

City of Decorah, Iowa Municipalization Preliminary Feasibility Study

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DEFINED TERMS

City	City of Decorah, Iowa
Commission	Colorado’s Public Utilities Commission
Concentric	Concentric Energy Advisors, Inc.
IUB	Iowa Utilities Board
NEM	Net Energy Metering
OATT	Open Access Transmission Tariff
RCLD	Reproduction Cost Less Depreciation

RCNLD	Replacement Cost New Less Depreciation			
STORMS	Alliant's	Work	Management	System

QUALIFICATIONS

Concentric Energy Advisors, Inc. ("Concentric") is a management consulting and financial advisory firm focused on the North American energy industry. Concentric has offices in Marlborough, Massachusetts and Washington, D.C., and specializes in utility regulation, energy markets, finance, mergers and acquisitions, valuation, management operations and planning, as well as civil litigation and alternative dispute resolution. Neither Concentric nor any of its employees have any present or contemplated future interest in the assets appraised in this report. Neither our engagement by Alliant nor our compensation is in any way contingent upon the value estimates contained in this report.

This report was prepared under the direction of Ann E. Bulkley, Senior Vice President, of Concentric. Ms. Bulkley is a certified general appraiser licensed in the Commonwealth of Massachusetts and the states of Michigan and New Hampshire. Ms. Bulkley has more than two decades of management and economic consulting experience in the energy industry. Ms. Bulkley has directed and supported numerous valuations of public utility and industrial properties for ratemaking, purchase and sale considerations, ad valorem tax assessments, and other accounting and financing matters. These valuations require expertise in utility finance and regulation, electricity and natural gas markets, and utility risk assessment. Prior to joining Concentric, Ms. Bulkley held senior expertise-based consulting positions at several firms, including Reed Consulting Group and Navigant Consulting, Inc., where she specialized in valuation. Ms. Bulkley holds an M.A. in economics from Boston University and a B.A. in economics and finance from Simmons College.

All statements, assumptions, opinions, positions, and conclusions set forth in this Preliminary Feasibility Study are solely and exclusively provided by and attributable to Concentric and to no other party whatsoever. Concentric is solely responsible for the contents of this Preliminary Feasibility Study. Nothing in this Preliminary Feasibility Study is intended, nor shall be construed, to be information, admissions, statements, assumptions, opinions, positions, or conclusions made or provided by or on behalf of Alliant.

EXECUTIVE SUMMARY

Concentric has performed this preliminary independent assessment of the costs and implications of the City of Decorah, Iowa ("City") acquiring Alliant's existing utility assets and assuming responsibility for providing electric service to Alliant's customers in the City.¹ Our report presents facts and industry insights for the primary stakeholder constituencies regarding a choice between the establishment of a new municipal electric utility by the City or the continuation of service from Alliant. This includes information that pertains to the rates that may be charged either by Alliant or the City, as well as the services that are currently provided by Alliant or may be provided by the City. It is appropriate to jointly consider the rates and services to be provided by Alliant or the City to provide an apples-to-apples comparison between the two alternatives.

It is important to understand the process by which a city can acquire utility property in the State of Iowa. The Iowa Code §476.23 governs municipalization cases. The decision to municipalize requires an affirmative vote in a city election. If there is support for municipalization through that election, the city is then required to submit a petition the Iowa Utilities Board ("IUB") for a certificate to municipalize the electric utility. If there are no objections to the petition, the IUB issues a certificate authorizing the municipality to provide service to the city. If there is an objection, the IUB is required to conduct a hearing that determines whether the municipal ownership and operation of the system is in the public interest. That determination includes many factors such as the capability and preparedness of the city to provide the service, unnecessary duplication of facilities, the plans established to maintain the system, a cost and benefit analysis, as well as other factors.

The key determinants of the rates that customers can expect to pay under the two alternatives are: (1) the City's cost of acquiring Alliant's utility assets and other initial actions necessary to prepare to serve as the electric utility, (2) the City's annual costs of providing electric service, including operating and maintaining, continuing to invest in utility assets, and acquiring power supplies and having them delivered to Decorah, (3) a forecast of the City's expected cost of providing service based on the initial investment and ongoing operating costs, and (4) a forecast of Alliant's rates to serve as a benchmark for comparing the municipal electric utility alternative.

There are several other financial and non-financial factors that should also be considered when making an informed decision. The City will have more control over decisions that uniquely affect its electric utility, the services that it provides, and the rates that customers pay. For example, the City could decide to expand the net metering program for customers or increase spending on energy efficiency programs. Of course, the ability to make these decisions comes with the knowledge that Decorah customers will pay for all the costs of these programs.

Customers will continue to care about the quality of service that they receive and their interactions with the utility when requesting a new service, asking questions or registering concerns. Alliant is organized to provide this function in a centralized manner with staffing, processes and systems that

¹ It will be appropriate to update this assessment and any subsequent formal valuation studies as new information becomes available that will have a meaningful impact on the results.

are sized to serve the needs of its customer base in Iowa. The City may be able to replicate this function with local personnel or may decide to rely on a combination of outside vendors and City functions. In either case, the City will be challenged to achieve the economies of scale that are possible at a large utility. On the other hand, the claim is often made that local personnel may be more responsive to customer concerns. There is also a difference in governance between the two alternatives as it relates to oversight of customer service, pricing, key decisions, and other matters. Alliant is regulated by the IUB with its staff of attorneys, economists, accountants, and engineers. The City will need to establish a governance organization to approve key decisions and oversee the quality of service provided by the municipal electric utility.

The estimate of electricity rates under the City utility option begins with the costs of forming the utility, composed of acquisition costs that are established by the condemnation process as well as certain transaction and startup costs. As shown in Figure ES-1, Concentric estimates the cost of forming a utility at \$51.1 million, assuming a 2021 acquisition.²

Figure ES-1: Preliminary Estimate of Acquisition Costs

Cost Category	2021 (\$ million)
Acquisition Costs	\$38.7
Transaction Costs	\$2.9
Startup Costs	\$9.5
Total	\$51.1

Acquisition costs include acquiring Alliant's distribution assets in service as of the transaction date, land and easements, and compensation that is due to Alliant for modifying facilities to "separate" the Decorah utility system and establish a new point of delivery for the City to receive its supply of electricity. Transaction costs include legal fees and underwriting costs necessary to issue debt to finance the acquisition costs and fund the startup efforts that prepare the municipal electric utility to exercise its responsibilities. Startup costs include new systems, inventory, facilities, and machinery that will be necessary to operate and maintain theand distribution system, manage customer relationships, and provide detailed billing of the electric service and financial reporting.

Federal law prohibits the use of tax-exempt debt to finance the acquisition of utility property from an investor-owned utility. Concentric assumed that the acquisition costs would be financed with 30-year taxable revenue bonds.³ All other costs are assumed to be financed with 30-year tax-exempt debt. Debt service costs are a major element of the cost of providing service as shown in the Figure ES-2.

² This is a preliminary estimate that can only be refined after a complete system inventory is conducted. Additional scenarios have been included in Section 6, assuming a transaction close date of 2020, which is optimistic, and 2024, which may be more reasonable.

³ Public Finance Network. "Tax-Exempt Financing: A Primer", p. 22.

Figure ES-2: Preliminary Cost Estimate of Providing Service

	2021	2026	2031	2036	2041	2046
	-----(\$000)-----					
Debt Service (Principal & Interest)	\$ 3,584	\$ 3,807	\$ 4,118	\$ 4,464	\$ 5,321	\$ 5,489
Power Supply & Delivery						
Purchased Power and Capacity	\$ 3,214	\$ 4,084	\$ 4,831	\$ 5,484	\$ 6,215	\$ 7,032
ITC Transmission Expense	\$ 2,302	\$ 2,443	\$ 2,669	\$ 2,832	\$ 3,094	\$ 3,283
O&M Expenses						
Operations and Maintenance Expense	\$ 1,247	\$ 1,411	\$ 1,597	\$ 1,807	\$ 2,044	\$ 2,313
Customer Accounting	\$ 223	\$ 253	\$ 286	\$ 323	\$ 366	\$ 414
Administrative & General	\$ 819	\$ 927	\$ 1,049	\$ 1,186	\$ 1,342	\$ 1,519
Energy Assistance Program	\$ 3	\$ 4	\$ 4	\$ 5	\$ 6	\$ 6
Energy Efficiency	\$ 403	\$ 456	\$ 516	\$ 583	\$ 660	\$ 747
Total Decorah Municipal Electric Utility Cost of Service	\$ 11,796	\$ 13,384	\$ 15,069	\$ 16,684	\$ 19,049	\$ 20,802
Replacement Property Taxes	\$ 83	\$ 94	\$ 106	\$ 120	\$ 136	\$ 153
Total Decorah Cost	\$ 11,879	\$ 13,478	\$ 15,175	\$ 16,804	\$ 19,184	\$ 20,955

Excluding the debt service, the largest cost of providing service is the power supply and delivery costs, which include the cost of acquiring supply and the transmission charges to transport power to Decorah. Concentric has assumed that the City municipal electric utility would purchase power at market rates. In addition, Concentric has assumed that the City will pay the firm point-to-point transmission costs and corresponding costs for use of the ITC transmission system.

For comparison purposes, Concentric assumed that Alliant's rates will increase by approximately 6 percent in 2018 based on Alliant's current rate case request and 3.0 percent every third year beginning in 2021 based on analysis of Midwestern rate case frequency and magnitude. The Base Case analysis estimates that of municipal ownership will result in an increase in costs of \$11 million on a net present value (NPV) basis over 10 years.

However, given the uncertainties of projecting costs over such an extended period, Concentric prepared alternative "Lower Bound" and "Upper Bound" scenarios to reflect the timing of the municipal acquisition of the system and that costs may be lower or higher than expected. The "Lower Bound" Scenario is considered the less risky scenario for a Decorah municipalization, while the "Upper Bound" Scenario reflects more conservative assumptions, resulting in a riskier scenario for the City. These scenarios are based on an internally consistent set of assumptions developed around transaction dates that are either aggressive (2020 for the Lower Bound Scenario) or reflect an extended condemnation process (2024 for the Upper Bound Scenario). In addition, these scenarios reflect the range of potential operating and acquisition costs. Residents and businesses of Decorah will want to consider the expected costs of the two alternative scenarios and the potential that the costs of either alternative will be significantly higher than expected. The figure below summarizes the differences between the scenarios. As mentioned, the Upper Bound Scenario includes assumptions that would make a municipalization riskier (i.e., costlier), whereas the Lower

Bound Scenario includes assumptions that would make a municipalization less risky than the Base Case.

Figure ES-3: Key Scenario Assumptions

Assumption	Base Case	Upper Bound	Lower Bound
Municipal Start Date	2021	2024	2020
Replacement Capital Investment	4.00%	4.50%	3.50%
Energy Efficiency Incentive Factor	100.00%	100.00%	50.00%
Cost of Debt	6.00%	6.50%	5.75%
Operating Costs (2021\$/customer)	\$623	\$865	\$504
Rate Increase	3.00% every three years starting 2021	2.20% every three years starting 2021	4.00% every three years starting 2021
Asset Buyout % Inventory	2.00%	3.00%	1.50%
Going Concern (2021\$mm)	4.40	9.55	2.38

The results of the Base Case and the two alternative scenarios are presented in Figure ES-4. In all cases, the 10- and 20-year net present value ("NPV") is negative.

Figure ES-4: Scenario Results

	2020	2021	2026	2031	2036	2041
				((\$000))		
Base Case						
Total Cost						
Decorah	\$ -	\$ 11,879	\$ 13,478	\$ 15,175	\$ 16,804	\$ 19,184
IPL	\$ -	\$ 11,357	\$ 11,698	\$ 12,410	\$ 13,166	\$ 13,561
Net Savings/(Costs)	\$ -	\$ (522)	\$ (1,780)	\$ (2,765)	\$ (3,638)	\$ (5,624)
10-Year Net Present Value		\$ (11,039)				
20-Year Net Present Value		\$ (26,302)				
Upper Bound						
Total Cost						
Decorah	\$ -	\$ -	\$ 15,104	\$ 16,960	\$ 19,236	\$ 21,298
IPL	\$ -	\$ -	\$ 11,517	\$ 12,029	\$ 12,564	\$ 12,840
Net Savings/(Costs)	\$ -	\$ -	\$ (3,587)	\$ (4,932)	\$ (6,672)	\$ (8,458)
10-Year Net Present Value		\$ (30,188)				
20-Year Net Present Value		\$ (57,946)				
Lower Bound						
Total Cost						
Decorah	\$ 9,986	\$ 10,824	\$ 12,355	\$ 13,916	\$ 15,754	\$ 17,451
IPL	\$ 11,026	\$ 11,467	\$ 11,926	\$ 12,899	\$ 13,952	\$ 14,510
Net Savings/(Costs)	\$ 1,040	\$ 643	\$ (429)	\$ (1,017)	\$ (1,802)	\$ (2,942)
10-Year Net Present Value		\$ (65)				
20-Year Net Present Value		\$ (6,560)				

Finally, in addition to considering the cost of electric service, Decorah voters will want to make a realistic assessment of the ability of a City-owned utility to execute on its obligations to provide safe and reliable electric service at levels that approximate or exceed the level of service provided by Alliant. This is referred to as “operating risk” and often receives short shrift in municipalization assessments where the municipality is entering a new business that is critically important to the health and safety of its citizens. A realistic view with respect to future system investments is part of this analysis.

