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The 500-MW Dilemma: Evaluating a Utility Service Agreement for Large-Scale Data Center Development

Classroom Teaching Case Study

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Abstract: This case examines the strategic, financial, regulatory, and stakeholder-management challenges facing Appalachian Valley Electric (AVE), a fictional investor-owned utility, as it evaluates a proposed 15-year electric service agreement with HyperScale Data Solutions for a 500-megawatt hyperscale data center. The project promises approximately $4.5 billion in economic investment, significant load growth, and substantial employment opportunities. However, the project also requires an estimated $425 million in transmission and distribution system upgrades, raising concerns regarding electric rates, infrastructure cost allocation, environmental impacts, land use, and long-term system planning. As public opposition grows and regulatory scrutiny intensifies, Sarah Mitchell, AVE's Chief Regulatory and Strategy Officer, must recommend whether the utility should approve, modify, phase, delay, or reject the proposed service agreement before a critical developer deadline. The case requires analysis of competing stakeholder interests, financial and regulatory risks, and alternative approaches to allocating project costs and risks among the developer, shareholders, and existing customers. The case is suitable for graduate-level courses in strategic management, leadership, public policy, utility regulation, innovation, and stakeholder management.

Keywords: Strategic Decision Making; Utility Regulation; Data Center Development; Stakeholder Management; Infrastructure Investment

PART I: TEACHING CASE

Learning Outcomes

By the end of this case study, students should be able to:

- Analyze the strategic opportunities and risks associated with large-scale data center development and its implications for regulated electric utilities.
- Evaluate competing stakeholder interests and assess how those interests influence organizational decision-making and project outcomes.
- Apply stakeholder management concepts to evaluate competing stakeholder interests associated with infrastructure expansion and economic development initiatives.
- Assess alternative strategies for balancing economic growth, customer affordability, regulatory expectations, and community acceptance.
- Develop and defend a strategic recommendation for utility leadership facing a complex, high-stakes decision involving multiple stakeholders and uncertain outcomes.

The Decision Facing Appalachian Valley Electric

Sarah Mitchell, Chief Regulatory and Strategy Officer at Appalachian Valley Electric (AVE), reviewed the latest briefing package for the proposed HyperScale Data Solutions project and glanced at the calendar displayed on her office wall. It was October 6, 2025. In nine days, she would be required to present a recommendation to AVE's executive leadership team regarding whether AVE should approve, modify, phase, delay, or reject a proposed 15-year electric service agreement with HyperScale Data Solutions to support development of a 500-megawatt hyperscale data center campus. The decision could become one of the most consequential recommendations of her career.

HyperScale Data Solutions had requested electric service for a proposed 500-megawatt campus that would become the largest single customer in the company's history. The project promised approximately $4.5 billion in economic investment, more than 2,000 construction jobs, hundreds of permanent positions, and substantial long-term electricity demand growth within AVE's service territory. However, company engineers estimated that serving the facility would require approximately $425 million in transmission and distribution upgrades, including a new substation and significant transmission investments.

The urgency surrounding the project reflected broader changes occurring throughout the utility industry. Rapid growth in artificial intelligence, cloud computing, and digital services has significantly increased demand for large-scale data centers and the electricity required to operate them. Koot and Wijnhoven (2021) found that increasing demand for digital services is expected to drive substantial growth in data center electricity consumption, creating additional pressures on utility infrastructure planning and system investment decisions. Similarly, research suggests that expanding artificial intelligence applications are increasing electricity demand from digital infrastructure and creating new challenges for energy systems, planning processes, and long-term sustainability efforts (Ahmad et al., 2021). For utilities, these developments create opportunities for load growth and economic development while simultaneously increasing concerns regarding affordability, reliability, infrastructure readiness, and stakeholder acceptance. Mitchell understood that the proposed project represented a local manifestation of a national trend that was reshaping the electric utility industry.

The situation had become increasingly urgent. HyperScale Data Solutions informed AVE that it required a binding service commitment by October 15, 2025, in order to preserve its construction schedule. Company officials privately indicated that at least two competing utilities in neighboring states had expressed interest in hosting the project. The timing also coincided with AVE's October Board meeting, where directors were expected to decide whether the company should proceed with negotiations, modify the proposed service framework, or defer the project. Without a recommendation from Mitchell, the Board would be unable to act before HyperScale's deadline. If AVE failed to provide a clear path forward, HyperScale could pursue an alternative location, eliminating one of the largest economic-development opportunities in the region.

Mitchell understood that recommending approval carried substantial risk. Community opposition was growing, local elected officials were demanding answers, and regulators were beginning to question how project costs would be allocated. Residents questioned whether existing customers would ultimately bear the cost of facilities designed primarily to serve a single large customer. Community groups raised concerns about land-use impacts, transmission line construction, environmental effects, and increased demands on local infrastructure. Local business leaders largely supported the project because of its economic-development potential, while consumer advocates called for stronger protections against future rate increases. Research on infrastructure projects has consistently found that weak stakeholder engagement increases project risk and can contribute to delays, opposition, and reduced project success (Prebanić & Vukomanović, 2023).

As Chief Regulatory and Strategy Officer, Mitchell was responsible for advising AVE's executive leadership team on regulatory strategy, stakeholder risk, and major infrastructure investments. Her recommendation would influence whether AVE pursued a long-term service agreement with HyperScale Data Solutions, how project costs might be allocated, and what conditions should be required to protect customers, shareholders, and the company itself. If the recommendation proved unsuccessful, AVE could face regulatory scrutiny, damaged stakeholder trust, stranded investments, or the loss of a transformational development opportunity.

The Board of Directors expected Mitchell to provide a recommendation that balanced growth opportunities with regulatory and stakeholder risks. AVE's Chief Executive Officer had indicated that the Board would rely heavily on her assessment because of the project's complexity and potential long-term implications. A failed recommendation could expose Mitchell to scrutiny from regulators, investors, and senior leadership while affecting future infrastructure decisions throughout the company.

On October 15, Mitchell would have to make a recommendation to AVE's executive leadership team and Board of Directors. The question was no longer whether the project was important. The question was whether AVE should approve, modify, phase, delay, or reject a proposed 15-year electric service agreement with HyperScale Data Solutions and how the financial, operational, regulatory, and stakeholder risks associated with the project should be allocated among the developer, shareholders, and existing customers.

Organizational Context

The Utility Industry and Growing Data Center Demand

Electric utilities across the United States are experiencing increasing demand from data centers that support cloud computing, artificial intelligence, and digital services. Data center developers are seeking locations with reliable electric infrastructure, available land, favorable regulatory environments, and opportunities for future expansion. As a result, utilities are facing growing pressure to evaluate large-load customer requests while balancing affordability, reliability, and stakeholder expectations. Researchers have noted that digitalization and electrification are reshaping infrastructure planning decisions and increasing the complexity of utility investment strategies (Allan Dahl Andersen et al., 2023). For many utilities, data center projects represent both a significant growth opportunity and a source of potential controversy. Industry analysts have noted that data center developers increasingly seek locations with available transmission capacity, competitive electric rates, and supportive regulatory environments, placing utilities in direct competition for major economic development projects (Takci et al., 2025). As a result, utility leaders must balance growth opportunities with long-term infrastructure planning and customer affordability considerations.

