIS

- [ ] Project description and site plan
- [ ] Total buildout (phases, timeline)
- [ ] Site size and property boundaries
- [ ] Proposed land use and zoning changes
- [ ] Estimated power demand (average and peak)
- [ ] Estimated water demand (average, peak, full buildout)
- [ ] Wastewater plan (on site, municipal, or other)
- [ ] Required permits and approvals
- [ ] Infrastructure upgrades (roads, power, water, etc.)
- [ ] Who pays, who owns, and who maintains each upgrade
- [ ] Any tax incentives or enterprise zone agreements

FROM OREGON

In Boardman, federal records show electrical infrastructure expanding alongside large industrial and data-center loads. But figuring out who ultimately paid for individual projects turned out to require more than finding the project's price tag. Some infrastructure can be directly assigned to a customer, some becomes part of the larger transmission system, and customer payments can involve later credits or reimbursements.

The lesson: when someone tells you who paid, ask whether they mean who paid first or who ultimately bore the cost.



4 THE BIG PICTURE

A data center is more than a building. It connects to land, water, power, transportation, and local services. Understanding how these pieces fit together helps you see the full impact and ask better questions.

LAND
Site size, zoning, agricultural land, habitat

WATER
Source, use, wastewater, thermal impacts

POWER
Grid capacity, new infrastructure, reliability

COSTS
Public incentives, tax revenue, rate impacts, infrastructure upgrades

COMMUNITY
Housing, roads, emergency services, local economy



5 FOLLOW THE WATER

Water use is often one of the biggest unknowns. Total annual use may not sound large, but peak demand can still strain a system, especially in rural areas. It also matters how the water is used and whether it will be returned to the environment as wastewater, reused on site, or discharged elsewhere.

✳ WRITE THIS DOWN

Don't record just "water use." Get three numbers if they're available:

Average daily demand: _____

Peak daily demand: _____

Full-buildout demand: _____

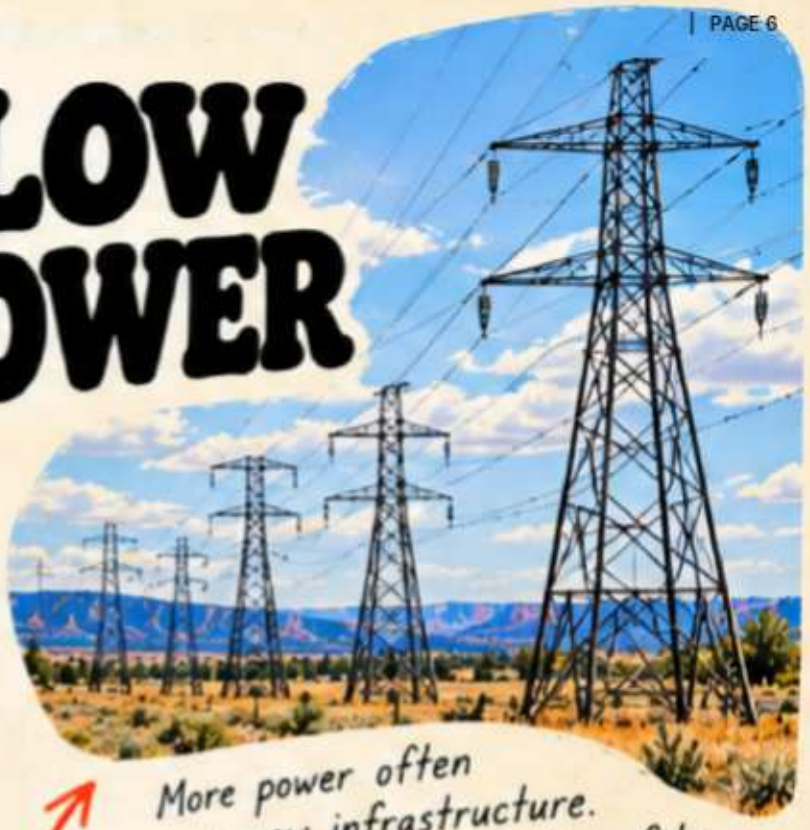
If those numbers aren't available, write down who you asked and what they told you.