SECTION 1: INTRODUCTION

Concentric has performed a preliminary independent assessment of the costs and implications of the City acquiring Alliant's existing utility assets and assuming responsibility for providing electric service to Alliant's Decorah customers (a "Preliminary Feasibility Study").⁴ As an independent assessment, the Preliminary Feasibility Study presents certain facts and perspectives that inform the primary stakeholder constituencies: Alliant as the current asset owner and service provider, the City of Decorah and its officials, and the residents and businesses that depend on reasonably priced, reliable and safe electric service.

The Iowa Code §476.23 governs municipalization cases. The decision to municipalize requires an affirmative vote in a city election. If there is support for municipalization through that election, the city is then required to submit a petition the IUB for a certificate to municipalize the electric utility. If there are no objections to the petition, the IUB issues a certificate authorizing the municipality to provide service to the city. If there is an objection to the municipalization, the IUB is required to conduct a hearing that determines whether the municipal ownership and operation of the system is in the public interest. That determination includes many factors such as the capability and preparedness of the city to provide the service, unnecessary duplication of facilities, the plans established to maintain the system, and a cost and benefit analysis, as well as other factors.

Concentric has considered the current costs and projected future cost of providing electric service under the two alternatives: (1) continuation of Alliant as the service provider, and (2) service provided by a newly formed City municipal electric utility. The City alternative requires the purchase of certain distribution, and other assets from Alliant at a price that will either be agreed upon or determined through a regulatory approval process under the oversight of the IUB. There will be additional costs related to the separation of the municipal system from the Alliant system and the reintegration of the remaining Alliant system. Financing of the acquisition will be included in the cost of a city owned municipal electric utility and recovered along with other costs through the rates that will be charged by the City.

It is not sufficient to only compare the rates under the City and Alliant options; it is also necessary to ensure that the comparison reflects a fair comparison between the services that would be provided by either the City or Alliant. For example, certain services are currently provided by Alliant throughout its service area and are included within the charge for basic electric service. The costs of those services (e.g., energy efficiency, support for solar energy, local property tax) will need to be considered as part of the service provided by the City to provide a fair comparison to the Alliant tariffed service.

There are also certain nonfinancial factors that should be considered by the City and residents in deciding whether to assume responsibility for providing electric service. For example, the City will have greater control over decisions that relate to the specific services to be provided by the City and

⁴ This Preliminary Feasibility Study will provide a high-level analysis of the valuation of Alliant's assets within the Decorah city limits. A more detailed review and certified appraisal report is likely to be required should the acquisition be approved by a vote of Decorah voters.

control over spending priorities that determine the capital and operating budget. However, the City will also be responsible for operating and maintaining the electric system, including responding to outages and other unforeseen challenges. The City will also need to determine which of the many oversight and regulatory services currently provided by the IUB will need to be replicated by the City with appropriate governance procedures.

The Preliminary Feasibility Study begins in Section 2 with a discussion of the municipalization process as informed by Iowa law and the precedent of the IUB. This review provides important context for the decision faced by the City. Section 3 presents various factors that are relevant to the determination of a fair acquisition price and presents a preliminary range for acquisition costs that the City can expect based on a reasonable set of assumptions. The section also addresses the costs of considering, planning and starting an electric utility, referred to as “Transaction and Startup” costs. Section 4 summarizes the City’s cost of providing electric service, including the financing costs attributable to the acquisition along with all other costs of providing service. Section 5 presents the alternative of continuing Alliant services. Finally, Section 6 brings all the relevant considerations together in a summary comparison of the two alternatives. In addition, Section 6 provides a sensitivity analysis that demonstrates the effect of key assumptions on the Preliminary Feasibility Study.

SECTION 2: THE MUNICIPAL ALTERNATIVE

2.1 OVERVIEW

Forming a municipal electric utility can be challenging, even when there is a compelling economic and public benefits case to be made. The municipality is making a likely irrevocable decision to finance and acquire assets from the existing utility provider, assume the obligations of providing reliable, safe and affordable electric service, and form an organization and governance structure to manage and operate the utility. The municipality is not only committing to acquiring existing assets, but to maintaining electric facilities according to national standards and to continue making investments that support the services that local residential and business customers expect. The Decorah City Council and residents, as the ultimate decision makers, will need to make a well-informed decision that considers economic and other considerations, recognizing that expected electricity prices may turn out to be higher or lower due to factors that are both within and beyond the municipality's control.

The impetus for considering municipalization varies but often centers around issues such as: (1) desire for local control; (2) the prospect of obtaining a greener electricity supply; (3) dissatisfaction with the existing utility supplier attributable to price and/or perceived service issues; and/or (4) perception that electricity prices will be lower with municipal ownership due to financing advantages or the belief that it will be possible to bypass costs that are incurred by the existing utility to provide service.

2.2 STATE OF IOWA LAW AND MUNICIPAL AUTHORITIES

The Iowa Code §476.23 governs municipalization cases. The process requires that there be an affirmative vote in a city election to pursue municipalization efforts. If there is support for municipalization through the election, the city is required to submit a petition to the IUB for a certificate to municipalize the electric utility. If there are no objections to the petition, the IUB issues a certificate authorizing the municipality to provide service to the city. If there is an objection, the IUB is required to conduct a hearing that determines if a city's service to customers is in the public interest. That determination includes consideration of any unnecessary duplication of facilities.

If the certificate is granted, it includes a requirement that the city pay the electric utility that is serving the customers a reasonable price for the facilities that are used to serve the customer. The statute provides that the IUB consider the following in establishing a reasonable price:

- 1) The cost of the facilities being acquired;

- 2) Any generation and capacity dedicated to the customer, including, but not limited to, electric power generating facilities and alternate energy production facilities not in service but for which the IUB has issued an order pursuant to Section 476.53;
- 3) Electric power generating facility emissions plan budgets approved by the IUB;
- 4) Depreciation;
- 5) Loss of revenue; and
- 6) Cost of reintegration of the system after the detached portion is sold.⁵

It is important to note that, other than stating that a reasonable price must be paid by the city for the electric utility's facilities and listing various factors to consider in making the price determination, the statute does not give explicit guidelines as to how the IUB is to determine a reasonable price.

In addition to acquiring the physical assets of the existing utility, the city will need to secure contractual arrangements to acquire electricity supply and have it delivered to the city via interconnections with transmission facilities that are owned by ITC Midwest or by other third parties. Efforts to secure electricity supply contracts and transmission service typically proceed in parallel with the condemnation process.

Just compensation is a primary driver in determining whether municipalization makes economic sense. However, public consideration of the municipal option often proceeds on a more accelerated path than a final determination of just compensation, creating a risk that the City Council and voters will decide to acquire assets based on a price that is well below the final determination. A typical sequence of activities is as follows:

- The City or entity supporting municipalization decides to retain an outside contractor to perform a feasibility study addressing the cost of and plan for acquisition and subsequent operation of the electric utility.
- The City decides whether or not to move forward by establishing a public election.
- If approved by a majority of voters, the the City submits a petition to the IUB.
- If the petition is challenged, regulatory proceedings commence through an IUB proceeding. The IUB determines whether or not the municipal operation of the electric utility system is in the public interest. This process can take years to complete and the decisions made by the IUB are reviewable by courts of appeal.
- After the legality of the acquisition and just compensation are determined, the community prepares to assume responsibility for management and operation of the utility, a process that can take up to a year to complete.

The process for municipalization of an electric utility can take many years and require considerable out-of-pocket expense to retain legal and consulting services.⁶

⁵ IUB decision, at para 3.

2.3 FEASIBILITY STUDY

The Feasibility Study is a report that provides the financial and operational considerations for the municipalization effort. As the primary source of information relied upon by municipal officials and voters, it is essential that a feasibility study be performed, meeting at a minimum the following criteria:

- Understandable: should be understandable by any voter interested in making an informed decision, relying on plain language to explain electric industry concepts to the extent possible;
- Informed by Relevant Law, Policy, and Precedent: as necessary to accurately define the requirements that a municipality must satisfy and the future operating environment in which investment and other decisions will need to be made;
- Objective: avoid any bias in the framing of the analysis or specifying assumptions, with conclusions and recommendations informed by relevant expertise and experience;
- Comprehensive: inclusive of all relevant quantitative and qualitative considerations;
- Rigorous: analytically sound, consistent with professional standards;
- Includes Risk Analysis: both “Acquisition Risks” through the presentation of analyses that reflect a reasonable range of acquisition and startup costs based on alternative sets of reasonable assumptions that capture the range of uncertainty and “Operational Risks” that will be assumed by the City when it assumes responsibility for operating the utility, including the obligation to respond to severe storms and other extraordinary events; and
- Documented: all source materials, assumptions, and calculations should be fully documented.

Among these criteria, elaboration is required with respect to the “Comprehensive” criterion. As noted above, the Feasibility Study should address quantitative, hard-to-quantify, and qualitative considerations. The quantitative assessment should produce a comparison of the municipal option and the continuation of the current electric service by the incumbent utility. There are several assumptions to consider as “Base Case” or “Most Likely” assumptions as well as realistic alternative scenarios. These assumptions include energy prices, operating costs, the impact of the acquisition on the municipality’s financial condition, the ability to access capital markets on reasonable terms, and any foregone municipal revenues (e.g., property taxes). The cost of providing electric service includes the following costs:

⁶ The process prior to filing a petition with the IUB can take several years. In the most recent municipalization cases in Iowa, Docket Nos. SPU-06-05, 07, 08, the IUB issued its decisions two years after the petitions were filed. In those cases, the IUB concluded that it was not in the public interest to proceed with the municipalization of Alliant’s electric distribution system assets.

- Debt Service: principal and interest payments on the debt incurred to fund the acquisition costs and finance incremental investments.
- Working Capital: the cost associated with maintaining cash balances to support day-to-day operations of the utility and respond to unanticipated events, including securing outside crews and equipment to assist with emergency storm restoration.⁷
- Energy and Capacity : the cost of purchasing delivered power supply in MISO- Iowa.
- Transmission Expense: the cost of transporting power under the ITC tariffs to the expected point of delivery to the Decorah system.
- Operations and Maintenance Expense: the cost to operate and maintain the transmission and distribution systems, including substations, and distribution lines, transformers, and communication facilities, as well as costs attributable to vegetation management and utility crews and equipment.
- Administrative and General Expense: salaries and wages, office supplies, outside services, rents, and other expenses not attributable to a specific utility function (i.e., distribution, transmission, or supply).
- Customer Service: the cost of billing and collection, including maintaining customer information systems.
- Taxes: Replacement local property taxes.
- Customer Programs: the cost of providing energy efficiency and energy assistance programs.
- Replacement Capital: investments required to replace distribution system assets, including assets that have failed and assets beyond their economic and functional life.

The financing costs for the municipal option are based on borrowing costs and the amount being financed, where the latter is the sum of the just compensation for acquired assets and startup costs. As described in Section 4.3, while municipal utilities can issue low-interest, tax-exempt debt to finance their *future* capital needs, the City's initial acquisition of the utility assets must be financed with taxable debt, similar to the debt relied upon by Alliant and other investor-owned utilities that finance investments to replace aging infrastructure, modernize the network, and support new services.⁸ All financing costs are included in the total costs of providing basic electric service (commonly referred to as "revenue requirements") and recovered through electricity rates charged to customers.⁹

⁷ Concentric relied on 45 days of working capital, estimated at \$1.4 million in the first year, for the Base Case. Working capital is included in total debt service.

⁸ Public Finance Network. "Tax-Exempt Financing: A Primer", p. 22.

⁹ Under both the IPL and municipal options, the utility will need to recoup the investment through an annual charge (i.e., depreciation) and a separate financing cost. These are frequently referred to as the return "of" and "on" capital, respectively.

