

Delano Water, Light and Power Commission

Valuation of Municipal Electric Utility Assets

Final Report – October 10, 2011

Prepared By:

LSS Resources LLC Team

- Larry L Schedin, P.E
- Jim Erickson
- Rob Hoerauf, P.E
- Kavita Maini

Table of Contents

I.	Introduction	3
II.	CapX 2020 Project Opinion and Other Timing Considerations	3
III.	Executive Summary	4
IV.	Total Electric Utility Valuations/Net Proceeds	11
V.	Load Profile	16
VI.	Rate Comparisons	18
VII.	Electric Utility Assets	25
VIII.	Other Value Considerations	28
IX.	Potential Buyers	29
X.	Future of Delano Electric Utility	30
XI.	List of Attachments	

Attachment 1	Analysis of DEU Potential Investment in Brookings County-Lyon County-Hampton Corner 345 KV Line
Attachment 2	DEU Weighted Average Electric Asset Service Life
Attachment 3	DEU Site Visit and Inspection Report
Attachment 4	DEU Contributions to the Local Economy
Attachment 5	DEU Customer Outage Data

I. Introduction

The Delano Water Light and Power Commission provides electric power and domestic water services to residents of the City of Delano, Wright County, MN. The Commission operates under the direction of a Board that is independent and separate from the Delano City Council. According to the 2010 directory of the Minnesota Municipal Utilities Association (MMUA), the Delano Electric Utility is one of 125 municipal electric utilities in Minnesota. Founded in 1894, it is also one of the oldest. Also, according to MMUA, during the past 20-25 years, there has been only one sale of a municipal electric utility in MN, and that was a very small utility under very unusual circumstances.

On March 30, 2010, the City Council (City) in cooperation with the Commission issued an RFP in an effort to retain a qualified independent consultant to provide an opinion and study regarding the value of the Commission's electric utility (hereinafter called Delano Electric Utility or DEU,) along with an opinion regarding the future of the Delano Electric Utility. After a considerable extension of the RFP response deadline, the Minneapolis, MN firm of LLS Resources, LLC (LLS Resources) was selected as the successful respondent to the RFP, and an agreement was executed between LLS Resources and the City and the Commission on December 4, 2010. In addition to Larry L Schedin PE, the firm's president and owner, the team members assigned to carry out the work include Kavita Maini, a senior rate economist; James Erickson, a utility financial specialist; and Rob Hoerauf PE, a specialist in electric power system operation and design. A further description of the team's qualifications is included in the RFP response.

II. CapX 2020 Project Opinion and Other Timing Considerations

Because of the need for the City and the Commission to decide whether or not to commit to part ownership of the Brookings County (SD)-Lyon County- Hampton Corner 345 KV line, a major part of the CapX 2020 project, and because ownership could have an impact on the Municipal Utility valuation study, LLS Resources was requested to provide an up-to-date written overview of the CapX 2020 project ownership opportunity. LLS Resources provided on March 17, 2011 a written report to the Commission and the City regarding the risks and rewards of project ownership as offered through CMMPA, DEU's wholesale generation and transmission (G&T) provider (See Attachment 1). This additional effort and the desire to receive and analyze audited financial statements for the 2010 calendar year set the study schedule back somewhat. Additionally, subsequent consideration of very favorable customer retail rate adjustments along with some further favorable financial adjustments in early 2011 have helped to make the study results much more current and meaningful.

III. Executive Summary

A. Valuation/Net Proceeds

1. **Value Estimates.** Since the City and the Commission are not requesting bid proposals, this report examines several alternate approaches to estimate the value of DEU from the view of a prospective buyer. These alternatives include a) net book value (original cost less booked depreciation), b) replacement cost new depreciated (RCND) and c) comparable sales (a range of premiums over book value). Results derived and explained in the Valuation Section discussion show the following:

	<u>Valuation \$ (millions)</u>
a. Net Book Value	\$11.6
b. RCND	\$13.7
c. Comparable Sales (1.38 times book value)	\$16.0

It is important to note that very few utilities have been sold recently to serve as the basis for a comparable sales estimate. However, the report does consider a recent sale of Aquila's Minnesota gas system assets to Minnesota Resources Corporation. Considerations based on this sale and the midpoint of a range of other assumptions could result in a 38% premium over net book value, but only if the acquisition meets some strategic goal of a purchasing entity. Additionally, the analysis warns that investor owned utilities (IOUs such as NSP, Otter Tail Power and Minnesota Power) are regulated by the Minnesota Public Utilities Commission (MPUC) are not allowed to earn on acquisition premiums (acquisition costs above net book value). Therefore any premium paid above book value may go unrecovered. This means that an IOU would need to factor in such strategic benefits such as cost saving synergies, sales growth potential, and the locking up of low-cost energy resources.