✳ ASK FOR THIS

- ☐ Source(s) of water (well, municipal, surface)
- ☐ Estimated average and peak water demand
- ☐ Seasonal variation in use
- ☐ How the water will be used (cooling, other)
- ☐ Where wastewater will go
- ☐ Permits and monitoring requirements
- ☐ Independent verification of use

Every data center needs water. It may come from a municipal system, a private well, a surface water source, or a combination. It also has to go somewhere.

6 FOLLOW THE POWER



Data centers require large, reliable amounts of electricity. This can lead to new transmission lines, substations, and upgrades to the local grid. The impacts can extend beyond the site and may affect rates, reliability, and the need for additional generation.

More power often means new infrastructure. Ask who pays and who benefits.



ASK FOR THIS

- ☐ Estimated electrical load (in MW)
- ☐ Source of power (utility, new generation)
- ☐ Grid upgrade requirements
- ☐ Who pays for the upgrades
- ☐ Timelines for construction
- ☐ Impact on local electricity rates
- ☐ Backup generation (e.g., diesel, natural gas)
- ☐ Air permits for on-site generators

Location matters. New transmission lines and substations can affect farmland, wildlife, and rural communities.

WRITE THIS DOWN

Estimated electrical load: _____ MW
Peak electrical load: _____ MW
Expected start date: _____
Full buildout date: _____
Known grid upgrades: _____
Who is paying? _____

If the information isn't available, write down who you asked and what they told you.

7 LAND & LOCATION

Where a data center is built matters. Consider zoning, agricultural land, wildlife habitat, cultural resources, proximity to homes, schools, and other uses. Location can affect both the project and the surrounding community.



ASK FOR THIS

- [ ] Site size and property boundaries
- [ ] Current and proposed zoning
- [ ] Use of agricultural or grazing land
- [ ] Proximity to homes, schools, and sensitive areas
- [ ] Wildlife and cultural resource studies
- [ ] Access roads and traffic impacts
- [ ] Decommissioning plans