Most utilities offer services that are more than what is required to meet “basic” service. These services may be provided to all customers, offered to all customers as an option, or offered to a subset of customers based on the specified criteria, such as the presence of solar panels on their rooftops. It is necessary to consider these harder-to-quantify factors in order to present a valid apples-to-apples comparison between the City and Alliant ownership alternatives. For example, there may be aspects of the existing utility service that the municipality may decide to expand, reduce or abandon. These include public benefits programs and services provided by Alliant overseen by the IUB, including conservation and energy efficiency programs (e.g., in-home audits; insulation and appliance rebates), low-income assistance, and financial support for solar energy that is located on the customer’s premises, but connected to the utility distribution grid. The municipality may also include potential value-added utility services that require an investment in infrastructure and new information systems, such as net metering that provides customers with compensation for the on-site generation of power that is put back on the distribution system. Alliant currently offers all of these services and recovers the costs from its entire base. However, if these same programs are to be provided by the City, these costs will now be borne (or avoided) only by customers in Decorah. An illustrative example: A greater proportion of Decorah customers taking part in energy efficiency programs or moving to net metering (through installation of rooftop solar panels) could put upward pressure on electricity rates for the remainder of the Decorah customers after the acquisition. The comparison between the City-owned utility and continuation of service from Alliant will need to take these harder-to-quantify considerations into account to provide a fair comparison.

Finally, there are several qualitative considerations that will affect the comparison between the municipal option and continuation of Alliant service. These include comparable levels of service quality, including customer service, reliability under favorable weather conditions and the ability to respond to storm-related and other extraordinary outages. Alliant’s service quality is subject to oversight by the IUB. The City will need to establish a governance structure to oversee the municipal electric utility’s reliability, safety and affordability of service, as well as a process for resolving customer billing and other inquiries.

2.4 RECENT MUNICIPALIZATION EXPERIENCE

As shown in Figure 1, only 16 of 51 national municipalization efforts since 2001 have been approved; 15 of these have been completed and another (Boulder, CO) is continuing to pursue municipalization. Four additional communities are currently considering or seeking the necessary approvals for municipalization. One community acquired the system from the regulated utility and sold the system back to the utility 12 years later. The remaining communities have decided not to proceed either because the municipalization effort has been rejected by voters, denied by regulatory commissions or otherwise abandoned by the municipality during the process. Municipalizations fail to proceed for a variety of reasons, including abandonment by the municipal government after consideration of a feasibility study or rejection by voters after government officials decided to bring the decision to a vote. Municipalization efforts have also been abandoned

if costs and time necessary to complete the effort greatly exceed original estimates.¹⁰ Feasibility studies performed on behalf of municipalities frequently underestimate both the time and cost of completing municipalization efforts that do not have the cooperation of the existing utility service provider.

Figure 1: United States Municipalization Efforts: 2001–2017

Municipality	Utility	Date	Status	State
Hermiston, OR	Pacific Power & Light	10/1/2001	Completed	OR
Village of Hamburg, NY	New York Gas & Electric	2001	Abandoned	NY
Oakland, CA	Pacific Gas & Electric Company	2002	Abandoned	CA
Saint Henry, OH	Dayton Power & Light, Midwest Electric	2002	Abandoned	OH
Hercules, CA	Pacific Gas & Electric Company	10/1/2002	Completed (sold back to PG&E in 2014)	CA
Corona, CA	Southern California Edison	5/7/2003	Abandoned by City Council	CA
Chula Vista, CA	San Diego Gas & Electric	2004	Abandoned	CA
Clackamas, OR	Portland General Electric Co.	2004	Abandoned	OR
Elk City, OK	American Electric Power Co.	2004	Completed	OK
Rancho Cucamonga, CA	Southern California Edison	2004	Completed	CA
Huron, OH	Ohio Edison	2004	Completed	OH
Moreno Valley, CA	Southern California Edison	2/6/2004	Completed	CA
San Marcos, CA	San Diego Gas & Electric	5/1/2004	Abandoned	CA
Berea, KY	Berea College Electric Utility	2005	Completed	KY
Fairfield, IA	Alliant Energy Corp.	3/4/2005	Abandoned	IA
Winter Park, FL	Progress Energy Florida	6/1/2005	Completed	FL
Cerritos, CA	Southern California Edison	7/1/2005	Completed	CA
Oregon Mutual Utility Development	Portland General Electric Co.	7/25/2005	Rejected by Governor	OR
Maitland, FL	Progress Energy Florida	8/8/2005	Rejected by City Council	FL
Iowa City, IA	MidAmerican Energy	11/1/2005	Rejected by Voters	IA
Belleair, FL	Progress Energy Florida	11/8/2005	Rejected by Voters	FL
Island Power, Pittsburg, CA	Former Military Base	2006	Completed	CA
City of Paris, IL	Ameren Illinois	2007	Abandoned	IL
Titonka, IA	Interstate Power & Light Co.	2/1/2007	Abandoned	IA
City of Atka	Andreanof Electric Corp.	2008	Completed	AK
Everly, IA	Interstate Power & Light Co.	5/13/2008	Rejected by Iowa Utilities Board	IA
Kalona, IA	Interstate Power & Light Co.	5/13/2008	Rejected by Iowa Utilities Board	IA
Rolfe, IA	Interstate Power & Light Co.	5/13/2008	Rejected by Iowa Utilities Board	IA
Terril, IA	Interstate Power & Light Co.	5/13/2008	Rejected by Iowa Utilities Board	IA
Wellman, IA	Interstate Power & Light Co.	5/13/2008	Rejected by Iowa Utilities Board	IA
San Francisco, CA	Pacific Gas & Electric Company	11/4/2008	Rejected by Voters	CA
Skagit County, WA	Puget Sound Energy	11/4/2008	Rejected by Voters	WA
Whidbey Island, WA	Puget Sound Energy	11/4/2008	Rejected by Voters	WA
Jefferson County, WA	Puget Sound Energy	11/4/2008	Completed	WA
Marin Energy Authority	Pacific Gas & Electric Company	2009	Completed	CA
City of Egegik	Egegik Light & Power Company	2011	Completed	AK
South Daytona, FL	Florida Power & Light Co.	11/1/2012	Rejected by Voters	FL
Thurston County, WA	Puget Sound Energy	11/6/2012	Rejected by Voters	WA
Toledo Public Power	First Energy	8/1/2012	Completed	OH
City of Klamath Falls, OR	PacifiCorp	2013	Abandoned	OR
Santa Fe, NM	PNM Resources Inc.	3/13/2013	Considering	NM
Boulder, CO	Xcel Energy Inc.	4/22/2013	Approved	CO

¹⁰ In the case of Las Cruces, New Mexico, in 1991, the consultant projected it would cost that city \$13 million to \$26 million to acquire the system. In 1999, Las Cruces abandoned its takeover effort after the costs escalated to over \$105 million.

Municipality	Utility	Date	Status	State
Minneapolis, MN	Xcel Energy Inc.	8/1/2013	Abandoned	MN
Klamath County, OR	PacifiCorp	2014	Considering	OR
Davis, California	Pacific Gas & Electric Company	1/28/2014	Abandoned	CA
Cape Coral, FL	LCEC	2014	Considered	FL
Island of Maui, HI	Hawaiian Electric Industries	2015	Considering	HI
Millersburg, Oregon	PacifiCorp	5/12/2015	Rejected by Voters	OR
DC Public Power	Pepco	10/1/2015	Abandoned	DC
California Electrical Utility District	PG&E, SDG&E SCE	11/8/2016	Abandoned	CA
Bainbridge Island, WA	Puget Sound Energy	7/9/2017	Abandoned	WA

Source: Data derived from various news publications, and SNL Financial.

In 2006, several Iowa municipalities petitioned the IUB to municipalize their electric utility systems (Everly, Kalona, Rolfe, Terril, and Wellman, shown in Figure 1). The IUB addressed these requests in a consolidated docket in 2008. In its decision in that proceeding, the IUB determined that the municipalization of the electric utility assets was not in the public interest in each city, and therefore, rejected each of the petitions filed by these cities. In that case, the IUB relied on the public interest standard, requiring a demonstration that municipalization would be in the public interest, taking into consideration financial benefits, as well as operational preparedness, and the due diligence and planning that are necessary to provide safe, reasonable and adequate service into the future.¹¹

Several municipalizations have been completed at costs that greatly exceeded original estimates. For example, Winter Park, Florida's costs escalated from an original estimate of \$16 million to nearly \$50 million by the time the takeover was completed. The initial feasibility study for Jefferson County Public Utility District's acquisition of Puget Sound Energy's electric assets estimated an acquisition cost of \$47 million, less than half of the final acquisition cost of \$103 million, excluding startup expenses. Increased acquisition and transaction costs translate directly into higher than projected municipal electricity rates.

¹¹ IUB decision, July 11, 2008, at para. 22.

SECTION 3:

DECORAH PROJECTED COSTS TO FORM AN ELECTRIC UTILITY

3.1 INTRODUCTION

The City will incur three major categories of costs to acquire and establish an electric utility:

1. Acquisition Costs: costs of acquiring Alliant's physical transmission and distribution system assets (e.g., distribution poles, lines, meters) at a reasonable price. Iowa code (476.23) identifies that the reasonable price shall consider the cost of the facilities being acquired, including electric generation and any Board-approved generation projects not yet in service, depreciation, loss of revenue, and the cost of reintegration of the system. These other categories include land and right-of-way easements that represent the fair market value of property owned by Alliant and easements that provide access to land that may be used by Alliant. These costs include system separation costs incurred by Alliant that are required to reconfigure the remaining Alliant facilities to maintain safe and reliable service for both Alliant and Decorah and compensation for assets acquired by Alliant or contractual obligations entered into to serve Decorah, but that will not have any continuing value to Alliant after the transaction. These are referred to as severance or stranded costs. Just compensation includes an estimate of the "going concern" value of the assets sold by Alliant to Decorah, recognizing that the value of the business being acquired by Decorah is greater than a collection of physical assets.
2. Transaction Costs: legal, consulting, and financing costs incurred by the City to pursue the condemnation process and close the transaction.
3. Startup Costs: startup costs incurred by the City necessary to prepare to perform as an electric utility, including new systems, inventory and machinery that will be necessary to operate and maintain the distribution system, manage customer relationships, provide detailed billing of the electric service and provide financial reporting. In addition, this category includes initial debt service reserve and working capital.

Each of these categories will be addressed in the balance of Section 3, including a summary of total costs that will be incurred by the City to begin serving as an electric utility. As noted above, the acquisition costs will be financed with taxable debt; the City is allowed to finance the transaction and startup costs with tax-exempt debt. These annual financing costs, combined with salaries and other costs required to maintain and operate the distribution system, are addressed in Section 4.

This section assumes that a condemnation process will be pursued initially and that any negotiation, should it occur, would also result in just compensation for Alliant's assets, as determined pursuant to Iowa laws.

3.2 ACQUISITION COSTS

A valuation methodology is necessary to arrive at a fair value or just compensation for the various components of acquisition costs. Physical transmission and distribution utility assets are usually valued by employing a cost-based valuation methodology; land and Going Concern value is generally estimated based on market principles that may include recent comparable transactions or the value of a future income stream.

The methodology that has been consistently relied on in Iowa for determining the value of the assets that are proposed to be included in the acquisition is the Replacement Cost New Less Depreciation ("RCNLD") approach. The RCNLD methodology develops the Replacement Cost New ("RCN") of the assets by replacing the existing assets with functionally equivalent assets of current materials and technology. The fair market value of the assets is determined by deducting from the RCN the estimated depreciation of the assets to establish the RCNLD. The RCNLD value represents an estimate of the cost to construct a new system today with commercially available equipment and technology and considering the current construction limitations and the current condition of the existing assets. It is likely, however, that it would not be possible to reconstruct the electric distribution assets in the same configuration or to apply the same development and construction practices. Some existing distribution routes might not be feasible under current regulations, and as a practical matter, it may not be possible to site all of the existing distribution lines in the same location today if they were built in areas that are currently classified as wetlands, environmentally sensitive, or are densely populated. Each of these factors increases the costs associated with approvals and construction. Even routes that are acceptable under current regulations might face local opposition if the attempt was made to establish those routes today

3.2.1 DISTRIBUTION SYSTEM ASSETS

Concentric developed a preliminary estimate of the value of the assets in the City of Decorah based on the replacement cost methodology. The asset inventory was based on Alliant's estimate of the cost of the assets. The RCN estimate was developed based on an estimate of the current inventory of assets in Decorah. The current replacement cost was estimated for these assets based on Alliant's cost estimating team.