Consideration was given to the option of sale of the generation assets only. However, given the current surplus of capacity, capacity is very inexpensive at present and may not be an economically feasible option at this time. Furthermore, the generation is all diesel fueled which makes it very expensive to operate. Also, the units have not been brought up to EPA's Reciprocating Internal Combustion Engine (**RICE**) standards estimated to cost \$587,000 as discussed in the report.

2. **Net Proceeds from Sale.** It is very important to note that the foregoing valuation estimates do not represent the net proceeds to the City and the Utility Commission resulting from a sale. Some of these adjustments can be estimated, while others require further study. For

example, one issue is the impact on the water utility because of loss of shared equipment, shared employees and shared office space with DEU. This report shows that to determine net sale proceeds, the following quantified items must be subtracted from the foregoing valuation:

a) Electric Utility Debt Refunding:	\$585,000
b) Liquidation of other Booked Assets and Liabilities:	(\$456,000)
c) Buyer cost to retrofit generation to RICE standards	<u>\$587,000</u>
Subtotal quantified subtractions	\$716,000

Additionally, the following items, not quantified, must also be considered:

- Debt retirement fees
- Legal and Transaction Costs
- Unwinding of CMMPA purchased power and energy contracts including cost of replacement of Midwest Independent System Operator (MISO) interface
- Employee Obligations
- Potential future property taxes if sold to a taxable entity would add costs for a purchasing entity but would add value to the City
- Increase in electric rates possibly resulting from a sale will negatively impact existing customers at the present time. The long term rate impact on existing customers is likely to be negative if a purchaser raises existing retail rates to area norms.
- Impact on water utility because of loss of shared resources.
- Potential transfer of electric utility headquarters may negatively impact local jobs and result in lost revenues to local support businesses.

3. Existing contractual obligations with CMMPA. The CMMPA acts as a planning, coordinating and negotiating agency for its members. As such, it is called a generating and transmission (G&T) organization. CMMPA also serves as the Midwest Independent System Operator (MISO) energy market and transmission participant for the City. The CMMPA services are secured via several contracts. DEU loads represent approximately 5.29% of CMMPA’s total load. These services are secured via CMMPA because it is not economically feasible for a small utility like DEU to provide its own MISO transmission owner and energy market participant services. Therefore, a purchasing entity will be required to buy out and provide this G&T obligation. This G&T obligation may be assumable in some form if CMMPA’s tax exempt status is not harmed and CMMPA agrees. DEU’s October 12, 2000 disclosure statement associated with the Commission’s most recent debt issue states that a 5-

year cancellation notice is required. The impact of unwinding from the CMMPA Agreement and providing an alternate MISO interface requires legal interpretation and is beyond the scope of this valuation study.

4. **Franchise Fee/Property Tax** The City of Delano charges a franchise fee based on the units of energy delivered to any class of retail customers within the corporate limits of the City. The current fee is \$0.00317 per KWH delivered. Annual electric franchise revenue is approximately \$158,500 based on annual sales of 50 million KWH. The franchise fee will continue to be in effect if the electric utility is sold and would be charged back to customers served in the City of Delano as a franchise fee under the rate tariffs of a purchasing entity. DEU's effective franchise fee as a percentage of revenue is approximately 3.3% based on 2010 revenue of \$4,744,361.

The City would gain a new source of property taxes if the electric assets are sold to a taxable entity. For example if the assets are sold for book value of \$11.6 million and the effective tax rate is 1.5% for the first \$150,000 and 2% for the balance, the sale would yield \$231,000 of additional property taxes. However, the City's share would be only approximately 46% of the total tax or \$106,000. It should be noted that DEU donated \$70,000 to the City "In Lieu of Taxes" in 2011, thus the net gain to the City would only be approximately \$36,000 per year. The estimate of additional property taxes may be impacted by the purchase price, asset additions, retirements and property tax mill rates.