WRITE THIS DOWN

Site size: _____ acres

Current zoning: _____

Proposed zoning: _____

Distance to nearest home: _____

Distance to nearest school: _____

Distance to sensitive areas (e.g., wetlands, habitat): _____

Access roads: _____

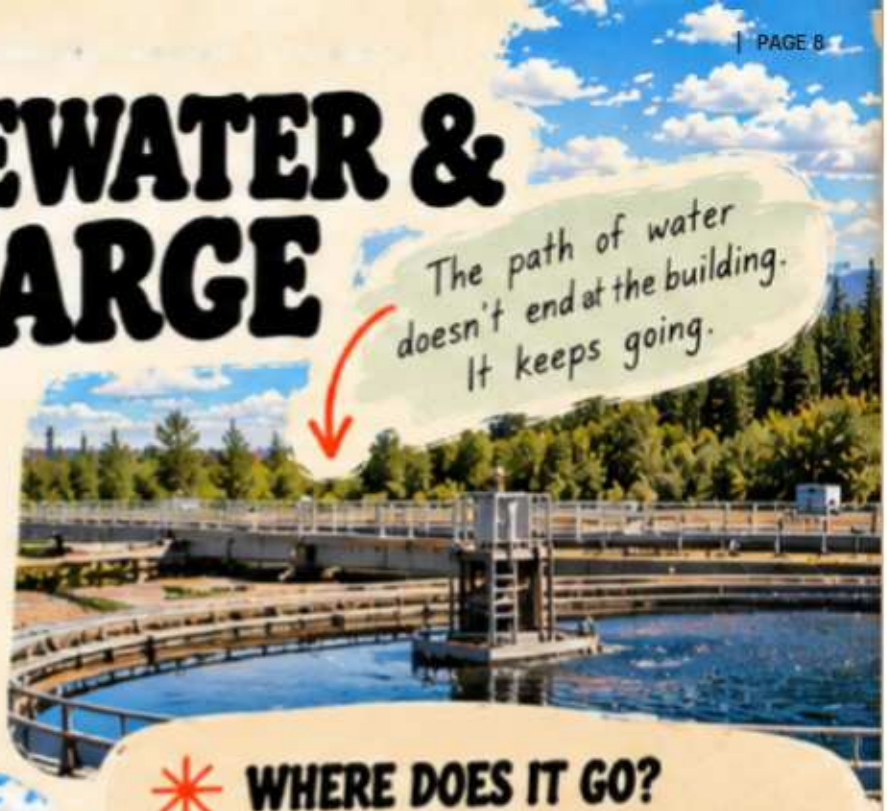
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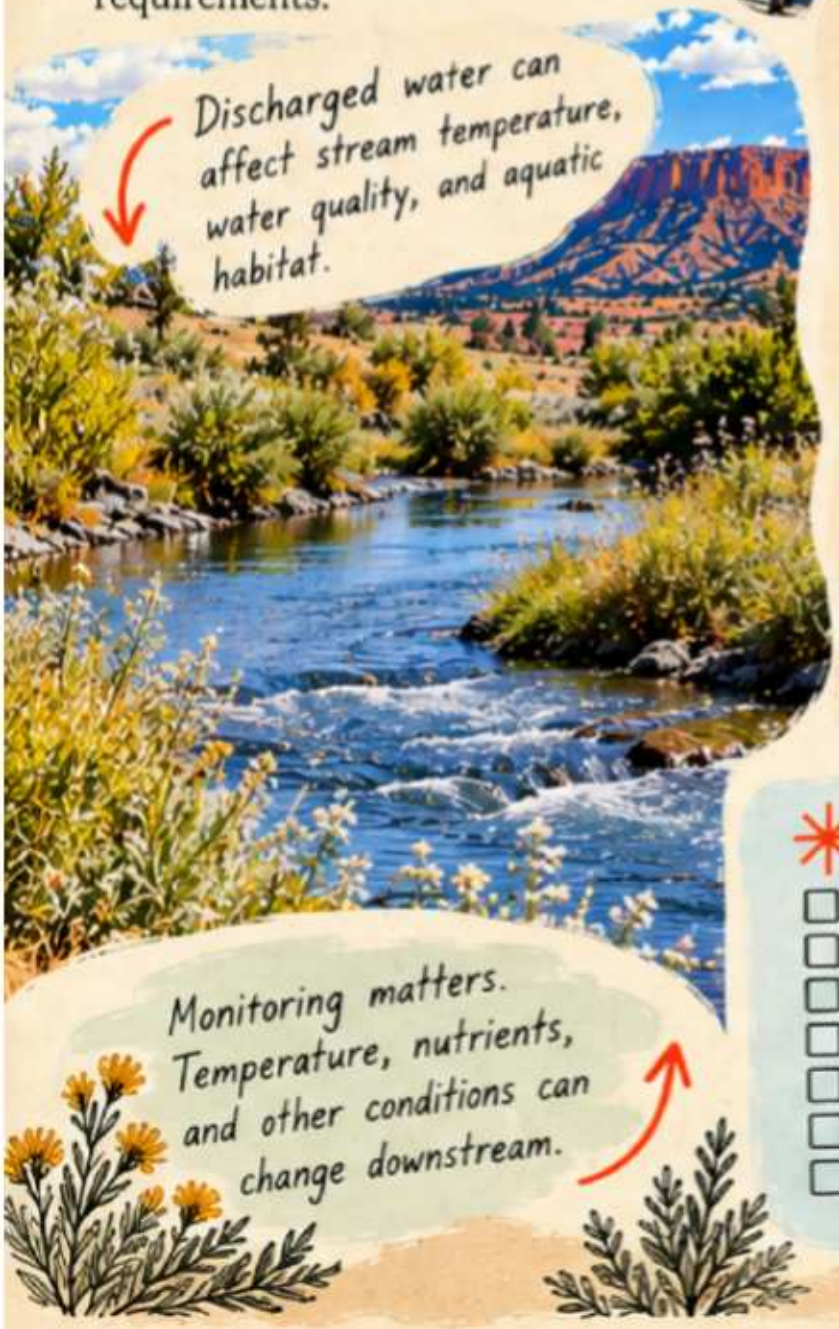
THINGS TO REVIEW

- Land use and zoning maps
- Comprehensive plans
- Agricultural and grazing land protections
- Critical habitat and cultural resources
- Traffic studies and road improvements
- Site restoration and decommissioning terms

8 WASTEWATER & DISCHARGE



After water is used for cooling, it must go somewhere. Data centers may discharge to a municipal wastewater system, reuse it on site, or release it to a surface water body. Each option has different rules, potential impacts, and monitoring requirements.