Appalachian Valley Electric

Appalachian Valley Electric (AVE) is a fictional investor-owned utility serving approximately 1.2 million customers across a largely rural service territory. The utility operates under traditional cost-of-service regulation and maintains responsibility for ensuring reliable electric service for residential, commercial, and industrial customers. AVE's corporate strategy emphasizes economic development, reliability, affordability, and constructive relationships with regulators and local communities. Company leadership has historically supported projects that strengthen regional economic growth while maintaining reasonable rates for existing customers. The proposed HyperScale Data Solutions project would be the largest single customer development opportunity in AVE's history.

Regulatory and Organizational Constraints

Although the project presented significant potential benefits, AVE faced several important constraints. The utility estimated that approximately $425 million in transmission and distribution infrastructure upgrades would be required to serve the facility. In addition to financial considerations, regulatory approval would be needed for major capital investments and future cost recovery requests. Utility regulators, consumer advocates, local governments, and community members were closely monitoring the project because of concerns regarding customer rates, land use, and infrastructure expansion. Research suggests that organizations managing large infrastructure projects must balance economic objectives with stakeholder expectations to maintain legitimacy and public support (Dugbartey & Kehinde, 2025; Koot & Wijnhoven, 2021). Consequently, Mitchell recognized that the success of the project would depend not only on technical feasibility but also on stakeholder trust and regulatory acceptance.

The Problem

Core Challenge

The central challenge facing Sarah Mitchell and Appalachian Valley Electric (AVE) was determining whether the company should approve, modify, phase, delay, or reject a proposed 15-year electric service agreement with HyperScale Data Solutions while balancing economic development, customer affordability, stakeholder concerns, and regulatory expectations. Although the project generated financial, operational, regulatory, environmental, and stakeholder-related questions, these issues converged into a single strategic decision: should AVE approve, modify, phase, delay, or reject the proposed 15-year electric service agreement with HyperScale Data Solutions, and under what conditions should the project proceed? The answer would influence not only the future of the project but also the utility's reputation, stakeholder relationships, and regulatory standing.

Economic and Financial Considerations

Mitchell and AVE's executive leadership viewed the project as a major economic opportunity. The proposed data center promised approximately $4.5 billion in capital investment, more than 2,000 construction jobs, and hundreds of permanent positions in a region seeking long-term growth. However, preliminary engineering studies estimated that serving the facility would require approximately $425 million in transmission and distribution upgrades. While the project offered opportunities for increased revenue and system utilization, questions remained regarding cost allocation and the potential impact on existing customers. Similar challenges have emerged across the utility industry as large-load customers seek service for energy-intensive facilities such as data centers and advanced manufacturing operations (Stein, 2025). Research suggests that large-load additions can reshape utility capital planning priorities, create new investment requirements, and raise questions regarding equitable cost allocation among customer classes (Kim et al., 2026).

Operational and Organizational Impacts

The project also created organizational challenges for AVE. Engineering, regulatory affairs, customer service, corporate communications, and economic development teams were all involved in evaluating the project and responding to stakeholder concerns. Employees increasingly received questions regarding reliability, construction impacts, environmental effects, and future rates. Research suggests that large infrastructure projects frequently require significant coordination across departments and stakeholder groups, increasing organizational complexity and project risk (Khan et al., 2021). As a result, AVE had to consider not only whether the project was technically feasible but also whether the organization could effectively manage the demands associated with it.

Stakeholder and Customer Concerns

Community members raised concerns regarding land use, transmission line construction, environmental impacts, and the fairness of investing utility resources to serve a single large customer. Existing customers questioned whether they would ultimately bear costs associated with infrastructure built primarily for the data center. In contrast, local governments and economic development organizations emphasized the potential benefits of job creation, increased tax revenue, and future business investment. These competing perspectives reflected a common challenge in infrastructure development, where stakeholders often evaluate success using different priorities and expectations (Kujala et al., 2022; Gaur et al., 2022).

Ethical Considerations

Beyond financial and operational concerns, the project raised important questions regarding fairness, transparency, and public trust. Utility leaders needed to determine how infrastructure costs should be allocated and how project information should be communicated to stakeholders. Decisions regarding stakeholder engagement would influence perceptions of procedural fairness and organizational legitimacy. Research suggests that organizations that meaningfully engage affected stakeholders are more likely to build trust, maintain legitimacy, and create long-term value (Musonda et al., 2024). Consequently, AVE's challenge extended beyond infrastructure planning to include balancing the interests of customers, communities, regulators, employees, shareholders, and the developer.

To support its evaluation of the proposed project, AVE assembled key information regarding project costs, infrastructure requirements, stakeholder concerns, and potential economic benefits. Mitchell reviewed engineering analyses, stakeholder feedback, community survey results, and strategic alternatives before preparing her recommendation. Additional project metrics, stakeholder information, timeline data, financial analyses, and strategic considerations are summarized in Exhibits 1 through 11.

Decision Point

By October 2025, Sarah Mitchell, Chief Regulatory and Strategy Officer at Appalachian Valley Electric (AVE), faced increasing pressure to determine whether she would recommend approval, modification, phased implementation, delay, or rejection of the proposed 15-year electric service agreement with HyperScale Data Solutions. Community concerns were growing, regulators were requesting additional information, and the developer wanted greater certainty regarding infrastructure commitments and project timelines. While company leaders agreed that the project offered significant economic development opportunities, there was no consensus regarding how to balance those benefits with customer affordability, stakeholder concerns, infrastructure investment requirements, and regulatory expectations. Four strategic options emerged.

Should Sarah Mitchell recommend that AVE approve, modify, phase, delay, or reject the proposed 15-year electric service agreement with HyperScale Data Solutions?

Option A: Approve the Proposed 15-Year Service Agreement as Negotiated

Under this approach, AVE would approve the proposed 15-year electric service agreement largely as negotiated with HyperScale Data Solutions. AVE would proceed with the full 500-megawatt development schedule and fund the estimated $425 million in transmission and distribution upgrades through its traditional capital investment process, subject to future regulatory approval and cost recovery.

Supporters argued that rapid approval would strengthen AVE's position as a competitive location for economic development, preserve the project's timeline, and maximize the likelihood that HyperScale Data Solutions would remain within the service territory. Critics argued that this approach could expose existing customers to future cost-allocation disputes, regulatory scrutiny, and potential stranded investment risk if the project were delayed, reduced, or cancelled.

Option B: Approve the Agreement with Significant Developer Cost Sharing

Under this approach, AVE would approve the 15-year service agreement but require HyperScale Data Solutions to fund approximately 50 percent of the proposed $425 million infrastructure investment. AVE would seek additional upfront contributions, stronger financial guarantees, and enhanced cost-recovery protections for existing customers.

Supporters viewed this approach as a means of protecting customers and reducing regulatory risk while still preserving the project's economic-development benefits. Critics argued that additional financial requirements could make the project less attractive and increase the likelihood that HyperScale Data Solutions would pursue alternative locations.