B. Other factors to assess value

From a potential buyer's perspective, aside from the quantitative valuation, factors ranging from the level of competitive retail rate levels to the physical status of DEU's infrastructure should be evaluated. The following key factors are reviewed in this report.

1. **Retail Rate Levels.** Retail rate levels are one of the most important indicators of DEU's viability and health and will be closely scrutinized by potential buyers. Retail rate levels include all the costs of operation and reflect operating efficiency not only from local operations but also from services provided by CMMPA, DEU's wholesale G&T provider. This study examines how residential and commercial-industrial (C&I) rates charged by DEU compare with other nearby utilities. The retail rate comparisons in this report include an analysis of comparable rates charged in 2010 and 2011 by Connexus and Wright-Hennepin coops as well as rates charged by Northern States Power Company (NSP). C&I rates (shown in detail in a subsequent section of this report) were examined at various usage levels and monthly load factors. The comparison indicates that in 2011, DEU's rates are the lowest when compared to surrounding utilities such as Wright Hennepin, Connexus and Xcel Energy. DEU has reduced rates for 2011 by 5%, has passed through a lower power

adjustment clause and is also passing transmission credits to its customers. At present, DEU's rates should be viewed very favorably by its retail customers.

Currently, DMU's total annual retail rate revenue advantage based on DMU's 2011 expected annual retail sales volumes is shown in the following table:

<u>Utility</u>	<u>2011 Revenues</u>	<u>Variance</u>
DMU Rates	\$4.19 million	-----
Xcel Rates	\$4.76 million	\$0.567 million
Wright-Henn Rates	\$5.21 million	\$ 1.013 million

At the same time it should be noted that DEU's current rate levels are highly dependent on their cost of market energy related purchase power which has been relatively low priced over the last couple of years due in large part from the slow economy and lower fuel prices compared to previous years. While DEU's generation is strategically positioned to provide both accredited capability and peaking capacity, it cannot be used for base load energy production. DEU has passed on the market energy savings to their customers through lower rates. If market energy prices increase, DEU will likely have to raise their rates possibly faster than other utilities that have included base load generation in their supply mix and base electric rates. Therefore, retaining competitive base-load purchases must remain a key strategy for CMMPA as one of several elements allowing DEU's rates to remain competitive with respect to area norms.

Although the current favorable retail rate levels charged by the DEU provide substantial savings to its existing customers, this positive aspect also has a negative aspect for customers with respect to a possible sale. A potential buyer of DEU is likely to consider the lower rates a potential opportunity to increase its cash flow by raising rates to support any premium paid and acquisition costs. Rolling in Delano customers into higher existing rate structure of the purchaser also does not harm existing customers of the acquiring entity. However, if the utility were sold given the current soft economy and low market prices, a typical residential customer's annual bill could potentially increase 4% (\$39) to 13% (\$136) or more depending on the entity that purchases the utility.

2. **Delano Municipal Utility Assets.** In general, the DEU electrical distribution system is very modern, flexible, reliable and well designed and installed. Key elements are as follows:

- a. **Substations**

The DEU owns a double-ended substation (Substation A and Substation B) which is located at the DEU power plant site. Each substation consists of:

- (1) 69 KV circuit switcher and associated equipment
- (1) 69 KV – 12.47 KV, 10 MVA transformer
- (1) 12.47 KV switchgear lineup (Includes tie to the other 12.47 KV switchgear)

Substation B also includes a tie to a 7.5 MVA, 12.47 KV – 4.16 KV transformer which feeds the 4.16 KV switchgear. This switchgear has the 4.16 KV generators on it, power plant auxiliary loads, and also one City feeder – Feeder #3. The 12.47 KV switchgear includes the city distribution feeders as well as the feeders for the local power plant generators.

The substation and switchgear systems are modern, well maintained, well designed, and provided flexible service and operating options for the distribution system.

b. Generation

DEU has seven engine-generators and one gas turbine-generator. These generators are of various vintages. The total DEU generating capability is approximately 25 MW. The generators are all well maintained and are in good working order. The associated generating equipment, including cooling systems, fuel containment systems, etc. are also of proper design, and are well maintained.