A cost per mile estimate was applied to determine the replacement cost for the primary and secondary distribution system within the City limits of Decorah. Mileage data was gathered from the Alliant (GIS) Mapping System and the average cost per mile was based on the 2014 to 2016 Alliant average costs per mile from STORMS. STORMS is Alliant's Work Management System, which contains both labor and material costs. Due to known rocky soil, a heavy concentration of trees and recognition of work around existing facilities, a complexity factor was applied to those costs contained in STORMS. This is consistent with Alliant estimating practices for normal rebuild and replacement projects in the Decorah Zone and within Alliant.

Metering costs were included, based upon the contract values on a cost per meter for the Iowa Smart Meter Project for which deployment is scheduled to begin in January of 2018. The customer meter count was extracted from the Alliant (GIS) mapping system.

The substation cost estimate includes the cost to construct the substation, the land purchase, feeder exits, and the transmission extension to the substation based upon other similar projects that Alliant has constructed within its service territory.

A cost per mile estimate was used to determine the cost to construct distribution facilities to serve customers within the Decorah area, but outside the City Limits that would be required to separate the Alliant distribution system from that the City of Decorah proposes to acquire. Consistent with the approach to the replacement cost calculation, mileage data was gathered from the Alliant (GIS) mapping system and the average cost per mile was based on the 2014 to 2016 Alliant average costs per mile from STORMS Work Management System, applying the same complexity factors that were applied in the replacement cost calculation.

An average cost was applied to the street lights based upon the existing number of street lights. The number of street lights was extracted from the Alliant (GIS) mapping system and the average cost per street light was developed using the STORMS Work Management System.

Lastly, the incremental capital investment is intended to reflect the capital additions that take place until expected acquisition date. These investments include repairs and replacements, which would also include the offsets of retirements, as well as technological improvements to the system that are made during that time period and estimated at 4.0 percent of asset value annually in the base case. The RCN was depreciated based on the expected life of the assets. The IUB recognizes a difference between accounting depreciation and depreciation for valuation purposes. In recent municipalization cases, the IUB recognized that depreciation from a valuation perspective is intended to reflect the continued usefulness of the assets. Therefore, while an asset may be fully depreciated for tax purposes and 90 percent depreciated for ratemaking purposes, it may still have a 50 percent remaining useful life. The IUB noted that the fair market value of that asset would be based on the 50 percent remaining useful life.¹² Concentric depreciated the RCN of Alliant's assets in Decorah using the expected lives of the assets based on Alliant's most recent depreciation study that has been accepted by the IUB in Alliant's rate proceedings, relying on a 4 percent discount factor.¹³ Concentric's preliminary estimate of the value of Alliant's distribution assets based on the RCNLD methodology and escalated to 2021 is \$23.3 million, as shown in Figure 2.

¹² IUB decision, WL p. 8.

¹³ The IUB has recognized that a discount factor is reasonable because it uses a fundamental valuation concept that the current value of service today is more valuable at present than service to be provided in future years.

Figure 2: Estimated 2021 Replacement Cost Depreciated

Asset Category	Replacement Cost Depreciated 2021 (\$ million)
Substation	\$3.2
Poles, Towers, Fixtures	\$5.4
Overhead Conductor	\$2.5
Underground Conduit	\$3.4
Underground Conductor	\$1.2
Transformers- Overhead Line	\$1.1
Transformers- Padmount	\$0.8
All Service	\$1.6
Meters	\$0.6
Streetlights	\$0.2
Incremental CapEx pre-municipalization	<u>\$3.3</u>
Total	\$23.3

Note: Totals may not add to total due to rounding.

3.2.2 LAND AND RIGHT-OF-WAY EASEMENTS

Land value is comprised of the value of land owned in fee by Alliant and used for the purposes of the distribution system, as well as the value of distribution easements acquired by Alliant and used for the network on Decorah. At this time, information is not readily available to estimate the value of land and right-of-way easements in Decorah. Therefore, the cost of acquiring these assets has been omitted from Concentric's feasibility study. Assuming the City elected municipalization, it would be necessary to determine the value of these assets and include this in the acquisition cost. Excluding these assets is a conservative assumption for the purposes of determining the financial feasibility of a municipalization of the electric utility assets in Decorah.

3.2.3 SYSTEM SEPARATION COSTS

System separation costs are the costs that are incurred to physically separate the municipal system from Alliant's integrated transmission and distribution system network. The issue of municipal utility boundaries was addressed by the IUB in Docket Nos. SPU-06-05, 06, 07, 08, 10. In that decision, the IUB determined that there were three principles necessary to be considered in the evaluation of the municipal boundaries:

- Absent a compelling reason, it is unreasonable to exclude parts of the city from the municipal utility boundaries.¹⁴
- Unreasonable duplication of facilities should be avoided.
- The ultimate test in determining service area boundaries in municipalization cases is one of reasonableness, taking into consideration engineering, efficiency, and other factors.

There are two primary approaches to addressing system reintegration: primary metering and physical separation of the Decorah system from the integrated Alliant distribution system. Primary metering is generally viewed as the most efficient reintegration plan from a cost perspective. However, there are risks to both utilities based on the continued interconnectedness of the distribution networks.

While there are limited municipalization cases to review in Iowa, the IUB has not mandated the use of primary metering in either of the two cases that have occurred in the last 25 years. In Sheldon, the IUB declined to use primary metering because it had not been used elsewhere against the incumbent utility's wish and because there was hostility between the incumbent and prospective municipal utility. In the Five Cities case, the IUB elected not to adopt primary metering because the Cities had not developed operational plans that would provide confidence that primary metering was sufficient. As a result, the IUB required that boundaries would be established at the Cities' limits and duplication in facilities, such as substations, were appropriate.¹⁵

Based on the IUB precedent, unless Decorah developed a detailed operational plan, it would be reasonable to assume that the asset boundaries would be established at the City limits. This would require system separation and reintegration costs for Alliant's system, as well as some additional costs to serve the customers outside the Decorah City limits. These costs are included in the transaction costs of acquiring the distribution system in the Feasibility Study. As shown in Figure 3, these costs are estimated to be \$11.0 million.

¹⁴ The IUB affirmed the conclusion reached in the Sheldon decision on this issue (p. 13).

¹⁵ 2008 WL 2782513 (Iowa U.B.), 266 P.U.R.4th 447, p. 5.

Figure 3: Estimated Separation and Reintegration Costs

Description	2021 (\$million)
New 2 - transformer sub 69 kV to 24.9 kV	\$5.5
Cost to serve existing rural customers, including step-tie XFMRs	<u>\$5.5</u>
Total	\$11.0

3.2.4 SEVERANCE COSTS

Severance costs are the costs of assets that were built or acquired by Alliant to serve Decorah customers, but which will not be acquired by the new municipal electric utility. These costs are typically referred to in the electric industry as “stranded costs,” and could include contract fees and the remaining undepreciated value of Alliant’s “stranded” generation and distribution assets.

Actual severance costs for Decorah would need to be established in the condemnation proceeding, based on a detailed review of Alliant’s inventory of assets associated with service to Decorah, and the damage to these assets attributable to the taking that has not already been accounted for in the valuation of distribution assets discussed in Section 3.2.1.

3.2.5 GOING CONCERN VALUE

Going Concern value is considered in the determination of just compensation under The Iowa Code. Going Concern represents the incremental value attributable to the fact that the distribution assets that are the subject of a condemnation are not just a collection of physical assets, but together comprise a business unit that is complete, functional, and can be run as a business unit on day one of the acquisition. This value is derived from all the elements that contribute to the complete operating business segment, including the establishment of a customer base, records, maps, and the time and cost of building the business.

The estimate of Going Concern value is typically based on an income capitalization methodology. Its simplest form, direct capitalization, assumes that there is some stabilized annual income that can be expected from the business over time. The expected annual income of the enterprise is divided by a discount rate to arrive at an estimate of the total value of the business. The Going Concern component is calculated as the value of the business less the value of the physical and tangible assets that are used to generate the income. However, this methodology usually produces a Going Concern value of hundreds of millions of dollars. Rather than relying on an income capitalization methodology, Going Concern value in the municipalization context is often based on

annual revenue from the Going Concern multiplied by a factor that ranges from 0.5 to 5 times the revenue of the business.¹⁶

For the Base Case, Concentric applied the lower end of this range (0.5), estimating Going Concern, and arrived at a preliminary estimated Going Concern value of approximately \$4.4 million. In the Lower Bound Scenario, Concentric relied on Going Concern costs that were estimated at 10 percent of the RCNLD of the assets (\$2.4 million); the Upper Bound Scenario calculates the Going Concern at 30 percent of the RCNLD of the assets (\$9.5 million). A full and thorough analysis of Going Concern damages could produce a significantly higher number.

3.2.7 SUMMARY OF ACQUISITION COSTS

As shown in Figure 4, Concentric estimates the acquisition costs at \$38.7 million, based on a transaction closing in 2021. The valuation summarized below is a preliminary estimate that can only be refined after a complete system inventory is conducted.

Figure 4: Preliminary Estimate of Acquisition Costs in 2021¹⁷

Asset Category	2021 (\$million)
Distribution Assets	\$23.3
Separation Costs	\$11.0
Severance Costs	\$0.0
Going Concern	\$4.4
Total	\$38.7

3.3 DECORAH TRANSACTION COSTS

The City will incur legal, consulting, and financing costs to pursue the condemnation process and close the transaction. Legal and consulting fees have been as high as \$10 million depending on the length of the proceeding. The legal process for establishing the acquisition price of the system can be a lengthy process that involves several legal and regulatory authorities, particularly if the outcome is determined through condemnation rather than negotiation. As shown in Figure 5, the transaction costs estimated in the Base Case are conservative.

¹⁶ A well-respected legal treatise, *Nichols on Eminent Domain* (3rd Edition) notes that, "...in the 'fair-value' era [courts] regularly valued the going concern element as an added percentage of the cost of reproduction of the physical assets (between 7.5% and 25%)."

¹⁷ The estimates for separation costs reflect the low end of a range in this figure.

Figure 5: Transaction Costs

Transaction Costs	2021 (\$million)
Legal/Consulting Costs	\$2.2
Flotation Costs	<u>\$0.7</u>
Total	\$2.9

Concentric has estimated that financing or underwriting fees will be approximately \$0.7 million associated with the taxable debt to fund the acquisition of the assets and the tax-exempt debt used to fund transaction fees, startup costs, acquisition costs, working capital, and an initial debt issuance to fund the first few years of capital expenditures.

3.4 STARTUP COSTS

The City will also incur certain one-time startup costs that are necessary to operate the newly formed municipal electric utility. Figure 6 summarizes the Base Case estimated startup costs.

Figure 6: Startup Costs

Startup Costs	2021 (\$million)
Inventory @ 3% of Total	\$0.5
Operations Startup Costs	\$1.1
Power Supply Startup Costs	\$1.1
Initial Capital Expenditure Fund for First 4 Years	\$3.7
Initial Debt Service Reserve	\$1.7
Working Capital	<u>\$1.4</u>
Total	\$9.5

Startup costs include new systems, inventory, and machinery that will be necessary to operate and maintain the distribution system, manage customer relationships, provide detailed billing of the electric service, and provide financial reporting. Those costs are estimated at \$2.7 million. In addition, the City will need to establish a debt service reserve fund roughly equivalent to one year of interest and principal estimated to be \$1.7 million. Concentric relied on 45 days of working capital, estimated at \$1.2 million in the first year, for the Base Case. Working capital is included in total debt service. Finally, the City will need to have access to capital to make replacement capital, prudently assumed to be four years of investment or \$3.7 million.¹⁸ Based on these estimates, the total startup costs are estimated to be approximately \$9.5 million.

¹⁸ The Feasibility Study assumes that the City has sufficient assets and capacity and will not need to acquire additional real estate or buildings for office space, operations and service center.

3.5 TOTAL COSTS TO DECORAH—BASE CASE

Figure 7 presents a summary of the three categories of costs to be incurred by the City: acquisition, transaction, and startup. Concentric has assumed that the acquisition costs will be financed with taxable debt; transaction and startup costs will be financed with tax-exempt debt. The total costs in the Base Case are \$51.5 million. Scenario analyses are presented in Section 6.