Option C: Approve a Phased Development Agreement Beginning at 125 Megawatts

Under this approach, AVE would approve the proposed 15-year electric service agreement through a phased implementation strategy. The initial agreement would support only the first 125 megawatts of demand, with future expansion to 500 megawatts contingent upon additional engineering studies, stakeholder engagement, regulatory review, and project-performance milestones.

Supporters argued that a phased approach would reduce financial and operational risk while allowing AVE to evaluate actual demand growth before committing to the full infrastructure build-out. Critics warned that a phased strategy could increase project complexity, delay economic benefits, and create uncertainty for the developer.

Option D: Delay or Reject the Proposed Agreement Pending Additional Analysis

Under this approach, AVE would delay or reject approval of the proposed 15-year electric service agreement until additional engineering studies, stakeholder consultations, and regulatory discussions could be completed.

Supporters argued that additional analysis would improve decision quality and allow unresolved concerns regarding cost allocation, infrastructure planning, and stakeholder impacts to be addressed. Critics argued that delay could result in HyperScale Data Solutions selecting another location and eliminate a major economic-development opportunity for the region.

Each option presented meaningful advantages and risks. As Sarah Mitchell prepared her recommendation, she faced a critical decision. Should AVE approve the proposed 15-year electric service agreement as negotiated, require greater developer participation in project costs, approve only a phased implementation, or delay the agreement until additional analysis could be completed? Her recommendation would determine whether the project moved forward, how risks would be allocated, and whether AVE could secure one of the largest economic-development opportunities in its history.

Data & Evidence

Exhibit 1. Project Timeline

Date	Event
January 2025	Hyperscale Data Solutions contacts AVE.
March 2025	Preliminary load study completed.
May 2025	Infrastructure cost estimates developed.
July 2025	Community concerns begin to emerge.
October 15, 2025	Board decision and HyperScale service commitment deadline.

Exhibit 2. Data Center Scale Relative to AVE Operations

Metric	Current AVE System	Data Center Impact
Peak Demand	7,100 MW	+500 MW (7.0% of system peak)
Annual Electricity Sales	37 TWh	+4.0 TWh (10.8% of annual sales)
Annual Capital Budget	$1.1 billion	$425 million required (38.6% of annual capital budget)

Customers Served	1.2 million	Largest single customer in company history
Economic Development Investment	N/A	$4.5 billion
Construction Employment	N/A	2,000+ jobs
Permanent Employment	N/A	350 jobs
Expected Project Life	N/A	20+ years

Exhibit 3. Data Center Development Scenarios

Scenario	Probability	Outcome
Full Build-Out	45%	Data center reaches full 500 MW demand by 2030
Partial Build-Out	25%	Data center reaches only 250 MW demand and delays future expansion
Delayed Development	20%	Project proceeds but commercial operation is delayed by 24 months.
Project Cancellation	10%	Developer terminates project after initial commitments and relocates operations

Note: Scenario probabilities were developed by AVE's strategic planning and economic development teams using available market information and comparable large-load projects.

Exhibit 4. Estimated Financial Impacts to AVE

Scenario	Estimated Net Present Value
Full Build-Out	+$125 million
Partial Build-Out	+$20 million
Delayed Development	+$60 million
Project Cancellation	-$75 million

Note: NPV estimates reflect projected revenues, infrastructure costs, cost recovery assumptions, and expected operating expenses. Values were prepared by AVE's finance and regulatory strategy teams. Students may use scenario probabilities and NPV estimates to evaluate expected project value under different assumptions.

Exhibit 5. Estimated Average Monthly Bill Impact

Customer Type	Option A	Option B	Option C	Option D
Residential	+$3.25	+$1.40	+$0.80	$0.00
Commercial	+$7.10	+$3.25	+$1.90	$0.00
Industrial	+$28.50	+$14.20	+$8.80	$0.00

Note: Estimates represent projected monthly impacts if infrastructure costs are recovered through traditional regulatory mechanisms. Actual impacts may vary depending on final regulatory decisions. Assumes approximately 1.2 million customer accounts and full recovery of utility-funded infrastructure investment.

Exhibit 6. Key Project Risks

Risk Category	Likelihood	Impact
Construction Cost Overrun	Medium	Infrastructure costs increase by 20%
Demand Shortfall	Medium	Facility reaches only 50% of projected demand
Project Delay	High	Commercial operation delayed by 24 months
Project Cancellation	Low	Infrastructure becomes partially stranded
Cost Recovery Challenge	Medium	Regulators deny full cost recovery

Exhibit 7. Community Survey Results

Issue	Percentage of Respondents Expressing Concern
Future Electric Rate Impacts	42%
Environmental Effects	36%
New Transmission Construction	31%
Land Use Changes	28%
Increased Utility Infrastructure	24%
Potential Benefit	**Percentage Supporting Project**
Job Creation Benefits	65%
Economic Development Potential	61%
Increased Local Tax Revenue	58%

Exhibit 8. Stakeholder Priorities and Representative Perspectives

Stakeholder Group	Primary Concern	Representative Perspective
Residential Customers	Electric affordability	"Existing customers should not bear the majority of costs associated with infrastructure built primarily to serve a single large customer."
Commercial Customers	Reliability and rates	"Economic development is important, but service reliability and reasonable rates must remain a priority."
Public Utility Commission	Prudence of investment and customer protection	"Any infrastructure investment must demonstrate that costs are prudently incurred and fairly allocated among beneficiaries."
Local Governments	Economic development and tax revenue	"The project could create substantial employment opportunities and long-term economic benefits for the region."
Hyperscale Data Solutions	Timely service and infrastructure availability	"Project success depends on certainty regarding infrastructure availability and construction schedules."
Community Organizations	Environmental and quality-of-life impacts	"Transmission construction, land-use impacts, and environmental effects should be fully evaluated before approval."
Utility Employees	Project execution and customer relations	"The project offers growth opportunities but may increase operational complexity and customer concerns."

Exhibit 9. Strategic Options Summary

Option	Potential Advantages	Potential Risks
A. Approve Agreement as Negotiated	Fastest implementation; preserves economic opportunity	Greater customer and regulatory risk
B. Approve with Major Developer Cost Sharing	Protects customers; reduces utility exposure	May reduce project attractiveness
C. Approve Phased Development (125 MW Initial Phase)	Lower financial and operational risk; greater flexibility	Delayed benefits; additional complexity
D. Delay or Reject Proposed Agreement Pending Additional Analysis	Additional information before major capital commitment	Increased risk of losing project

Exhibit 10. Proposed Service Agreement Terms

Contract Term	Proposed Value
Contract Length	15 years
Initial Service Commitment	500 MW
Minimum Demand Payment	80% of contracted demand
Customer Security Deposit	$50 million
Infrastructure Cost Contribution	Developer contribution under negotiation (0% to 50% of infrastructure costs)
Early Termination Fee	Remaining unrecovered infrastructure costs
Expansion Rights	Subject to system capacity and regulatory approval
Service Start Date	January 2028
Cost-Recovery Protection	Subject to regulatory approval and contract provisions

Note: Terms are preliminary and remain subject to negotiation between AVE and HyperScale Data Solutions. Alternative strategic options may modify these terms or require additional protections.