WHERE DOES IT GO?

To a municipal system
Treated at a local wastewater plant and then discharged to a river or stream.

Reuse on site
May be used for landscaping, dust control, or other non-potable uses.

Surface water discharge
Released to a river, stream, or other water body, with permits and monitoring.

Agricultural reuse
In some cases, treated water may be applied to land, which requires permits and monitoring to protect soil and water quality.

ASK FOR THIS

- [ ] Wastewater disposal method for each facility
- [ ] Permit numbers and conditions (NPDES, DEQ)
- [ ] Monitoring data (temperature, nutrients, flow)
- [ ] Where the discharge goes (river, stream, or reuse)
- [ ] Infrastructure upgrades at treatment plants
- [ ] Plans for future expansion
- [ ] Independent review of potential impacts

9 COSTS & PUBLIC INCENTIVES

Data centers can bring investment and tax revenue, but they also require public investments. Costs may include new power infrastructure, water systems, road upgrades, and emergency services. Some costs are paid by the developer, some by utility customers, local ratepayers, or taxpayers.



Some infrastructure is paid up front by the developer. Other costs can be spread across utility customers or taxpayers over time.

COMMON PUBLIC COSTS

Power infrastructure
New transmission lines, substations, and grid upgrades

Water infrastructure
Drinking water supply, treatment capacity, and wastewater systems

Transportation
Road improvements and heavier use

Emergency services
Fire, police, and medical response capacity

Other public investments
Permits, staff time, environmental reviews, and long-term monitoring

ASK FOR THIS

- [ ] Who pays for each infrastructure upgrade
- [ ] Agreements with the utility (e.g., BPA, PGE, UEC)
- [ ] Cost estimates and timelines
- [ ] Any rate impacts to utility customers
- [ ] Tax incentives, exemptions, or enterprise zone benefits
- [ ] Reimbursement agreements
- [ ] Long-term maintenance responsibilities
- [ ] Independent financial analysis of public costs

FROM OREGON: BOARDMAN

The Boardman area has been home to data centers for more than a decade. Public records show grid infrastructure expanded alongside large industrial loads. Enterprise zone benefits and other incentives have also been part of the discussion.

What to look for:

- Who paid for specific transmission and substation upgrades
- How costs were allocated (developer, ratepayers, or taxpayers)
- What incentives were provided
- Long-term obligations and maintenance
- How the benefits and costs compare for the local community



Public incentives are often just part of the larger picture. It's important to understand who benefits and who ultimately pays.

10 PEOPLE, FARMS & RURAL COMMUNITIES

A data center doesn't just affect the site. It can influence nearby farms, ranches, homes, schools, small businesses, and the overall quality of life. Some impacts show up quickly. Others take years to understand.



Ranches, farms, and small towns are part of the picture too. Their needs and concerns should be included early.

POTENTIAL IMPACTS

Water availability
Competition for water, changes in local supply, and potential effects on wells and irrigation.

Agriculture and livestock
Effects on crops, grazing land, and animal health.