Figure 7: Preliminary Estimate of Decorah Costs—2021 Transition

Cost Category	2021 (\$million)
Acquisition Costs	\$38.7
Transaction Costs	\$2.9
Startup Costs	\$9.5
Total	\$51.1

SECTION 4:

DECORAH COSTS TO OPERATE AN ELECTRIC UTILITY

4.1 INTRODUCTION

The going forward costs of operating the utility is referred to as the “cost of service” or “revenue requirement,” including debt service, and stipulates that revenues must be sufficient for the City to maintain an investment grade credit rating related to its utility debt. This analysis assumes that the City will generally replicate the services currently provided by Alliant. Financial feasibility in this context implies that the City will be able to raise the capital necessary to acquire Alliant’s assets and fund the startup operations and, once operational, generate sufficient revenue to maintain investment grade credit ratings from electricity rates that Decorah customers are willing to pay. The Base Case analysis is performed over the 20-year period of 2021–2040, assuming a 2020 acquisition. This section presents Concentric’s assumptions used to perform the financial feasibility analysis, including operating costs of the electric distribution system as a newly formed municipal electric utility.

Concentric’s Base Case reflects the expected operation of the existing electric distribution system, assuming baseline forecasts of customer growth, operations and maintenance costs, and capital replacement. Additional cost scenarios are also presented in Section 6.

4.2 DECORAH ELECTRIC UTILITY REVENUE REQUIREMENT

The typical annual operating expenses for an electric utility included in the revenue requirement are:

- Debt Service: principal and interest payments on the debt incurred to fund the acquisition costs, as well as investments required to replace assets that have failed and assets that are beyond their economic and functional life and capital investment to fund system expansion and upgrades.
- Purchased Power: cost for purchasing power to serve Decorah customers.
- Transmission Expenses: cost of transporting power across the transmission system to the expected separation point between Alliant and Decorah.
- Operations and Maintenance Expenses: cost to operate and maintain the distribution system.
- Administrative and General Expenses: cost of administrative and management services for the electric utility operations.
- Customer Service: cost of billing and customer information systems and employee salaries required to issue bills, collect revenues, operate online and mobile tools for billing, outages and other services, and operate a call center to respond to customer requests.
- Customer Program Expenses: Incremental costs of providing energy efficiency, energy assistance, and other customer programs.
- Taxes: Property taxes and any other taxes that are collected through utility rates.

Each of these cost categories is described in the remainder of this section.

Many of these costs are affected by the number of customers served by the utility, their total energy usage, and system peak demand requirements. Concentric reviewed United States Census data for Decorah, IA for the period from 2010-2015. This data indicates that population has declined less than one half of one percent over that period. Based on the Census data, Concentric assumed that the starting number of customers (3,673) would remain flat over the projection period. Concentric assumed that peak demand would grow at the same rate and that the systemwide load factor and monthly usage patterns would remain unchanged during the forecast period.

4.3 DEBT SERVICE: PRINCIPAL AND FINANCING COSTS

Concentric's Base Case assumes an aggressive timeline, where the City begins operation in 2021. This schedule reflects less than three years for the completion of the process and the transition to City operation and is considered aggressive, given the likelihood that a condemnation process will be required to establish the level of just compensation.

As presented in Section 3, the City will need to raise capital sufficient to fund acquisition costs (\$38.7 million) and related transaction costs (\$2.9 million), and finance transaction and startup costs (\$9.5 million).

Due to a federal law prohibiting the use of tax-exempt debt to finance the acquisition of utility property (i.e., \$23.3 million of the acquisition costs) from an investor-owned utility, the City will be

required to finance the acquisition with taxable revenue bonds. Other costs, including startup, inventory, working capital, and legal and consulting fees can be financed with tax-exempt debt. Concentric assumes that both tax-exempt debt and revenue bonds would be issued for a term of 30 years.¹⁹

Annual debt service costs will be determined by the amount to be financed and the relevant interest rate. Concentric based its interest rate for tax-exempt debt on the Bloomberg value curve 20-year debt costs for State of Iowa municipalities, with consideration given to a historical review of tax-exempt bond issuances, and the expectation that interests will rise between now and 2020. Over the past year, the Federal Reserve has established a policy of increasing the Federal Funds rate and in October 2017 began unwinding its balance sheet, reducing the amount of U.S. Treasury bonds held on its balance sheet. The expectation is that the combination of these two normalization policies will result in rising interest rates going forward. Therefore, it is reasonable to assume that the coupon rate on tax-exempt debt would be 100 basis points higher than recent issuances to reflect a higher interest rate environment at the time when an acquisition would require financing. Based on these considerations, Concentric assumed a tax-exempt interest rate of 4.5 percent.

To establish the interest rate differential (spread) between taxable revenue bonds and tax-exempt bonds, Concentric reviewed the interest rates for 30-year debt issued by municipalities in Iowa over the last 10 years. Comparing bond rates issued by the same utility for the same duration normalizes the results for differences in interest rates due to varying borrowing lengths and utility credit ratings. This analysis indicates that the spread between taxable and tax-exempt debt for issuances of similar term and credit rating is between 150-200 basis points. Concentric's Base Case assumption for financing costs relies on the low end of the range, applying a 150-basis-point spread to the tax-exempt interest rate of 4.5 percent to establish the taxable debt rate of 6.0 percent.

Underwriting fees and other issuance expenses or "flotation costs" are assumed to be 1.5 percent of the borrowed amount, which is consistent with industry practice. These costs, which total \$0.7 million, comprise the transaction costs category.

In addition to financing the initial acquisition and startup costs, the City will need to continue to reinvest in the system to replace aging infrastructure and to maintain the reliability of the system. Concentric assumed that the capital replacement program would be based on the depreciation rate of the assets. Typically, the determination of the depreciation rate of the system requires a statistical study of the existing infrastructure age. Depreciation of distribution assets is usually in the range of 3.0 percent to 4.0 percent per year. Concentric has assumed a capital replacement rate of 4.0 percent and applied that to the average annual rate base of the new municipal electric utility, taking into consideration both the RCNLD of the existing system assets and additional investments made over the study period. Capital replacement is assumed to be debt-funded through incremental debt issuances every four years at tax-exempt rates. To the extent that interest rates continued to escalate and tax-exempt debt costs increase over the study period, incremental debt issuances would need to be financed at higher rates.

¹⁹ Shorter financing terms could be achieved and may provide for lower borrowing costs; however, the annual debt service would be higher to reflect the prepayment of principal over fewer years.

4.4 PURCHASED POWER SUPPLY

Replacement purchased power is the largest component of the revenue requirement for any electric utility. Based on data provided by Alliant, Concentric estimates that the peak load for Decorah is 18 MW. In order to estimate the replacement capacity and energy costs for Decorah, Concentric relied on an all-in delivered energy and capacity price projection developed by Wood Mackenzie. Alliant has relied on Wood Mackenzie forecasts in many filings that have been approved by the IUB. Concentric's Base Case also assumes flat load. The figure below shows annual replacement power costs assumed.

Figure 8: Replacement Power Supply Costs

Year	MISO Iowa (\$/kWh)	Replacement Power and Energy Cost (\$ million)
	Nominal	
2021	\$0.039	\$3.21
2022	\$0.044	\$3.62
2023	\$0.046	\$3.73
2024	\$0.047	\$3.87
2025	\$0.049	\$3.98
2026	\$0.050	\$4.08
2027	\$0.052	\$4.23
2028	\$0.054	\$4.40
2029	\$0.056	\$4.55
2030	\$0.058	\$4.71
2031	\$0.059	\$4.83
2032	\$0.061	\$4.98
2033	\$0.062	\$5.10
2034	\$0.064	\$5.19
2035	\$0.065	\$5.34
2036	\$0.067	\$5.48
2037	\$0.069	\$5.64
2038	\$0.071	\$5.81
2039	\$0.072	\$5.88
2040	\$0.074	\$6.06

Source: Wood Mackenzie

4.5 TRANSMISSION EXPENSE

Decorah will need to reserve and pay for transmission service to transport power across the ITC system to Decorah to serve its customers. To estimate the transmission expense on the ITC transmission system, Concentric relied on Alliant's total 2018 transmission expenses as shown in Figure 9.

Figure 9: ITC Transmission Services and Rates

Transmission Schedule	2018 Alliant Expense (\$)
Schedule 1: Scheduling/Dispatch	\$6,226,228
Schedule 2: Voltage/Reactive	\$4,379,371
Schedule 9: Network Service	\$312,014,610
Schedule 10: FERC Admin	\$1,262,295
Schedule 26: Network Upgrade	\$23,975,936
Schedule 26A: MVP	<u>\$28,082,235</u>
Total	\$375,940,675

Concentric applied the load ratio for Decorah to the remainder of the system to establish the 2018 base transmission expense as shown in Figure 10, the resulting annual expense assumed in 2018 is \$2.17 million.

Figure 10: Estimated Decorah Transmission Costs

Decorah Costs	2018 (\$million)
Alliant Transmission Cost	\$375.94
Decorah Share of Alliant Transmission (%)	0.58%
Decorah Transmission Cost	\$2.17

ITC transmission expenses were escalated based the expectation of rate increases. ITC transmission rate increases were assumed to be 3 percent every two years.

4.6 OPERATIONS AND MAINTENANCE, CUSTOMER ACCOUNTS, AND ADMINISTRATION AND GENERAL EXPENSES

Concentric reviewed reported financial statements and budgets for several municipal utilities, including 38 Iowa municipal utilities with at least 1,000 customers. Concentric assessed an average of two financial reports per utility.

- | | |
|--|---|
| <ol style="list-style-type: none"> 1) Algona, City of (2013, 2014) 2) Ames, City of (2015, 2016) 3) Atlantic Municipal Utilities (2010, 2011) 4) Bloomfield, City of (2015, 2016) 5) Cedar Falls Utilities (2013, 2014, 2015, 2016) 6) Denison, City of (2015, 2016) | <ol style="list-style-type: none"> 7) Estherville, City of (2012, 2016) 8) Forest City (2014, 2015, 2016) 9) Greenfield, City of (2015, 2016) 10) Grundy Center Municipal Light and Power Department (2015, 2016) 11) Harlan, City of (2011, 2016) 12) Hawarden, City of (2016) |
|--|---|

13) Independence, City of (2012, 2013, 2014, 2015)	25) Pella, City of (2014, 2015, 2016)
14) Indianola Municipal Utilities (2014, 2015)	26) Rock Rapids Municipal Utility (2016)
15) Lake Mills City (2016)	27) Sergeant Bluff, City of (2016)
16) Lamoni, City of (2005, 2016)	28) Sibley, City of (2015, 2016)
17) Maquoketa, City of (2015)	29) Sioux Center, City of (2011, 2015, 2016)
18) Milford, City of (2016)	30) Spencer, City of (2015, 2016)
19) Mount Pleasant, City of (2014)	31) Story City (2015, 2016)
20) Muscatine Power and Water (2014, 2015, 2016)	32) Tipton, City of (2015, 2016)
21) New Hampton, City of (2012, 2013, 2014, 2015, 2016)	33) Vinton, City of (2016)
22) Onawa, City of (2016)	34) Waverly Communications Utility (2014, 2015, 2016)
23) Orange City (2015, 2016)	35) Webster City (2014)
24) Osage, City of (2014, 2015)	36) West Liberty, City of (2016)
	37) Wilton, City of (2015, 2016)
	38) Winterset, City of (2015)

The municipal utilities assessed were used to create a benchmark group estimate of the expected expense per customer for a municipal electric utility in Decorah. The benchmark data was used to establish the first-year cost estimates. Specifically, Concentric sought:

- Non-fuel Operations and Maintenance Expense
- Customer Accounting Expense
- Administrative and General Expense

The Base Case assumes the average value of the benchmarks for each of the expense categories below. The Upper Bound and Lower Bound scenarios are based on the range of benchmark values, described in Section 6.

Figure 11: Benchmarking Metrics Operating Expenses

Expense Item	Benchmark \$/customer (\$2021)	Projected Expenses (\$million)
Operations and Maintenance	\$340	\$1.25
Customer Accounting	\$61	\$0.22
Administrative and General	<u>\$223</u>	<u>\$0.82</u>
Totals	\$623	\$2.29

Note: Analysis assumes 3,673 Alliant electric customers in Decorah in 2017. Historical US Census data indicates that from 2010 through 2015 the population in Decorah has declined less than half of one percent. Based on this data, the Base Case assumes that customers are held constant over the study period.

4.7 ENERGY EFFICIENCY PROGRAM EXPENSES

Decorah, as a stand-alone utility, will not be required to provide energy efficiency programs to its customers. However, Decorah residential and business customers have taken advantage of Alliant's energy efficiency programs. As shown in Figure 12, participating residential and business customers in Decorah have received rebates and other investments through Alliant. This figure represents the out-of-pocket payments to customers and program costs and does not include any allocation of the administrative costs incurred by Alliant that are incurred to design, market, administer, and report the results of these programs.