Exhibit 11. Regulatory Considerations and Prior Precedent

Issue	Regulatory Consideration
Infrastructure Investment Approval	AVE must demonstrate that proposed transmission and distribution investments are prudent, reasonable, and necessary to serve customer demand.
Cost Recovery	Recovery of utility-funded infrastructure investments is subject to approval by the Public Utility Commission (PUC). Regulators may disallow costs that are determined to be imprudent or primarily benefit a single customer.
Special Contract Approval	Any negotiated service agreement containing unique pricing, cost-sharing arrangements, or customer-specific provisions may require PUC review and approval.
Customer Protection	Regulators generally seek to ensure that existing customers do not bear unreasonable costs associated with serving new large-load customers.
Cost Allocation	The PUC typically evaluates whether project costs are allocated fairly among developers, shareholders, and ratepayers.

Relevant Regulatory Precedent

In 2022, the neighboring fictional utility Piedmont Electric Corporation received approval to serve a 300-MW advanced manufacturing facility. Regulators approved the project only after the developer agreed to:

- Fund approximately 30% of required transmission and distribution upgrades.
- Provide a substantial security deposit.
- Commit to minimum demand-payment obligations.
- Repay certain infrastructure costs if the project was cancelled before reaching full operation.

The commission concluded that customer protections were necessary to reduce stranded-investment risk and ensure that existing customers were not required to subsidize facilities that primarily benefited a single large customer.

Questions for Consideration

- Should the Piedmont Electric precedent influence AVE's decision?
- Is a 0% developer contribution under Option A consistent with regulatory expectations?

- Would Options B or C be more likely to receive regulatory support?
- What additional customer protections might regulators require before approving cost recovery?

Discussion Questions

The following questions are intended to guide analysis of the decision facing Sarah Mitchell and Appalachian Valley Electric.

1. What decision must Sarah Mitchell make before October 15, 2025, and what objectives should guide her recommendation?
2. What financial, operational, regulatory, environmental, and reputational risks are associated with each strategic option?
3. Which stakeholders have the greatest influence over the success or failure of the proposed 15-year service agreement, and how might each option affect their interests?
4. What are the strengths and weaknesses of Option A (Approve as Negotiated), Option B (Approve with Major Developer Cost Sharing), Option C (Approve Phased Development), and Option D (Delay or Reject Pending Additional Analysis)?
5. To what extent should HyperScale Data Solutions be responsible for funding the infrastructure investments required to serve the proposed data center? What factors should influence that decision?
6. Which assumptions have the greatest impact on Sarah Mitchell's recommendation? How might the recommendation change if project costs increase, project timelines slip, or the developer reduces its planned demand?
7. Should Sarah Mitchell recommend that AVE approve, modify, phase, delay, or reject the proposed 15-year electric service agreement with HyperScale Data Solutions? Support your recommendation using evidence from the case.
8. Evaluate the proposed service agreement terms. Which provisions should Sarah Mitchell retain, modify, add, or remove to protect existing customers, shareholders, and AVE?
9. How should Sarah Mitchell communicate the recommendation to regulators, customers, local governments, community organizations, employees, and HyperScale Data Solutions?
10. What additional information would you want before making a final recommendation, and how might that information influence your decision?

Further Reading

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PART II: TEACHING NOTE

The 500-MW Dilemma: Evaluating a Utility Service Agreement for Large-Scale Data Center Development: Teaching Note

Case Study Summary

The rapid expansion of artificial intelligence (AI), cloud computing, and digital services is increasing electricity demand from large-scale data centers and creating new challenges for electric utilities. Industry forecasts suggest that growing data center demand will require substantial investments in transmission, distribution, and generation infrastructure, forcing utilities to balance economic development opportunities with affordability, reliability, and stakeholder expectations (Koomey et al., 2025). Recent analyses suggest that data centers could account for a substantially larger share of U.S. electricity consumption by the end of the decade as artificial intelligence applications continue to expand and hyperscale facilities increase their energy requirements (Siddik et al., 2021). Utilities are increasingly being asked to support unprecedented load growth while maintaining affordability, reliability, and regulatory compliance. As a result, utility leaders face increasingly complex strategic decisions that extend beyond technical planning to include financial risk, regulatory oversight, stakeholder management, and public policy considerations.

This case places students in the role of Sarah Mitchell, Chief Regulatory and Strategy Officer at Appalachian Valley Electric (AVE), who must recommend whether the utility should approve, modify, phase, delay, or reject a proposed 15-year electric service agreement with HyperScale Data Solutions before an October 15, 2025 deadline. HyperScale has requested service for a proposed 500-megawatt hyperscale data center campus that would become the largest single customer in AVE's history. The project promises approximately $4.5 billion in economic investment, more than 2,000 construction jobs, hundreds of permanent positions, and substantial load growth. However, serving the facility would require approximately $425 million in transmission and distribution infrastructure upgrades, creating questions regarding cost allocation, regulatory approval, customer affordability, and long-term system planning.

The case presents students with a complex strategic decision involving multiple sources of uncertainty and risk. In addition to evaluating competing stakeholder interests, students must assess quantitative information related to project-development scenarios, financial outcomes, customer bill impacts, infrastructure investments, and risk exposure. The proposed service agreement also includes preliminary contract terms regarding demand commitments, security deposits, cost-sharing provisions, and termination protections, creating opportunities for students to evaluate how project risks should be allocated among the developer, shareholders, and existing customers. Similar challenges have become increasingly common as utilities compete for large-load customers while maintaining regulatory support and customer trust (Libertson et al., 2021).

The organizational and stakeholder dynamics surrounding the project create significant management challenges. Utility leaders must coordinate engineering, regulatory affairs, customer service, communications, finance, and economic development functions while responding to concerns from regulators, customers, local governments, and community groups. Existing customers may support economic growth while simultaneously questioning future rate impacts, infrastructure spending, and environmental effects. Research indicates that effective stakeholder engagement and cross-functional coordination are critical factors influencing project success, organizational legitimacy, and public trust (Nonet et al., 2022).

The case presents a timely and increasingly relevant business problem facing utilities throughout North America. Decisions regarding infrastructure investment, cost allocation, service-agreement design, customer protection mechanisms, stakeholder engagement, and strategic risk management can influence project outcomes, regulatory relationships, and organizational reputation (Li et al., 2021). Consequently, the case provides students with an opportunity to analyze a high-stakes decision involving strategy, leadership, stakeholder management, utility regulation, and public policy. Students must determine not only whether the proposed project should move forward, but also under what conditions, with what contractual protections, and with which allocation of risks among stakeholders. This creates a multidisciplinary decision environment that reflects the increasingly complex challenges facing utility leaders in an era of rapid data center growth.

Learning Objectives

After analyzing this case, students should be able to:

1. Evaluate the financial and strategic attractiveness of a large-scale data center project.
2. Assess financial, operational, regulatory, and stakeholder risks associated with alternative service-agreement structures.
3. Develop and defend a recommendation regarding project approval, cost allocation, and contractual protections.