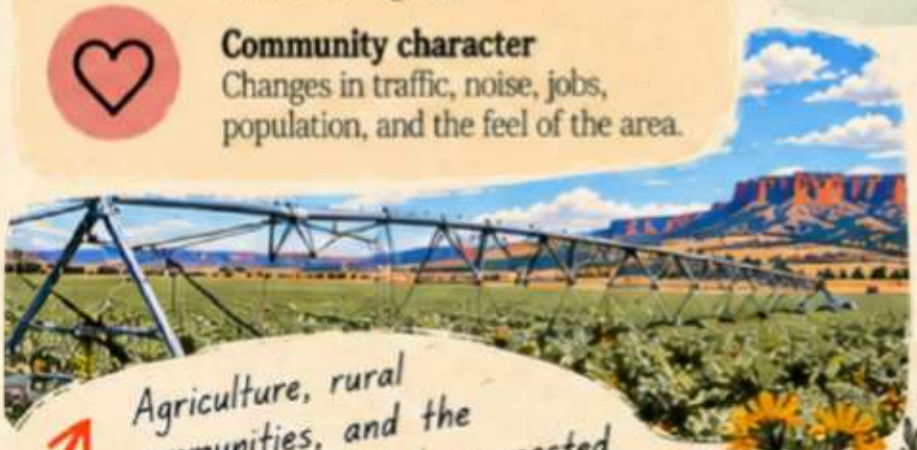
Housing and cost of living
Increased demand for housing and higher prices.

Schools and public services
More students, more demand for services, and potential strain on local budgets.

Community character
Changes in traffic, noise, jobs, population, and the feel of the area.

ASK FOR THIS

- [ ] Agricultural impact studies
- [ ] Rancher and farmer outreach records
- [ ] Well data and groundwater level reports
- [ ] Local economic impact analyses
- [ ] Housing and population projections
- [ ] School district planning documents
- [ ] Emergency services capacity assessments
- [ ] Traffic and road use studies
- [ ] Noise, light, and air quality monitoring
- [ ] Community benefit agreements (if any)
- [ ] Public comments and meeting records



Agriculture, rural communities, and the environment are interconnected. Changes in one area can ripple through many others.

REAL VOICES

"We just want to make sure the impacts are something we can all live with for a very long time."

MARY KILLION • MORROW COUNTY PLANNING COMMISSION
HEPPNER GAZETTE-TIMES • OCT. 9, 2024

11 TRACKING, TRANSPARENCY & LONG-TERM OVERSIGHT

Transparency helps communities make informed decisions — now and in the future.

The effects of a data center can change over time. That's why ongoing monitoring, public reporting, and clear accountability are essential. Good records help communities understand what's actually happening and whether promises are being kept.





Ongoing monitoring and public reporting help hold projects accountable.

ASK FOR THIS

- ☐ Monitoring reports (water, air, power, noise)
- ☐ Permit compliance records
- ☐ Enforcement actions and violations
- ☐ Community benefit agreement updates
- ☐ Independent audits or reviews
- ☐ Operational changes and expansion proposals
- ☐ Public meeting records and outreach
- ☐ Long-term environmental monitoring plans
- ☐ Data in usable formats (not just PDFs)

THINGS TO WATCH OVER TIME

- Are water use, power use, and emissions within the permitted limits?
- Are promised community benefits delivered?
- Are monitoring reports publicly available and easy to understand?
- Are there new proposals, expansions, or changes to operations?
- How are concerns from residents, farmers, and tribes being addressed?

QUESTIONS TO KEEP ASKING

1. Are they following the rules?
2. Is the information public and easy to find?
3. Have the predicted impacts matched what actually happened?
4. Who is responsible if there are problems?
5. What happens when equipment is outdated or the facility closes?

12 READ THE PART EVERYBODY SKIPS

Contracts, agreements and approvals can look solid on the front end, but projects change. Before you support or sign anything, read the sections that explain what happens if the project is delayed, expanded or doesn't meet expectations. These details can significantly affect your community for years to come.





KEY SECTIONS TO REVIEW

- ☐ Term length and renewal options
- ☐ Expansion rights
- ☐ Water and power commitments
- ☐ Performance requirements
- ☐ Penalties for non-compliance
- ☐ Liability and remediation
- ☐ Community benefit commitments
- ☐ Disclosure of future major equipment changes
- ☐ Decommissioning and site restoration plans

WATCH FOR RED FLAGS

- Vague or broad language
- Unlimited or automatic expansion rights
- Little detail on water or power use
- Weak penalties for non-compliance
- Unclear responsibility if the company leaves
- Community benefits without timelines
- Confidentiality clauses that limit public access

QUESTIONS TO ASK

1. What happens if the project is delayed or not built as promised?
2. Can the facility expand without a new review?
3. Who pays if there are environmental problems?
4. Are community benefits guaranteed and enforceable?
5. What happens when the facility is no longer needed?