As shown in the figure below, Alliant spends an average of \$364,980 annually on energy efficiency programs that benefit Decorah customers, including roughly \$292,600 on energy efficiency rebates for residential and business customers. In addition, over the past two years, Alliant has also funded free direct installation of electric measure (e.g., LEDs, power strips) for 58 free home energy assessments for residential customers, costing a total of \$8,334, or annualized over 5 years of \$1,667. Alliant's C&I customers in Decorah also benefit from Alliant's funding of energy assessments, engineering and design services, and a dedicated account management team. Between 2012 and 2016, Alliant conducted the following series without cost to the customers:

- Six C&I free customer energy audits, costing a total of \$24,850;
- Ten mid-sized free audits to customers, and costing a total of \$11,459;
- 56 free small business energy audits, costing Alliant \$22,440. These C&I services total roughly \$58,749, or an annual average over 5 years of \$11,750;
- Alliant provided \$180,289 in contractor incentives for energy efficiency projects associated with the Small Business Program over the period, or an annual average of \$36,058;
- Between 2012-2016, Alliant funded \$9,000 to plant 109 trees in the community, with an additional \$75,525 to plant 420 trees for residential customers. The tree plant program costs to Alliant totaled \$84,525, or an annual average of \$16,905; and
- Alliant also provided low income energy assistance EE programs of \$6,000 annually over the period, or \$30,000 in total. The table below shows these program costs.

Figure 12: Decorah Customer Participation in Alliant's Energy Efficiency Programs

EE Program	2012	2013	2014	2015	2016	Annual Average
Energy Efficiency Rebates	\$292,600	\$416,600	\$1,454,500	\$135,800	\$64,400	\$292,600
Free Direct Installation Measures	-	-	-	\$4,167	\$4,167	\$1,667
C&I Audits	\$11,750	\$11,750	\$11,750	\$11,750	\$11,750	\$11,750
Contractor Incentives	\$36,058	\$36,058	\$36,058	\$36,058	\$36,058	\$36,058
Community Tree Planting	\$16,905	\$16,905	\$16,905	\$16,905	\$16,905	\$16,905
Low Income Energy Assistance	<u>\$6,000</u>	<u>\$6,000</u>	<u>\$6,000</u>	<u>\$6,000</u>	<u>\$6,000</u>	<u>\$6,000</u>
Totals	\$363,313	\$487,313	\$1,525,213	\$210,680	\$139,280	\$364,980

Note: Concentric relied on the median, rather than annual average, for the rebate annual average, given the large rebates from 2014.

While there is no obligation for the City to continue to offer energy efficiency programs through a municipal electric utility, in the feasibility study Base Case Concentric assumes that these programs will continue at the minimum funding levels seen over the past five years.

4.8 LOW-INCOME ASSISTANCE PROGRAM EXPENSES

Concentric assumed that a newly formed municipal electric utility would continue to provide the same level of support for low-income customers as would be provided if service was provided by Alliant. Over the period from 2010 through 2016, Alliant has provided a total of \$188,950 of low-income assistance to customers in Decorah, an annual average expense of \$30,750 (2017\$). In the Base Case, Concentric relied on this annual program contribution estimate and escalated the cost at the rate of inflation for the study period.

4.9 PROPERTY TAXES

As a private corporation, Alliant pays property taxes on the assessed value of its assets located in Decorah. These taxes are included as an expense in Alliant's revenue requirements and are reflected in the calculation of electricity rates paid by all Alliant customers. Property taxes benefit the City. If the City were to own and operate the electric utility, Alliant would no longer pay property taxes and these revenues would no longer be available to fund services provided by the City. In the case of Decorah, the City would need to find an alternative source of funds (approximately \$75,000) to maintain the current funding of City services. In all cases, Concentric's analysis assumes that a Decorah electric utility would replace the funding for local services currently funded through the Alliant property taxes. In the Feasibility Study, Concentric estimated the revenue from property taxes in each year based on the depreciated value of the asset purchase and incremental investments made to maintain the system.

4.10 PROJECTED REVENUE REQUIREMENT FOR DECORAH MUNICIPAL ELECTRIC SERVICE

Figure 13 summarizes the Base Case projected revenue requirement for electric utility service for the forecast period.

Figure 13: Decorah Projected Revenue Requirement

	2021	2026	2031	2036	2041
	-----(\$000)-----				
Debt Service (Principal & Interest)	\$ 3,584	\$ 3,807	\$ 4,118	\$ 4,464	\$ 5,321
Power Supply & Delivery					
Purchased Power	\$ 3,214	\$ 4,084	\$ 4,831	\$ 5,484	\$ 6,215
BPA Transmission Expense	\$ 2,302	\$ 2,443	\$ 2,669	\$ 2,832	\$ 3,094
O&M Expenses					
Operations and Maintenance Expense	\$ 1,247	\$ 1,411	\$ 1,597	\$ 1,807	\$ 2,044
Customer Accounting	\$ 223	\$ 253	\$ 286	\$ 323	\$ 366
Administrative & General	\$ 819	\$ 927	\$ 1,049	\$ 1,186	\$ 1,342
Energy Assistance Program	\$ 3	\$ 4	\$ 4	\$ 5	\$ 6
Energy Efficiency	\$ 403	\$ 456	\$ 516	\$ 583	\$ 660
Total Decorah Municipal Electric Utility Cost of Service	\$ 11,796	\$ 13,384	\$ 15,069	\$ 16,684	\$ 19,049
 Replacement Property Taxes	 \$ 83	 \$ 94	 \$ 106	 \$ 120	 \$ 136
Total Decorah Cost	\$ 11,879	\$ 13,478	\$ 15,175	\$ 16,804	\$ 19,184

SECTION 5:

FORECAST OF ALLIANT REVENUE REQUIREMENTS AND RATES

The financial feasibility assessment of the Decorah municipal option depends critically on the rates that Decorah customers can expect to pay, should Alliant continue to serve Decorah. This section summarizes the assumptions used to project the cost of service if Decorah were to continue to receive service from Alliant.

Changes to Alliant's retail rates are approved by the IUB and occur primarily through rate cases that update the calculations required to establish rates to reflect changes in the cost of service, as well as changes in the number of customers and energy demand by customer class. Changes to the cost of service determine the revenue requirements that rates will be designed to collect; changes to the number of customers and energy demand will affect the allocation of these revenue requirements to each class of customers (e.g., residential, commercial, industrial) and the calculation of the specific rates that appear on customer bills. Alliant will also change the total rate for electricity by petitioning the IUB to change rates to reflect a significant change in the cost of power supply.

For purposes of this Preliminary Feasibility Study, Concentric has estimated the periodic changes through rate cases, beginning with the ongoing Alliant rate case that was filed in April 2017. The ongoing rate case requests a 11.6 percent increase in rates in Docket D-RPU-2017-0001. Based on Alliant's rate cases over the past 20 years, Concentric anticipates that the rate case will go into effect in February 2018. Of the four completed rate cases over the past 20 years, the authorized rate as a proportion of rate requested averaged 65.7 percent. For the purpose of this Preliminary Feasibility Study, Concentric assumed the 65.7 percent average proportion for the pending rate case, indicating an anticipated authorized rate increase of 6.4 percent.²⁰ The table below shows the pending and completed Alliant rate cases over the past 20 years, which were used to project out the revenue requirement increases over the forecasted 20-year study period.

Figure 14: Selected Alliant Electric Rate Cases

Docket No.	Status	Initial Filing Date	Rate Case Completion Date	Rate Case Duration (Months)	Rate Base/ Revenue Requested Rate (%)	Rate Base/ Revenue Authorized Rate (%)	Authorized/ Requested Rate (%)
D-RPU-2017-0001	Pending	4/3/2017	2/3/2018	10 ²¹	11.60	6.41 ²²	65.7% ²³
D-RPU-2010-0001	Completed	3/10/2010	12/15/2010	9	11.80	9.00	76.3%
D-RPU-2009-0002	Completed	3/17/2009	1/4/2010	9	9.90	8.20	82.8%
D-RPU-04-1	Completed	3/15/2004	12/14/2004	9	16.30	11.50	70.6%
D-RPU-02-3	Completed	3/29/2002	4/15/2003	12	8.70	2.90	33.3%

Source: SNL

²⁰ The IUB rarely approves the full amount of a requested utility rate increase.

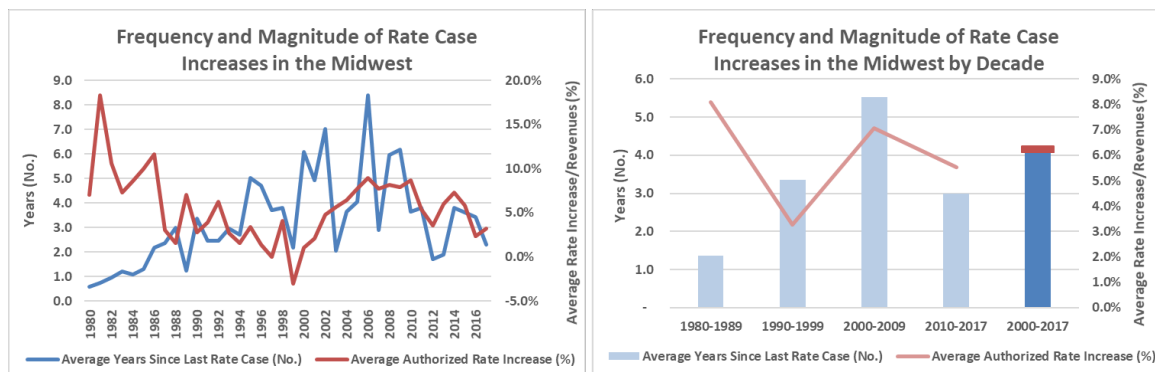
²¹ Estimated based on the average (10 months) of the previous four cases.

²² Estimated based on the average proportion (65.7%) of the authorized rate as a share of required rate.

²³ Estimated based on the average proportion of the previous four cases.

Concentric projected the revenue requirement increases for Alliant over the remainder of the 20-year study period by estimating the timing of future rate cases and the average expected increase for each rate case. The basis of those projections is a review of the history of Alliant rate cases over the past two decades, a period in which utilities have been experiencing slowing sales growth and continuing investment to replace aging infrastructure. In addition, Concentric analyzed rate case trends, in terms of both frequency and magnitude of rate cases in the Midwest. The analysis included 610 rate cases in the Midwest, including 451 cases with data on the magnitude of authorized rate changes.²⁴

Figure 15: Average Frequency and Magnitude of Rate Case Increases in the Midwest by Decade

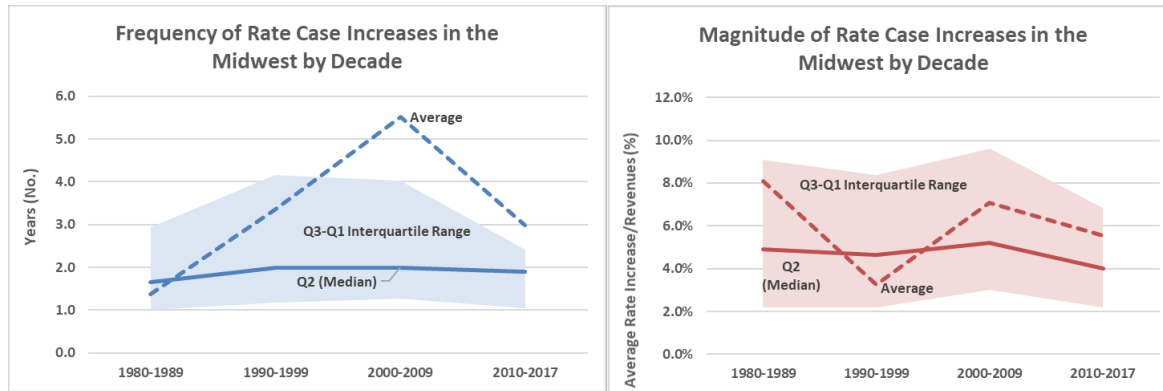


The figure below shows that the number of years between rate cases for the 2010-2017 period averages 3 years between cases, with rate increases averaging 5.5 percent (as a percent of revenue). During the 2010-2017, the median years between rate cases was about 2 years and a rate increase of 4 percent. The interquartile range²⁵ showed a range of between 1 and 2.4 years between rate cases, at an authorized rate increase of 2.2-6.9 percent.

²⁴ Analysis includes the following states: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, North Dakota, Ohio, South Dakota, and Wisconsin.

²⁵ The Q3-Q1 interquartile range is the range between the first and third quartiles, or variability in frequency and magnitude of rate cases between the top 25 percent and bottom 75 percent of all cases in the period.