Theoretical Frameworks

Role of Theoretical Frameworks

This case is primarily a strategic decision-making and risk-allocation case. Students are expected to evaluate the financial attractiveness of the proposed project, assess regulatory and stakeholder risks, compare strategic alternatives, and determine appropriate contractual protections. The theoretical frameworks presented below are intended to serve as analytical tools that support decision making rather than prescribe a single solution. Instructors are encouraged to emphasize evidence-based analysis of the strategic options before introducing theoretical perspectives.

Stakeholder Theory

Stakeholder Theory argues that organizations create long-term value by considering the interests of all stakeholders affected by organizational decisions rather than focusing exclusively on a single group such as shareholders (Mahajan et al., 2023; Kujala et al., 2022). Stakeholders may include customers, employees, regulators, suppliers, local communities, investors, and government entities. The theory emphasizes balancing competing interests while maintaining organizational legitimacy and stakeholder trust.

Stakeholder Theory provides a useful framework for analyzing the challenge facing Appalachian Valley Electric (AVE). The proposed data center project involves numerous stakeholders with differing priorities. HyperScale Data Solutions seeks timely access to reliable electric service, while residential customers are concerned about affordability and reliability. Local governments emphasize economic development opportunities, whereas community organizations focus on environmental, land-use, and quality-of-life impacts. Students can use Stakeholder Theory to evaluate stakeholder influence, identify competing interests, and assess how AVE might balance stakeholder expectations when selecting among the available strategic options. Research suggests that organizations that effectively engage stakeholders are more likely to achieve sustainable outcomes and maintain legitimacy during complex decision-making processes (Kujala et al., 2022).

Design Thinking

Unlike traditional utility planning approaches, Design Thinking emphasizes co-creation with stakeholders and encourages organizations to develop solutions based on stakeholder experiences rather than purely technical criteria (Rösch et al., 2023). The framework typically consists of five stages: empathize, define, ideate, prototype, and test. Rather than focusing solely on technical, financial, or regulatory considerations, Design Thinking encourages decision makers to understand stakeholder experiences and develop innovative solutions that address underlying needs and concerns.

In the context of this case, Design Thinking helps students explore how Appalachian Valley Electric (AVE) can develop creative approaches for balancing economic development opportunities with customer affordability, regulatory expectations, and stakeholder concerns. Many of the issues surrounding the proposed data center involve perceptions of fairness, transparency, risk allocation, and long-term accountability rather than strictly technical challenges. By applying a Design Thinking perspective, students can evaluate alternative service-agreement structures, customer-protection mechanisms, phased-development strategies, stakeholder-engagement approaches, and infrastructure cost-allocation models that address competing interests while preserving the potential benefits of the project.

The framework is particularly useful when students evaluate the strategic options presented in the case and consider how modifications to contract terms, financial protections, demand commitments, cost-sharing provisions, or project phasing might reduce stakeholder concerns without eliminating economic-development opportunities. Design Thinking encourages students to move beyond a simple approve-or-reject decision and instead develop creative solutions that balance the interests of HyperScale Data Solutions, regulators, customers, shareholders, employees, local governments, and community organizations.

Force Field Analysis

Force Field Analysis, originally developed by Kurt Lewin, is a decision-making framework used to evaluate factors supporting or opposing organizational change (Christiansen & Vidskjold, 2023). Driving forces encourage movement toward a desired outcome, while restraining forces create resistance and barriers to implementation. Effective decision making requires understanding both sets of forces and identifying strategies to strengthen drivers or reduce resistance (Shafaghat et al., 2021).

The proposed data center project presents a clear example of competing forces. Driving forces include economic development, job creation, increased utility revenues, and regional competitiveness. Restraining forces include community opposition, affordability concerns, environmental questions, infrastructure costs, and regulatory uncertainty. Students can use Force Field Analysis to compare the strategic options presented in the case and identify which approach best addresses the factors influencing project success. The framework also helps illustrate why technically feasible projects can encounter significant implementation challenges when stakeholder concerns are not adequately addressed.

Transformational Leadership

Transformational Leadership focuses on a leader's ability to inspire, motivate, and guide stakeholders through periods of uncertainty and change. Transformational leaders establish a compelling vision, encourage collaboration, and build trust among individuals and groups affected by organizational decisions (Rojak et al., 2024). This leadership approach is particularly valuable in situations where competing stakeholder interests make consensus difficult.

The leadership team at AVE faces a challenge that extends beyond infrastructure planning and regulatory compliance. Executives must communicate effectively with customers, regulators, employees, community groups, and the data center developer while balancing competing priorities and expectations. Students can apply Transformational Leadership concepts to evaluate how AVE's leaders might build trust, communicate project objectives, and navigate stakeholder concerns. The framework highlights the importance of leadership behavior in influencing organizational outcomes and maintaining stakeholder confidence during complex strategic decisions.

Discussion Questions

1. What decision must Sarah Mitchell make before October 15, 2025?
2. What financial, operational, regulatory, and stakeholder risks are associated with the project?
3. Which stakeholders have the greatest influence over project outcomes?
4. Evaluate options A-D. What are the advantages and disadvantages associated with each option?
5. How should infrastructure costs be allocated among customers, shareholders, and HyperScale?
6. How should the development scenarios influence decision making?
7. Which option should Sarah Mitchell recommend?
8. Evaluate the proposed service agreement terms. What are their strengths and weaknesses?
9. How should AVE communicate the decision?
10. What additional information would improve the decision?

Analysis & Suggested Answers

Question 1: What decision must Sarah Mitchell make before October 15, 2025?

Students should recognize that Mitchell must recommend whether AVE should approve, modify, phase, delay, or reject the proposed 15-year electric service agreement with HyperScale Data Solutions before the developer's October 15, 2025 deadline. The decision extends beyond whether the project should proceed and includes determining how financial, operational, regulatory, and stakeholder risks should be allocated among the developer, shareholders, and existing customers. Students should recognize the importance of the deadline, competing utility interest in the project, and the long-term implications of the decision.

Question 2: What financial, operational, regulatory, and stakeholder risks are associated with the project?

Students should identify risks presented throughout the case and summarized in Exhibit 6. Financial risks include construction-cost overruns, demand shortfalls, stranded investments, and potential denial of cost recovery. Operational risks include project delays, infrastructure readiness challenges, and system-planning implications. Regulatory risks include scrutiny regarding prudence, cost allocation, and customer impacts. Stakeholder risks include community opposition, political pressure, reputational damage, and loss of trust. Strong responses should recognize that many risks are interconnected and may influence both project viability and long-term organizational legitimacy.

Question 3: Which stakeholders have the greatest influence over project outcomes?

Students should identify regulators, customers, HyperScale Data Solutions, local governments, community organizations, shareholders, and employees as key stakeholders. Regulators possess formal authority over cost recovery and infrastructure investments. HyperScale controls the potential economic investment and may pursue alternative locations. Customers and community organizations influence public acceptance and political support. Local governments view the project through the lens of economic development and tax revenue. Strong responses should explain both stakeholder interests and stakeholder influence rather than simply listing groups.

Question 4: Evaluate Options A-D.