13 ASK WHAT YOU'LL STILL BE ALLOWED TO KNOW LATER

Information can be easy to get before a project is approved, but it may become harder to access after construction begins. Some data is treated as confidential, restricted for security reasons, or only available through special processes. Understanding what will be public and what may be withheld helps you plan for long-term transparency.





KEY RECORDS TO ASK ABOUT

- ☐ Water use and discharge data
- ☐ Air emissions and generator operation
- ☐ Noise and light monitoring
- ☐ Inspection reports and violation notices
- ☐ Permit conditions and compliance reports
- ☐ Community benefit agreement details
- ☐ Emergency response plans
- ☐ Decommissioning and site restoration plans
- ☐ Any claims of "confidential" or "security sensitive" information and how long the restrictions last

WATCH FOR RED FLAGS

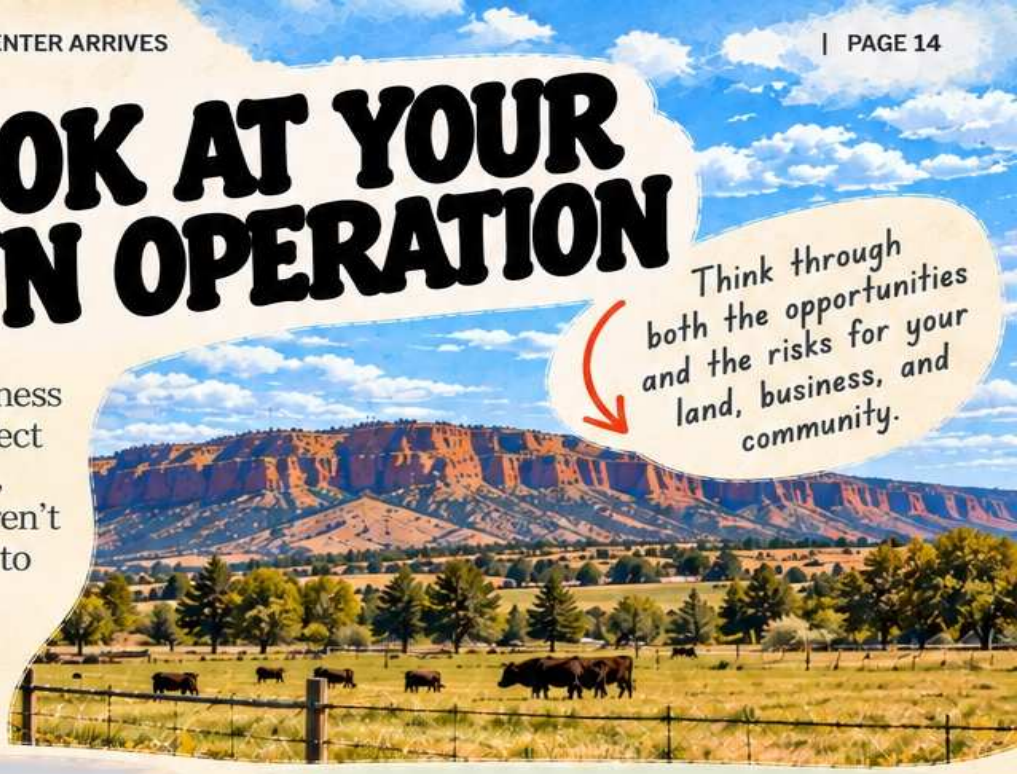
- Broad claims of trade secrets or security exemptions
- Information only available through lengthy or costly requests
- Promises of future reports with no specific dates
- Key monitoring data not made public in an easy-to-find format
- Community benefit agreements kept private or only summarized

QUESTIONS TO KEEP ASKING

1. What information will remain public after the facility is built?
2. How often will monitoring data be released, and in what format?
3. Can the public access full inspection reports and enforcement actions?
4. What parts of the project may be considered confidential, and for how long?
5. Who decides what information is withheld, and is there a process to challenge it?