Figure 16: Range in Frequency and Magnitude of Rate Case Increases in the Midwest by Decade



Note: The Q3-Q1 interquartile range is the range between the first and third quartiles, or variability in frequency and magnitude of rate cases between the top 25 percent and bottom 75 percent of all cases in the period. Q2 is the second quartile, or median.

As shown in Figure 16, comparing the 2010-2017 period to the prior decade (2000-2009), the magnitude of rate case increases decreased approximately 25 percent. The 2010-2017 period has been a period of significant capital investment that cannot be projected to continue in its entirety over the next 40-year period. Thus, for the Base Case analysis, Concentric assumed a rate case increase every third year with a 3 percent increase, based on median results for the 2010-2017, adjusted to reflect the trend of declining rate increases seen since 2000-2009. The Upper Bound Scenario assumes the same frequency of rate cases (every third year) and the first quartile rate increase of 2.20 percent rate. The Lower Bound Scenario also assumes every three years for rate cases and a magnitude of 4.00 percent (the median).

SECTION 6:

PRELIMINARY FEASIBILITY STUDY FINANCIAL RESULTS

6.1 INTRODUCTION

This section presents the quantifiable assessment of the two alternatives: municipalization and continuation of service to Decorah by Alliant. Concentric has also assessed certain nonquantifiable but important considerations in Section 7. The determination of net financial consequences to Decorah customers from the decision to form a municipal electric utility is assessed by a comparison of the revenue requirement that is projected for municipal operation of the electric utility to the electricity expenditures by Decorah customers under a continuation of service with Alliant.

The quantifiable impacts are addressed in this section through consideration of a “Base Case” and two scenarios that bound the results. The discussion in Sections 3 and 4 focus primarily on the reasoning for Base Case assumptions, although the discussion also identifies sources of variability and uncertainty, implying that an assessment of these uncertainties will provide useful insights. Each scenario, including the Base Case, represents an internally consistent and integrated set of key assumptions.

A major driver of financial results is the timing of a transition from Alliant to a City municipal electric utility. The uncertainty with respect to timing is attributable to the initiation and duration of a condemnation proceeding. As described in Section 2.4, a municipalization can take anywhere from 4 to 10 years. The total costs will increase as the duration is extended due to higher legal and consulting fees and continued escalation of both capital and operating costs. Concentric has assumed that the transition occurs in 2021 in the Base Case, 2020 in a scenario designed to arrive at a reasonable Lower Bound on costs, and 2024 in a scenario designed to determine a reasonable Upper Bound.

Additional insights are provided by testing the sensitivity of the Base Case results to a change in a single assumption. Scenario and sensitivity analyses combine to provide a more robust understanding of the potential financial feasibility of a municipal electric utility than is possible by limiting the assessment to a single Base Case.

6.2 BASE CASE RESULTS

Figure 17 compares the Base Case revenue requirement that is projected for a municipal electric utility beginning in 2021 to the Base Case projected revenue from Alliant’s continued service to Decorah. As shown in that figure, the net present value of the comparison indicates that there would be a net financial loss of \$26.3 million over a 20-year period from municipal ownership and operation of the electric utility as compared with a continuation of service with Alliant.

The Base Case also assumes:

- Replacement capital investment of 4.00 percent;

- An energy efficiency incentive factor of 100.00 percent, meaning that a Decorah municipal utility will match energy efficiency programs offered by Alliant;
- Operations and maintenance, customer accounting, and administrative and general costs of \$623/customer, or \$2.3 million in 2021;
- Cost of debt of 6.00 percent;
- Alliant rate case increase of 3.00 percent every third year starting in 2021 (after the 6.10 percent assumed rate increase in 2018); and
- Going Concern valuation of \$4.4 million.

Figure 17: Base Case: 2021 Transition

	2021	2026	2031	2036	2041	2046
	-----(\$000)-----					
IPL Est Rate Revenue	\$ 11,357	\$ 11,698	\$ 12,410	\$ 13,166	\$ 13,561	\$ 14,387
<u>City of Decorah Municipal Electric Cost of Service</u>						
Debt Service (Principal & Interest)	\$ 3,584	\$ 3,807	\$ 4,118	\$ 4,464	\$ 5,321	\$ 5,489
Power Supply & Delivery						
Purchased Power and Capacity	\$ 3,214	\$ 4,084	\$ 4,831	\$ 5,484	\$ 6,215	\$ 7,032
ITC Transmission Expense	\$ 2,302	\$ 2,443	\$ 2,669	\$ 2,832	\$ 3,094	\$ 3,283
O&M Expenses						
Operations and Maintenance Expense	\$ 1,247	\$ 1,411	\$ 1,597	\$ 1,807	\$ 2,044	\$ 2,313
Customer Accounting	\$ 223	\$ 253	\$ 286	\$ 323	\$ 366	\$ 414
Administrative & General	\$ 819	\$ 927	\$ 1,049	\$ 1,186	\$ 1,342	\$ 1,519
Energy Assistance Program	\$ 3	\$ 4	\$ 4	\$ 5	\$ 6	\$ 6
Energy Efficiency	\$ 403	\$ 456	\$ 516	\$ 583	\$ 660	\$ 747
Total Decorah Municipal Cost of Service	\$ 11,796	\$ 13,384	\$ 15,069	\$ 16,684	\$ 19,049	\$ 20,802
Replacement Property Taxes	\$ 83	\$ 94	\$ 106	\$ 120	\$ 136	\$ 153
Total Decorah Cost	\$ 11,879	\$ 13,478	\$ 15,175	\$ 16,804	\$ 19,184	\$ 20,955
 City Estimated Savings \$/Year	 \$ (522)	 \$ (1,780)	 \$ (2,765)	 \$ (3,638)	 \$ (5,624)	 \$ (6,569)
Net Present Value 10 Year Savings	\$ (11,039)					
Net Present Value 20 Year Savings	\$ (26,302)					

As shown in Figure 17 the Decorah operating cost is greater than the Alliant operating cost in each year of the study. Debt service is approximately one-third of the operating cost in the initial years of the feasibility study. On a net present value basis, over 10 years, the incremental cost of municipal operation of the Decorah electric utility is \$11.0 million and over 20 years the incremental cost escalates to \$26.3 million.

6.3 SCENARIO ANALYSES

The Upper Bound Scenario, which includes assumptions that likely would result in higher costs related to a Decorah municipalization, assumes a delayed municipalization start date of 2024, which may increase transition costs. This scenario also assumes:

- Replacement capital investment of 4.50 percent;
- An energy efficiency incentive factor of 100.00 percent;
- Cost of debt of 6.50 percent;
- Operations and maintenance, customer accounting, and administrative and general costs of \$932/customer, or \$3.4 million in 2024;
- Alliant rate case increase of 2.20 percent every three years starting in 2021 (after the 6.10 percent assumed rate increase in 2018); and
- Going Concern valuation of \$9.5 million.

The figure below indicates a net present financial loss of \$30.2 million and \$57.9 million over a 10-year and 20-year period, respectively, from municipal ownership and operation of the electric utility as compared with a continuation of service with Alliant.

Figure 18: Upper Bound Scenario: 2024 Transition

	2024	2026	2031	2036	2041	2046
	-----(\$000)-----					
IPL Est Rate Revenue	\$ 11,517	\$ 11,517	\$ 12,029	\$ 12,564	\$ 12,840	\$ 13,412
<u>City of Decorah Municipal Electric Cost of Service</u>						
Debt Service (Principal & Interest)	\$ 4,486	\$ 4,428	\$ 4,766	\$ 5,609	\$ 5,980	\$ 6,373
Power Supply & Delivery						
Purchased Power and Capacity	\$ 3,866	\$ 4,084	\$ 4,831	\$ 5,484	\$ 6,215	\$ 7,032
ITC Transmission Expense	\$ 2,371	\$ 2,443	\$ 2,669	\$ 2,832	\$ 3,094	\$ 3,283
O&M Expenses						
Operations and Maintenance Expense	\$ 1,906	\$ 2,003	\$ 2,266	\$ 2,564	\$ 2,901	\$ 3,282
Customer Accounting	\$ 252	\$ 265	\$ 300	\$ 339	\$ 384	\$ 434
Administrative & General	\$ 1,264	\$ 1,328	\$ 1,502	\$ 1,700	\$ 1,923	\$ 2,176
Energy Assistance Program	\$ 4	\$ 4	\$ 4	\$ 5	\$ 6	\$ 6
Energy Efficiency	\$ 434	\$ 456	\$ 516	\$ 583	\$ 660	\$ 747
Total Decorah Municipal Cost of Service	\$ 14,583	\$ 15,010	\$ 16,854	\$ 19,116	\$ 21,163	\$ 23,333
Replacement Property Taxes	\$ 89	\$ 94	\$ 106	\$ 120	\$ 136	\$ 153
Total Decorah Cost	\$ 14,673	\$ 15,104	\$ 16,960	\$ 19,236	\$ 21,298	\$ 23,486
City Estimated Savings \$/Year	\$ (3,156)	\$ (3,587)	\$ (4,932)	\$ (6,672)	\$ (8,458)	\$ (10,075)
Net Present Value 10 Year Savings	\$(30,188)					
Net Present Value 20 Year Savings	\$(57,946)					

The Lower Bound Scenario, which includes assumptions representing potentially lower costs of running a municipal utility, assumes an aggressive municipalization start date of 2020, which would allow the municipal utility to save on transition costs. This scenario also assumes:

- Replacement capital investment of 3.50 percent;
- An energy efficiency incentive factor of 50.00 percent, meaning that a Decorah municipal utility would have more conservative energy efficiency offerings;
- Cost of debt of 5.75 percent;
- Operations and maintenance, customer accounting, and administrative and general costs of \$491/customer, or \$1.8 million in 2020;
- Alliant rate case increase of 4.00 percent every third year starting in 2021 (after the 6.10 percent assumed rate increase in 2018); and
- Going Concern valuation of \$2.4 million.

The figure below suggests a loss of \$65,000 over a 10-year period, and a net present financial loss of \$6.6 million over a 20-year period from municipal ownership and operation of the electric utility as compared with a continuation of service with Alliant.

Figure 19: Lower Bound Scenario: 2020 Transition

	2020	2021	2026	2031	2036	2041	2046
	-----(\$000)-----						
IPL Est Rate Revenue	\$ 11,026	\$ 11,467	\$ 11,926	\$ 12,899	\$ 13,952	\$ 14,510	\$ 15,694
City of Decorah Municipal Electric Cost of Service							
Debt Service (Principal & Interest)	\$ 3,209	\$ 3,170	\$ 3,411	\$ 3,680	\$ 4,343	\$ 4,640	\$ 4,957
Power Supply & Delivery							
Purchased Power and Capacity	\$ 2,456	\$ 3,214	\$ 4,084	\$ 4,831	\$ 5,484	\$ 6,215	\$ 7,032
ITC Transmission Expense	\$ 2,235	\$ 2,302	\$ 2,443	\$ 2,669	\$ 2,832	\$ 3,094	\$ 3,283
O&M Expenses							
Operations and Maintenance Expense	\$ 1,068	\$ 1,095	\$ 1,239	\$ 1,402	\$ 1,586	\$ 1,795	\$ 2,030
Customer Accounting	\$ 137	\$ 140	\$ 159	\$ 179	\$ 203	\$ 230	\$ 260
Administrative & General	\$ 599	\$ 614	\$ 695	\$ 786	\$ 889	\$ 1,006	\$ 1,138
Energy Assistance Program	\$ 3	\$ 3	\$ 4	\$ 4	\$ 5	\$ 6	\$ 6
Energy Efficiency	\$ 197	\$ 201	\$ 228	\$ 258	\$ 292	\$ 330	\$ 373
Total Decorah Municipal Cost of Service	\$ 9,905	\$ 10,741	\$ 12,262	\$ 13,810	\$ 15,634	\$ 17,316	\$ 19,080
Replacement Property Taxes	\$ 81	\$ 83	\$ 94	\$ 106	\$ 120	\$ 136	\$ 153
Total Decorah Cost	\$ 9,986	\$ 10,824	\$ 12,355	\$ 13,916	\$ 15,754	\$ 17,451	\$ 19,234
City Estimated Savings \$/Year	\$ 1,040	\$ 643	\$ (429)	\$ (1,017)	\$ (1,802)	\$ (2,942)	\$ (3,540)
Net Present Value 10 Year Savings	\$ (65)						
Net Present Value 20 Year Savings	\$ (6,560)						

6.4 SENSITIVITY ANALYSES

The figure below shows the impact of various sensitivities on a 10-year NPV. The largest gain would be a decrease in O&M, customer accounting, and A&G expenses to \$504/customer (2021\$), resulting in a 10-year NPV loss of \$7.4 million, whereas the largest loss (\$18.3 million) results in an increase in those expenses to \$865/customer (2021\$). Given the penetration rate of Net Energy Metering ("NEM") in Decorah, relative to Alliant's overall service territory, Concentric also ran a sensitivity on an increase in NEM, which is described in the next subsection.