Students should evaluate each option's advantages and disadvantages.

Option A

Provides the fastest path to implementation and preserves the full economic-development opportunity. However, it exposes AVE to greater customer, regulatory, and cost-allocation risks.

Option B
Protects customers through developer cost sharing and reduces financial exposure. However, additional financial obligations could reduce project attractiveness and increase the likelihood of relocation.
Option C
Reduces financial and operational risk while allowing AVE to evaluate actual demand before committing to full build-out. However, it may delay benefits and create uncertainty for the developer.
Option D
Provides additional information and reduces uncertainty before major capital commitments. However, it may result in losing the project entirely.

Strong responses should recognize that no option completely eliminates risk and that each reflects a different approach to risk allocation.

Question 5: How should infrastructure costs be allocated among customers, shareholders, and HyperScale?

Students should debate competing fairness and regulatory principles. Some may argue that HyperScale should fund a substantial portion of the infrastructure because the facilities primarily serve its needs. Others may argue that some utility investment is appropriate if system benefits extend beyond the project itself. Exhibit 5 provides rate-impact information that can be used to discuss potential consequences for existing customers. Exhibit 10 also provides a basis for evaluating cost-sharing arrangements. Strong responses should consider affordability, regulatory precedent, economic development benefits, and risk allocation. Students should also consider the regulatory precedent presented in Exhibit 11, where a neighboring utility was required to obtain developer cost contributions, demand commitments, and financial protections before receiving regulatory approval. Students should discuss whether similar protections should be required in AVE's agreement with HyperScale Data Solutions. Students should compare customer bill impacts across Options A through D (Exhibit 5) and consider whether the projected affordability impacts justify requiring greater developer cost participation.

Question 6: How should the development scenarios influence decision making?

Students should use Exhibits 3 and 4 to analyze uncertainty.
Possible calculation:
Expected NPV:

- 45% × $125 million = $56.25 million
- 25% × $20 million = $5.00 million
- 20% × $60 million = $12.00 million
- 10% × (-$75 million) = -$7.50 million

Expected Value = **+$65.75 million**

Students should use Exhibits 3 and 4 to calculate expected project value and evaluate downside risk. While the expected value of the project is positive (+$65.75 million), the presence of a 10 percent cancellation scenario and a negative NPV outcome demonstrates that risk allocation and contractual protections remain important considerations. Students should discuss whether Options B or C reduce downside risk relative to Option A. Students should recognize that expected value analysis is only one input into the decision and should be considered alongside stakeholder concerns, regulatory uncertainty, customer affordability impacts, and long-term strategic objectives.

Sensitivity Considerations

Students should recognize that the expected-value calculation is based on assumptions regarding project costs, customer demand, regulatory treatment, and developer commitments. Sensitivity analysis allows students to evaluate how changes in these assumptions may influence the preferred strategic option.

Students should consider how their recommendations might change under the following scenarios:

- Infrastructure costs increase by 20 percent above initial estimates.
- Data-center demand reaches only 250 MW rather than the projected 500 MW.
- Project completion is delayed by two years.
- Regulators deny recovery of a portion of project-related costs.
- HyperScale agrees to fund 50 percent of required infrastructure upgrades.
- Construction costs exceed budget while customer demand remains below forecasted levels.
- Additional contractual protections reduce AVE's exposure to stranded-investment risk.

Strong responses should recognize that recommendations may differ depending on the assumptions adopted. For example, Option A may appear more attractive if full build-out occurs, infrastructure costs remain within budget, and regulatory cost recovery is highly likely. Conversely, Options B or C may become more attractive if uncertainty regarding demand growth, infrastructure costs, regulatory outcomes, or project timing increases. Option D may be reasonable if students conclude that existing information is insufficient to support a major capital commitment. Sensitivity analysis highlights the importance of risk allocation and demonstrates why utility decision making often depends on multiple plausible future scenarios rather than a single forecast.

Question 7: Which option should Sarah Mitchell recommend?

There is no single correct answer.
Many students may favor:

Option B

Because it balances economic development with customer protections through developer cost sharing.
Others may favor:

Option C

Because phased implementation reduces uncertainty and limits infrastructure exposure.
Some may favor:

Option A

Because it maximizes economic-development benefits and preserves competitive positioning.
Others may support:

Option D

Because additional analysis may reduce uncertainty.
Strong recommendations should be supported by quantitative evidence, stakeholder considerations, risk analysis, and application of relevant theoretical frameworks.

Comparing Strategic Options

The four strategic options represent different approaches to balancing economic-development opportunities with financial, operational, regulatory, and stakeholder risks. Instructors should encourage students to compare the alternatives using information from Exhibits 3 through 11.

Option A: Approve the Agreement as Negotiated

Option A offers the greatest opportunity to capture the project's full economic-development benefits, including the potential for increased revenues, load growth, and regional investment. It also preserves the highest likelihood that HyperScale Data Solutions will remain within AVE's service territory. However, Option A creates the greatest exposure to infrastructure-investment risk, customer rate impacts, and regulatory scrutiny. As shown in Exhibit 5, this option produces the highest projected bill impacts for residential, commercial, and industrial customers. Option A is most appropriate if students believe the probability of full build-out is high and that regulators will support recovery of most project-related costs.

Key Advantages

- Fastest implementation
- Maximum economic-development potential
- Strongest competitive position

Key Risks

- Highest customer affordability impacts
- Greatest cost-recovery uncertainty
- Highest stranded-investment exposure

Option B: Approve with Significant Developer Cost Sharing

Option B seeks to preserve the economic-development benefits of the project while reducing financial exposure for AVE and its customers. By requiring significant developer participation in infrastructure costs, AVE reduces potential rate impacts and improves the fairness of cost allocation. However, increased financial obligations may reduce the attractiveness of the project and create a risk that HyperScale selects another location. Option B is most appropriate if students believe customer protection and prudent risk allocation should be prioritized while still pursuing the project.

Key Advantages

- Reduced customer bill impacts
- Stronger protection against stranded-investment risk
- Improved regulatory defensibility

Key Risks

- Potential reduction in project attractiveness
- Increased negotiation complexity
- Higher risk of developer relocation

Option C: Approve a Phased Development Agreement

Option C reduces uncertainty by limiting AVE's initial infrastructure commitment and allowing expansion only after actual demand and project performance are demonstrated. This approach aligns investment timing more closely with realized load growth. The downside is that economic benefits may be delayed and the developer may view the phased approach as creating uncertainty. Option C is most appropriate if students believe downside-risk mitigation is more important than rapid expansion.

Key Advantages

- Lowest initial financial exposure
- Greater flexibility
- Reduced downside risk

Key Risks

- Delayed economic benefits
- Potential developer dissatisfaction
- Additional implementation complexity

Option D: Delay or Reject Pending Additional Analysis

Option D minimizes immediate financial commitments and allows AVE to gather additional information before making a major investment decision. Students supporting this option may argue that uncertainty regarding demand, infrastructure costs, regulatory treatment, or stakeholder impacts remains too high. The primary drawback is the possibility of losing the project entirely.

Option D is most appropriate if students place substantial weight on uncertainty and believe the current information is insufficient to justify a major commitment.