14 LOOK AT YOUR OWN OPERATION

Every farm, ranch, and rural business is different. A data center may affect your access to water, power, land, labor, and markets in ways that aren't always obvious at first. Take time to understand how a nearby project could impact your operation, now and in the future, and what steps you might take to prepare.





KEY AREAS TO CONSIDER

- ☐ Water availability and cost
- ☐ Power reliability and cost
- ☐ Impact on land values and leasing
- ☐ Changes in labor market and housing
- ☐ Competition for local resources
- ☐ Effects on local infrastructure and roads
- ☐ Potential for new markets or partnerships
- ☐ Risks to long-term sustainability
- ☐ How a project fits with your long-term goals

WATCH FOR RED FLAGS

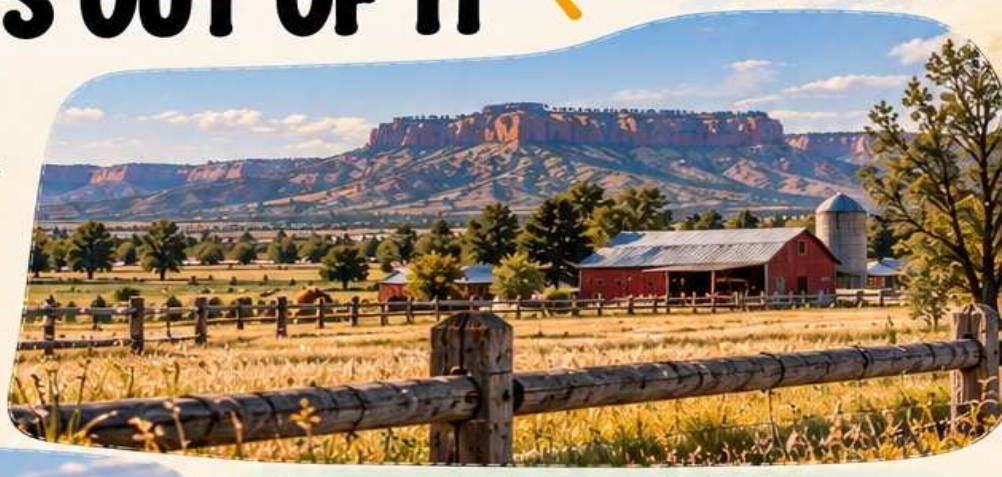
- Increased water prices or new restrictions
- Higher energy costs or more frequent outages
- Rising land prices or loss of agricultural land
- Labor shortages due to rapid growth in the area
- Increased truck traffic and road wear
- Promises that don't match written agreements

QUESTIONS TO ASK

1. How could this project affect my access to water and power?
2. Will it make it harder or easier to find and keep good workers?
3. Could it increase competition for land or resources?
4. Are there opportunities for my business, and what are the trade-offs?
5. What can I do now to prepare for potential changes?

15 ASK WHAT YOUR FARM OR COMMUNITY GETS OUT OF IT

Data centers can bring jobs, tax revenue, and infrastructure investments, but the benefits aren't automatic. Communities negotiate different deals, and not all of the promises end up being delivered, Understand what's on the table, what is guaranteed, and how the benefits will be shared over time.





KEY BENEFITS TO LOOK FOR

- [ ] Property tax revenue and how it will be used
- [ ] Guaranteed community benefit agreements
- [ ] Investments in roads, utilities, and schools
- [ ] Local hiring and workforce training
- [ ] Support for affordable housing
- [ ] Funding for emergency services
- [ ] Commitments to environmental monitoring
- [ ] Long-term operations, not just construction
- [ ] Clear timelines and enforceable terms

WATCH FOR RED FLAGS

- Vague or non-binding promises
- One-time payments instead of long-term commitments
- Benefits that mostly go to outside contractors
- No clear plan for how tax revenue will be used
- Short time frames that don't match the project's lifespan
- Community benefits that aren't enforceable

QUESTIONS TO ASK

1. What specific benefits are promised, and are they written into a binding agreement?
2. How long do the commitments last, and what happens if the company sells the facility?
3. How will tax revenue be used, and who decides?
4. What local jobs will be created, and what kind of training is included?
5. How will the community know if the promised benefits are actually delivered?