Figure 20: Base Case Sensitivities

	2021	2026	2031	10-YR NPV
	----- (\$000) -----			
Base Case City Estimated Savings	(\$522)	(\$1,075)	(\$2,765)	(\$11,039)
	----- Change in Values -----			
Assumption 1: Capital Replacement Costs				
Increase to 4.50%	(\$618)	(\$1,164)	(\$2,922)	(\$11,879)
Decrease to 3.50%	(\$426)	(\$985)	(\$2,609)	(\$10,199)
Assumption 2: O&M, Customer Accounting, A&G Costs				
Increase to \$865/customer (2021\$)	(\$1,414)	(\$2,036)	(\$3,910)	(\$18,316)
Decrease to \$504/customer (2021\$)	(\$80)	(\$598)	(\$2,198)	(\$7,432)
Assumption 3: Cost of Debt				
Increase to 6.50%	(\$616)	(\$1,168)	(\$2,859)	(\$11,398)
Decrease to 5.75%	(\$476)	(\$1,028)	(\$2,719)	(\$10,858)
Assumption 4: Rate Increase				
2.20% every 3 years	(\$580)	(\$1,194)	(\$3,016)	(\$11,947)
4.00% every 3 years	(\$450)	(\$924)	(\$2,444)	(\$9,889)
Assumption 5: Load Reduction due to NEM				
Decrease 0.50% annually (years 1-10), 0.25% (years 11-20)	(\$503)	(\$1,055)	(\$2,755)	(\$10,751)

6.4.1 NET ENERGY METERING

Decorah's residents have been aggressive in taking advantage of NEM, with NEM customers comprising less than 1 percent of Alliant's customer base but would make up 4 percent of a Decorah municipalization customer base.

Figure 21: Alliant versus Decorah NEM Concentration Rates

Jurisdiction	Alliant NEM Projects (No.)	Customer Base (No.)	NEM Concentration (%)
All Alliant	2,100	513,234	0.5%
Decorah	158	3,673	4.3%

Figure 22 below shows the solar output additions below 10 kW by year in Decorah, and provides an estimate for the proportion of residential load for each year in which load is available. The proportion of residential solar projects as a share of residential load increased dramatically over the period, a trend expected to continue over the foreseeable future.

Figure 22: Estimated Decorah Solar Project Output

Year	Solar Output (kW)	Estimated Residential Solar (kW)	Cumulative Estimated Residential Solar (kW)	Estimated Residential Solar load (kWh)	% Residential Solar Load Growth	% Residential Load
2007	2	2	2	3,504		
2008	0	0	2	3,504	0%	N/A
2009	0	0	2	3,504	0%	N/A
2010	0	0	2	3,504	0%	N/A
2011	12	12	14	24,528	600%	N/A
2012	392	47	61	106,872	336%	0.5%
2013	392	158	219	383,688	259%	1.6%
2014	597	243	462	809,424	111%	3.6%
2015	763	36	498	872,496	8%	4.2%
2016	271	61	559	979,018	12%	4.5%
2017	0	0	559	979,018	N/A	N/A

Note: Concentric assumed that all Alliant solar projects below 10 kW as residential solar. Concentric then applied a 20% capacity factor on the kW systems to derive an estimate for annual generation by these solar facilities.

Under Alliant, NEM customer costs are spread over the entire customer base, diluting per-customer NEM impacts. Current NEM customers in Decorah benefit from Alliant's socialized cost structure, with NEM costs allocated across Alliant's large service territory. NEM reduces the costs a utility recovers in the short term, as NEM customers generate at least a portion of their own electricity, so the utility cannot charge them the full rate for that incremental load. Over time, such costs must be recovered from non-NEM customers, resulting in a "cost shift."

A Decorah municipalization would mean that the smaller customer base would fully absorb the larger than average costs of Decorah's NEM pursuits. Given the high NEM adoption rate in Decorah, relative to the Alliant average, this cost shift to non-NEM customers would be greater if Decorah were to municipalize.

With an average share of residential load nearing 3 percent over 2012-2016, this indicates that a continuation of this trend may worsen solvency for a Decorah municipal utility. While NEM customers will continue to contribute some fixed costs, the municipal utility will lose a large portion of its revenue stream associated with the incremental load moving to NEM, further limiting the utility's revenue source. Any additional NEM projects in Decorah would reduce the city's revenue, as NEM would reduce the city's revenues (due to a load reduction and any payments to NEM customers for load provided). The city may need to increase rates in order to recover costs, and with any additional NEM projects, which further depress the utility's revenue source, rates on non-NEM customers must increase further.

For the purpose of this analysis, in the Base Case, Concentric assumed that a Decorah municipal utility would compensate the NEM at the full retail value. Concentric's NEM sensitivity case assumed that residential load will decline 0.50 percent over the first 10 years (through 2030) and

0.25 percent thereafter, based on a continuation of recent “NEM” trends (discussed earlier) and the expectation that customers would engage in energy usage management efforts to minimize any electricity usage increases. As shown in Figure 20, the drop in a Decorah utility residential load due to NEM would result in a 10-year NPV loss of \$10.8 million for a municipal utility.

SECTION 7: OTHER FACTORS TO BE CONSIDERED

7.1 SERVICES TO BE PROVIDED BY ALLIANT AND DECORAH

An examination of Alliant's tariffs reveals the extent of services that are offered by Alliant. The City will need to determine whether to offer all of these services or a more limited set. Differences between the service menu and the costs of providing each service should be considered when comparing the two options.

Alliant offers two residential services (individual customer and master-metered), twenty commercial and industrial services (with variations by size, type of customer, and commitment to serve), ten outdoor lighting services, and several ratemaking adjustments that are associated with services such as low-income, energy conservation, and distributed energy production.

For example, the City will need to measure and bill net energy produced by customer-sited solar according to a published tariff. This will require a determination as to how much compensation is provided to customers that produce more electricity than they consume during a billing period. Alliant essentially compensates customers at the applicable retail rate for energy production that either reduces purchases from the utility or provides excess supply to Alliant. This effectively shifts the responsibility for recovering fixed costs of providing delivery service from the solar customer to all other customers, a matter of controversy in many states. The City will need to determine how it wants to compensate its solar customers and then implement the approach. To the extent that a higher proportion of customers take advantage of Alliant's NEM tariff than other parts of Alliant's service area, this will place upward pressure on electricity rates unless the City decides to reduce the level of compensation to solar customers. This is just one example of the need to carefully evaluate each and every service that is currently being provided by Alliant and determine whether—and on what terms—the service will be provided by the City utility.

7.2 OTHER NON-QUANTIFIABLE CONSIDERATIONS

There are several nonquantifiable considerations that have an impact on the comparison of the two options. These include the ability to provide adequate regulatory oversight and supervision, potential impacts on reliability and the quality of service more generally, the ability of the two utility options to take advantage of technological advancements, and the ability to execute on clean energy and other societal goals.

Alliant is regulated by the IUB. This oversight takes several forms. First, oversight includes a review of every major investment decision by Alliant and approval of the terms under which new services can be offered, including price. Second, the IUB oversees quality-of-service issues, including the resolution of customer complaints. The IUB reviews supply and distribution planning activities to ensure that they support the provision of safe, reliable and affordable service as well as

other public policy objectives. These functions respond to the recognition that electricity is an essential public service that enables the well-being of citizens, the ability of local businesses to thrive and grow, and the achievement of environmental objectives. The IUB wields considerable regulatory authority over Alliant, subject to legal restrictions that require that Alliant be allowed a reasonable opportunity to earn a fair return on invested capital. The IUB can prevent Alliant from earning both a return on and return of any investment that the IUB deems to have been imprudently incurred.

The public interest requires that the City establish mechanisms to perform these functions. This is achieved in various ways and may include a publicly elected “light board” that reviews all major decisions and approves any changes in the prices to be charged. While local authority has its advantages, it should be weighed against potential organizational and competency challenges of overseeing a relatively complex industry. In particular, overseeing quality of service requires the ability to assess the trade-off between desired improvements in the quality of service and both the implementing actions and costs of achieving such improvements. This may require periodic retention of outside engineering and financial expertise to perform these oversight functions.

The electric industry is currently undergoing a transformation that is being driven by a goal to interconnect solar energy and other distributed resources to the network. The industry is also making advances in information and communications technologies necessary to operate and maintain the distribution network through the increasing penetration rates of these resources. Many utilities are also implementing smart meters and associated systems in an effort to improve the efficiency of the network and provide opportunities to customers to save on their energy bills by changing usage patterns. There are substantial economies-of-scale associated with the information and other systems required to support distributed resources and smart meters. Large utilities are best equipped to plan, implement and operate these systems.



MEMORANDUM

TO: Randy Bauer
FROM: Ann Bulkley
DATE: April 17, 2019
RE: Decorah Feasibility Study Update

As we discussed, Concentric has reviewed the rate case filing and updated our Feasibility Study for the Decorah municipal electric utility to reflect the proposed rate increases as well as the benefits from the development of the wind projects that are included in the rate case. The following summarizes the analyses that we have updated since the last study.

1. The Feasibility Study was prepared before Alliant's last rate case was completed. Therefore, we updated to reflect the actual increase that was finalized in your last case: 7.49% increase on a total bill basis.
2. The current rate case filing has a net interim rate increase of 5.5% in 2019 and an additional increase of 6.20% in 2020. The Feasibility Study was updated to reflect these increases.
3. Future projected rate increases were assumed to begin 3 years from 2020 at an assumed increase of 3% per year. These rate increases occur every three years.
4. Concentric calculated a credit to the overall cost of service for the benefits of wind power that were not reflected in the rate increase. That credit was calculated using the following assumptions:
 - a. The analysis is based on savings that is identified in the rate case. The source of the savings for this information is: IPL Michek confidential schedules "X1(E) Sch B-1", line 11 comparing 2020 with 2018.
 - b. 1000 MW of wind power at a 44% assumed capacity factor results in 3,854,400 MWh of energy.
 - c. Unitized savings were calculated on a \$/MWh basis.
5. Concentric applied the unitized rate \$/MWh to Decorah's assumed percentage of the wind sales
 - a. Wind power was estimated to be 22.14% of IPL load (2017 IPL Total Sales= 17,406,995) $3,854,400/17,406,995=22.14\%$
 - b. Applied wind credit to 22.14% of Decorah sales resulting in an annual credit to IPL's cost of service in Decorah.
 - i. Decorah 2017 total kWh sales: 81,652,000
 - ii. $22.14\% = 18,080,057$
 - iii. Wind credit = $18,080,057 * \$/\text{kWh savings}$
6. In addition, Concentric assumed that Decorah Power would also purchase wind at market to provide an "apples-to-apples" comparison of service
 - a. The market prices were based on levelized costs per MWh that were received from wind power producers in response to an RFP issued by the Company. These levelized prices

may be conservative based on the difference in the scale of IPL's wind RFP and the pro rata share of wind that is assumed for Decorah.

- b. Calculated the difference between the market price of energy and wind power to calculate the incremental cost of wind or benefit from wind for Decorah Power.
 - c. Adjusted replacement capacity and energy in Decorah Power costs to reflect the same amount of wind.
7. DAEC contract buyout (Docket SPU-2018-0008): In addition to the rate case updates that are discussed above, Concentric also considered the expected savings resulting from the DAEC contract buyout that are expected to begin in 2021. Concentric updated the IPL cost of service to reflect the pro-rata share of the total customer savings, net of the transmission upgrades and capacity purchases that would be required over the period from 2021 through the remainder of the study period. In the first five years of this adjustment, there are significant cost savings that lower the IPL cost of service by approximately \$275,000 per year on average resulting from the buyout of the DAEC contract, net of the transmission upgrades required and the replacement capacity. In the remaining years of the study, there is a small increase in the overall cost of service of approximately \$2300 per year, on average which represents Decorah's pro-rata share of the costs of the necessary transmission upgrades.
8. Feasibility Study Results:
 - a. 10-yr NPV (\$5,188,134)
 - b. 20-yr NPV (\$16,297,947)
 - c. Both of these cases are estimating that it would still cost more to run the Decorah electric system under Municipal ownership than IPL ownership.
 - d. All other assumptions remain unchanged.