Key Advantages

- Avoids near-term capital exposure
- Allows additional due diligence
- Reduces decision uncertainty

Key Risks

- Highest likelihood of losing the project
- Lost economic-development opportunity
- Reduced competitive positioning

Question 8: Evaluate the proposed service agreement terms.

Students should analyze Exhibits 10 and 11 and determine whether the preliminary terms adequately protect AVE and whether they are consistent with likely regulatory expectations.

Potential issues include:

- Is a 15-year term sufficient?
- Is an 80% minimum-demand payment adequate?
- Is a $50 million security deposit sufficient relative to a $425 million infrastructure investment?
- Should HyperScale contribute more to infrastructure costs?
- Is the early-termination provision strong enough?
- Are additional cost-recovery protections needed?

Strong responses should recognize that contractual provisions are a key mechanism for allocating financial, operational, and regulatory risks among AVE, HyperScale Data Solutions, shareholders, and existing customers.

Evaluating Contract Terms

Exhibit 10 introduces students to a common utility-industry challenge: allocating project risks through contractual provisions rather than relying solely on regulatory processes. Students should recognize that the proposed service agreement serves as a mechanism for distributing financial, operational, and regulatory risks among Appalachian Valley Electric (AVE), HyperScale Data Solutions, shareholders, and existing customers.

Several contract provisions warrant discussion:

- **15-year contract term:** Students may debate whether the term is sufficient to justify the scale of AVE's infrastructure investment and provide reasonable certainty regarding long-term cost recovery.
- **80% minimum-demand payment:** Students should evaluate whether the provision sufficiently protects AVE if actual data-center demand falls below expectations.
- **$50 million security deposit:** Students may question whether the deposit adequately protects the utility given the estimated $425 million infrastructure investment required to serve the project.
- **Developer infrastructure cost contributions:** Students should assess the extent to which HyperScale should fund infrastructure that primarily serves its operations and whether greater cost sharing would better protect existing customers.
- **Early termination fee:** Students may evaluate whether requiring repayment of remaining unrecovered infrastructure costs sufficiently protects AVE from stranded-investment risk.
- **Cost-recovery protections:** Students should consider whether additional regulatory protections, guarantees, or contractual provisions are necessary to reduce exposure if regulators deny full cost recovery.

- **Expansion rights:** Students may debate whether future expansion should be automatic or contingent upon additional engineering studies, regulatory review, system-capacity assessments, or performance milestones.

There is no single correct answer regarding the ideal contract structure. Strong responses should recognize that contract terms represent a strategic tool for allocating risk and balancing the interests of customers, shareholders, regulators, and the developer. Students should be encouraged to propose modifications that improve customer protections while preserving the economic-development benefits of the project.

Question 9: How should AVE communicate the decision?

Students should recommend a communication strategy emphasizing transparency, consistency, and stakeholder engagement.
Communication should:

- explain the rationale for the decision
- discuss benefits and risks
- clarify customer protections
- address regulatory concerns
- explain cost-allocation decisions
- outline next steps

Transformational Leadership concepts may be particularly useful when discussing trust-building, stakeholder engagement, and organizational credibility.

Question 10: What additional information would improve the decision?

Students may request:

- more detailed engineering studies
- alternative load forecasts
- additional scenario modeling
- regulatory guidance regarding cost recovery
- transmission-routing information
- environmental-impact assessments
- stronger demand commitments from HyperScale
- benchmarking information from comparable utility projects

Strong responses should explain how the additional information might change the recommended course of action.

Teaching Plan

Target Audience

This case is designed primarily for graduate and executive-level students in business, public administration, public policy, and energy-related programs. It is particularly suitable for Master of Business Administration (MBA), Doctor of Business Administration (DBA), Master of Public Administration (MPA), and Master of Public Policy (MPP) courses where students are expected to evaluate complex organizational challenges involving multiple stakeholders and competing objectives. The case is appropriate for courses in Strategic Management, Managerial Decision Making, Utility Regulation, Stakeholder Management, Public Policy, Leadership, and Energy Policy. Because the case integrates economic development, infrastructure planning, regulatory oversight, financial analysis, risk allocation, and stakeholder considerations, it can also be used in interdisciplinary courses exploring the intersection of business strategy and public policy.

Students will benefit most from this case if they possess a foundational understanding of organizational decision-making, stakeholder analysis, and strategic planning. However, the case is written so that specialized knowledge of the utility industry is not required.

Subject Area

Primary Subject Area:

- Strategic Management and Managerial Decision Making

Secondary Subject Areas:

- Utility Regulation
- Stakeholder Management
- Public Policy
- Leadership

Class Timing (75-90 Minutes)

Activity	Time
Introduction and industry context	10 minutes
Quantitative analysis (Exhibits 3-6)	15 minutes
Stakeholder analysis	15 minutes
Strategic options evaluation	20 minutes
Contract-term analysis (Exhibits 10&11)	10 minutes
Recommendations and debate	15 minutes
Wrap-up and key takeaways	5 minutes

Suggested Classroom Discussion Plan

Opening Question

Should Appalachian Valley Electric (AVE) approve, modify, phase, delay, or reject the proposed 15-year service agreement with HyperScale Data Solutions?

This question should be asked before discussing the exhibits in detail. The opening discussion provides a baseline view of student assumptions regarding economic development, customer protection, and risk allocation.

Expected Student Positions

Students will frequently gravitate toward one of four positions:

- **Option A advocates** may emphasize economic development, job creation, revenue growth, and competitive positioning.
- **Option B advocates** may emphasize customer protection, prudent infrastructure investment, and cost-sharing principles.
- **Option C advocates** may focus on uncertainty reduction, phased investment, and risk mitigation.
- **Option D advocates** may argue that additional information is needed before making a major capital commitment.

Major Calculations and Analyses

Students should be encouraged to evaluate:

- Expected project value using the scenario probabilities and NPV estimates provided in Exhibits 3 and 4.
- Customer bill impacts under each strategic option using Exhibit 5.
- Project risks and downside scenarios using Exhibit 6.
- Contractual protections, regulatory precedent, and risk-allocation mechanisms using Exhibits 10 and 11.

Transition Questions

Instructors may use the following questions to guide discussion between major topic areas:

From Decision Framing to Quantitative Analysis

- What information in the exhibits is most relevant to Sarah Mitchell's recommendation?
- Does the projected value of the project justify the risks AVE may be assuming?

From Quantitative Analysis to Stakeholder Analysis

- Which stakeholders benefit most if the project is successful?
- Which stakeholders bear the greatest risks if the project underperforms?

From Stakeholder Analysis to Strategic Options

- Which option best balances economic-development benefits with customer protection?
- How does each option allocate risk among AVE, customers, shareholders, regulators, and HyperScale?

From Strategic Options to Contract Analysis

- What contractual protections would strengthen your preferred option?
- Which contract terms are most important for protecting customers from stranded-investment risk?

From Contract Analysis to Recommendation Development

- Has your recommendation changed after reviewing the proposed contract terms?
- What conditions or modifications would need to be added before you would support project approval?