16 UNDERSTAND INFRASTRUCTURE AND PUBLIC COSTS



Data centers require large amounts of electricity, water, roads, and other infrastructure. Some of these upgrades are paid for by the company, but in many cases the public helps cover the costs. It's important to understand what infrastructure improvements are planned, who will pay for them, and whether the local community could be responsible for future costs.



KEY THINGS TO LOOK FOR

- ☐ Who is paying for new or upgraded power lines, substations, and grid improvements
- ☐ Whether water and wastewater systems need to be expanded
- ☐ Road upgrades and increased truck traffic
- ☐ Who pays for emergency services, schools, and other public services
- ☐ Any use of tax incentives, enterprise zones, or public funding
- ☐ Long-term maintenance and replacement costs
- ☐ Clear written agreements and timelines

WATCH FOR RED FLAGS

- Public funds used for private infrastructure
- Vague or incomplete cost estimates
- Costs passed to local ratepayers or taxpayers
- Lack of transparency in agreements
- Infrastructure built before full environmental review
- No plan for long-term maintenance or eventual decommissioning

QUESTIONS TO ASK

1. What infrastructure upgrades are planned, and who will pay for them?
2. Will local utility rates or taxes increase?
3. Are there any public incentives, subsidies, or tax breaks involved?
4. How will increased demand affect electricity reliability, water availability, and emergency services?
5. What happens to the infrastructure when the facility is no longer operating?



17 LOOK AT COMMUNITY IMPACTS AND QUALITY OF LIFE

Data centers can bring economic growth, but they can also change what a community is like. Increased demand for housing, higher utility rates, more truck traffic, and land use changes can affect daily life. It's important to look at both the potential benefits and the possible downsides, and to make sure community concerns are part of the discussion early on.





KEY COMMUNITY CONSIDERATIONS

- [ ] Housing availability and affordability
- [ ] Changes to local tax base and services
- [ ] Increased truck traffic and road safety
- [ ] Strain on water and wastewater systems
- [ ] Effects on air quality, noise, and light pollution
- [ ] Land use and loss of farmland or open space
- [ ] Impact on schools, healthcare, and emergency services
- [ ] Long-term compatibility with community goals
- [ ] Opportunities for local input and decision-making

WATCH FOR RED FLAGS

- Rapid increases in home prices and rents
- Significant increase in truck traffic without mitigation
- Strain on local water supply or wastewater capacity
- Ongoing noise, light, or air quality complaints
- Community concerns that are not being addressed
- Vague plans for infrastructure or public services
- Loss of agricultural land or natural areas

QUESTIONS TO ASK

1. How might this project affect housing affordability and availability?
2. What impacts are expected on local roads and traffic, and how will they be mitigated?
3. Can the community's water and wastewater systems handle the increased demand?
4. What will happen to local services like schools, healthcare, and emergency response?
5. How will the long-term impacts on the community be monitored, and who will be accountable?

CLOUDS — ON THE — RANGE

REAL QUESTIONS CLEAR INFORMATION STRONGER RURAL COMMUNITIES

Rural communities deserve a seat at the table. Good information helps us all make better decisions.

You do not have to know everything about data centers. Know what is being proposed. Know what has to be built around it. Know where the water comes from and where it goes. Know who is responsible for the costs. And when somebody gives you an important number, ask where it came from.

That's enough to start.

Clouds on the Range is an independent research and reporting project examining what happens when data centers meet rural and agricultural communities, with a focus on water, power, infrastructure and the people already using these.

A NOTE ON AI

I use AI as a research and editing tool. For this guide, it helped me summarize technical records and organize the draft. I reviewed the sources myself, checked the claims, and made final decisions about what the evidence shows and does not support.

SOURCES & NOTES

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