While DEU purchases almost all of its energy requirements from CMMPA, the generation is used to fulfill capacity obligations for long term reliability and resource adequacy. MISO requires that load serving entities have enough accredited capacity to meet peak load requirements plus a planning reserve margin. To receive an accredited capacity rating by MISO, the DEU generators are regularly capability (URGE) tested. These test results have been supplied as part of the study information requests. An important aspect is that future operation of these generating units can remain useful for peak shaving and price shaving purposes. Operation for other than emergency purposes will likely require retrofit costs in order to conform to future mandatory RICE rules (further explained in the discussion section of this report) at an estimated cost of \$587,000.

c. Transmission Lines

The primary Xcel 69 KV transmission line passes through the City of Delano on an east-west direction. This Xcel line is connected to an Xcel substation in both the east and the west direction. DEU taps this line, south of the DEU power plant with a recently built, steel structured 69 KV line. There is also a 69 KV backup line from a substation west of town (Crow River Sub) to the DEU substation that features a wood structure design.

Therefore, the DEU system has access to three Xcel 69 KV substations, which provides good utility source reliability.

d. Distribution System

The overall condition of the DEU electrical distribution system is excellent. In general, the distribution system is relatively new as the distribution, in recent years, has undergone a planned conversion to underground residential distribution (URD) from overhead (OH).

At present, DEU has approximately 7 circuit miles of OH feeders and 47 circuit miles of URD feeders (circuit miles can be either single-phase or three-phase). DEU has approximately 457 transformers (single-phase and three-phase total) in operation, not counting spares. The remaining OH to URD conversions is planned in 2011.

The DEU 12.47 KV loop system is approximately 75% complete. It is anticipated that 100% completion of the loop system will require approximately 5 more years as future developments are completed.

Outage statistics provided for the past several years indicate that undergrounding has made the distribution system very reliable especially when compared to the annual reliability indices filed by Xcel and other Minnesota IOU's in the annual electric reliability reports of each.

e. Other Important Assets

DEU is installing an up-to-date system control and data acquisition (SCADA) system and its office facilities and vehicle fleet are adequate and up to date.

C. Future of DEU

The following are our observations and recommendations regarding the future of DEU:

- 1. Sales and Growth Potential.** The DEU service territory is a relatively small stable service territory with limited growth potential for a potential buyer. However, the comparative rate and reliability evaluations in this report indicate that the utility is well run, efficient, reliable, and competitive.
- 2. Peaking vs. Base Load Strategy.** Although DEU's peaking units are older and expensive to operate, these units serve as a hedge to avoid capacity purchases and to allow low-cost energy market purchases via CMMPA accessing the MISO hourly energy market. While energy sales along with hourly prices have been depressed, these conditions could change as the economy recovers and as base load energy prices increase.

A key reason to be aware of potential base load price increases involves current actions being taken by the federal Environmental Protection Agency (EPA). This Agency is engaged in a number of rulemaking and regulatory efforts that may have the effect of shutting down older, coal-fired power plants that serve Minnesota as well as increasing the cost of those units which survive. The EPA has recently issued or is now in the process of

process of promulgating new rules on carbon, mercury, fine particulate matter, NO_x, SO_x, ozone, cooling water discharge, coal combustion byproducts and other emissions associated with coal power. A December 2010 study by The Brattle Group consultancy estimates that up to 50,000 MW of coal power (1/5 of the U.S. fleet) would need to be retired as a result of these regulations. Of this total, some 16,000 to 20,000 MW would be retired in the “Midwest ISO” region, which serves Minnesota, up to 28 percent of the coal fleet in the area.