Common Student Errors

Instructors should watch for several common analytical mistakes:

- Focusing primarily on economic-development benefits and employment impacts.
- Ignoring regulatory approval and cost-recovery considerations.
- Assuming that a positive expected project value automatically justifies project approval.
- Overlooking the importance of contract terms in managing financial and operational risk.
- Treating stakeholder concerns as secondary to financial analysis or vice versa.

Key Teaching Points

By the conclusion of the discussion, students should recognize that:

- A positive expected value does not eliminate project risk.
- Risk allocation is a central issue in utility regulation and infrastructure planning.
- Contract design can significantly reduce uncertainty and protect stakeholders.
- Multiple recommendations may be reasonable when supported by evidence and sound analysis.
- Effective strategic decisions require the integration of financial, operational, regulatory, and stakeholder considerations.

Flow of Discussion

Prior to class, students should review the case and prepare responses to the discussion questions. The instructor should begin by introducing current trends related to artificial intelligence, cloud computing, and large-scale data center development. This discussion establishes the broader industry context and highlights why utilities are increasingly confronting large-load customer requests. The discussion should then focus on the decision facing Sarah Mitchell and the consequences of the October 15, 2025 deadline. Students should clearly understand the decision alternatives available to AVE and the risks associated with delaying action. Once the decision context has been established, students should evaluate the quantitative exhibits presented in the case. Particular attention should be given to project-development scenarios, financial outcomes, customer bill impacts, and identified project risks. Students should discuss how the quantitative information influences the attractiveness of the project and the level of risk faced by AVE.

After reviewing the quantitative evidence, the discussion should transition to stakeholder analysis. Students should identify the key stakeholders and evaluate how different project outcomes may affect customers, regulators, local governments, community organizations, employees, shareholders, and HyperScale Data Solutions. The discussion should emphasize how stakeholder interests influence both the decision itself and the likelihood of successful implementation.

The next phase of the discussion should focus on the four strategic alternatives available to AVE. Small-group discussions can be used to compare the advantages, disadvantages, trade-offs, and risk-allocation implications associated with each option. Students should be encouraged to evaluate the alternatives using both the case evidence and the theoretical frameworks presented in the teaching note.

Following evaluation of the strategic options, attention should shift to the proposed service agreement contained in Exhibit 10. Students should assess demand commitments, infrastructure cost-sharing arrangements, security deposits, termination protections, expansion rights, and other contractual provisions. Discussion should emphasize how contract design can serve as a mechanism for allocating risk among stakeholders.

The final phase of the discussion should focus on recommendation development. Student groups should develop, defend, and justify a recommendation using quantitative evidence, stakeholder analysis, contract evaluation, and relevant theoretical frameworks. Instructors should encourage debate and remind students that the case is intentionally designed without a single correct solution. Students should explain not only whether the project should proceed but also under what conditions and with what contractual protections.

Key Transitions Between Topics

Transition 1: Industry Context to Decision Framing

After discussing data center growth, artificial intelligence, and utility industry trends, transition the conversation to the specific decision facing Sarah Mitchell. Students should move from understanding the broader industry environment to evaluating AVE's challenge of determining whether the utility should approve, modify, phase, delay, or reject the proposed 15-year service agreement.

Transition 2: Decision Framing to Quantitative Analysis

Once students understand the decision and its importance, shift the discussion to the quantitative exhibits. Encourage students to evaluate the project's scale (Exhibit 2), development scenarios (Exhibit 3), estimated financial impacts (Exhibit 4), customer bill impacts (Exhibit 5), and project risks (Exhibit 6). Students should consider how these exhibits influence the attractiveness of the proposed agreement and the level of risk AVE may be assuming.

Transition 3: Quantitative Analysis to Stakeholder Considerations

After evaluating the project's financial and operational implications, transition to stakeholder analysis. Students should identify key stakeholders and assess how various outcomes may affect customers, regulators, local governments, community organizations, employees, shareholders, and HyperScale Data Solutions. Encourage students to consider how stakeholder priorities may influence both the decision itself and the likelihood of successful implementation.

Transition 4: Stakeholder Considerations to Strategic Options

Once students understand both the quantitative and stakeholder dimensions of the project, shift the discussion to the four strategic options available to AVE. Students should evaluate the advantages, disadvantages, trade-offs, and risk-allocation implications associated with each alternative.

Transition 5: Strategic Options to Contract and Risk Allocation Analysis

After evaluating the strategic alternatives, introduce the proposed service-agreement terms in Exhibit 10 and the regulatory considerations and precedent presented in Exhibit 11. Students should consider how contract provisions such as demand commitments, security deposits, cost-sharing arrangements, termination protections, and cost-recovery mechanisms can be used to mitigate risks and protect stakeholders. Emphasize that contract design is an important strategic tool rather than a purely legal consideration.

Transition 6: Contract Analysis to Recommendation Development

The final transition should move students from analysis to decision-making. Students should develop, defend, and justify a recommendation using quantitative evidence, stakeholder considerations, contract analysis, and relevant theoretical frameworks. Encourage students to explain not only whether the project should proceed but also under what conditions and with what protections.

Instructor Guidance

The instructor should emphasize that the central issue is determining whether and under what conditions Appalachian Valley Electric (AVE) should proceed with the proposed 15-year service agreement with HyperScale Data Solutions. Students should evaluate not only whether the project should move forward, but also how financial, operational, regulatory, and stakeholder risks should be allocated among the developer, shareholders, and existing customers. The case is intentionally structured so that reasonable arguments can be made in support of approval, modification, phased implementation, delay, or rejection of the proposed agreement.

Instructors should also emphasize that the case reflects a broader industry challenge associated with rapid growth in data center demand and the implications this growth creates for utility planning, infrastructure investment, cost allocation, and rate design decisions. Students should be encouraged to evaluate both the potential economic-development benefits associated with large-load customer growth and the risks associated with significant infrastructure investments, uncertain demand forecasts, and evolving regulatory expectations.

Students frequently focus too heavily on either stakeholder concerns or financial outcomes in isolation. Instructors should encourage students to integrate both quantitative and qualitative considerations when evaluating the strategic options. Effective analysis should incorporate the development scenarios, financial projections, customer bill impacts, project risks, stakeholder priorities, and proposed contract terms presented throughout the case exhibits. Students should recognize that a project with a positive expected value may still present significant downside risks that require mitigation through phased implementation, cost-sharing arrangements, contractual protections, or other strategic mechanisms.

Special attention should be given to the allocation of project risks among stakeholders. Students should consider how service-agreement provisions, infrastructure cost-sharing arrangements, demand-payment requirements, security deposits, termination protections, and cost-recovery mechanisms can be used to balance economic-development objectives with customer affordability and regulatory accountability. Strong analyses should recognize that the decision extends beyond whether the project should proceed and includes determining the conditions under which it should proceed.

Finally, instructors should encourage students to consider how stakeholder engagement, communication, and leadership decisions can influence project outcomes even when infrastructure investments are technically feasible and financially attractive. Successful implementation depends not only on engineering and financial considerations but also on maintaining stakeholder trust, regulatory support, and organizational credibility throughout the decision-making process.

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