- 3. Strategic Plan.** As a result, DEU working with CMMPA and others to retain and improve its competitive position should investigate ways to retain favorable energy rates while continuing to use the peaking units as a capacity hedge. The Minnesota Hub is an established trading point where future energy prices can be hedged. Bilateral over-the-counter contracts also serve this purpose. This investigation should result in a strategic energy plan. The plan should also include an assessment of future transmission costs without an ownership portion of the Brookings County-Hampton Corner 345 KV line. We understand that CMMPA is presently completing a new strategic plan which will include input and feedback from all its members.
- 4. Viability of Peaking Generation.** Because of the value of DEU’s oil-fired peaking generation as a hedge against capacity purchases and ultra-high energy costs during hot weather and other adverse conditions, it is important that DEU commit to a RICE Rule conformance plan in anticipation of the effective date of these new federal rules.
- 5. Industrial Incentive Rate.** Because of the relatively small industrial component in DEU’s sales revenue engaged in 3-shift operations, DEU should consider an industrial incentive rate priced above marginal cost to attract new business. Such a rate typically includes a sliding demand charge forgiveness provision phased out over five years.
- 6. Automation Systems.** DEU should continue to place high priority on completing its System Control and Data Acquisition (SCADA) and Automatic Meter Reading (AMR) automation systems now in process.

IV. Total Electric Utility Valuations/Net Proceeds

A. Valuation Approaches

The value of the Delano Electric Utility assets is a function of the earnings that could be derived by the investment in the future. Investor Owned Utilities (IOU) regulated by the Minnesota Public Utilities Commission (MPUC) are not allowed to earn on acquisitions premiums if utility assets are purchased at a price greater than original installed cost depreciated. Thus, any premium over net book value will go unrecovered. Thus, an IOU would need to factor in cost saving synergies, sales growth potential and the value of locking up power supply sales to justify paying a premium over the net book value. Most Minnesota IOU's are investing heavily into renewable energy, transmission and pollution control and thus may not be actively seeking other utility investments as they were 5 to 10 years ago. Credit today to help fund an acquisition is not as readily available as before the credit crisis, thus further damping the potential for receiving a significant premium over the book value of electric utility assets.

The valuations assume no rate caps for current DEU customers. A rate cap on current DEU customers may reduce electric asset valuations. An increase in DEU rate levels is likely to be required to support a reasonable valuation of its electric assets.

1. Book Value Approach

The book value approach looks at the original installed cost of the assets less accumulated book depreciation plus inventory. The net book value of DEU's assets was \$11.6 million as of 12/31/2010. This net book value has been relatively stable since 2006 as shown in Table 4.1. Generation assets comprise approximately 44% of this value. This analysis assumes the generation assets would only provide a regulated return.

Table 4.1: DEU's Balance Sheet

Delano Electric Utility						
Electric Balance Sheet Items						
	2005	2006	2007	2008	2009	2010
Assets						
Plant	\$ 14,778,433	\$ 15,204,087	\$ 16,113,456	\$ 16,452,365	\$ 17,216,898	\$ 17,802,241
CWIP	\$ 294,916	\$ 813,497	\$ 386,520	\$ 445,544	\$ 352,158	\$ 480,421
Total Plant	\$ 15,073,349	\$ 16,017,584	\$ 16,499,976	\$ 16,897,909	\$ 17,569,056	\$ 18,282,662
Accumulated Depreciation	\$ (4,809,204)	\$ (5,320,070)	\$ (5,799,980)	\$ (6,214,714)	\$ (6,745,924)	\$ (7,268,896)
Net Utility Plant	\$ 10,264,145	\$ 10,697,514	\$ 10,699,996	\$ 10,683,195	\$ 10,823,132	\$ 11,013,766
Inventory	\$ 446,372	\$ 551,946	\$ 508,765	\$ 515,826	\$ 616,486	\$ 566,345
Total Assets per Sale	\$ 10,710,517	\$ 11,249,460	\$ 11,208,761	\$ 11,199,021	\$ 11,439,618	\$ 11,580,111
Other Current Assets						
Other Current Assets	\$ 1,213,177	\$ 1,432,994	\$ 1,256,999	\$ 1,120,908	\$ 1,256,526	\$ 1,391,806
Other NonCurrent Assets						
Other NonCurrent Assets	\$ 589,830	\$ 759,112	\$ 965,363	\$ 1,129,666	\$ 913,408	\$ 653,324
Total Assets	\$ 12,513,524	\$ 13,441,566	\$ 13,431,123	\$ 13,449,595	\$ 13,609,552	\$ 13,625,241
Liabilities and Net Assets						
Long-Term Debt						
Long-Term Debt	\$ 2,440,000	\$ 2,030,000	\$ 1,575,000	\$ 1,095,000	\$ 585,000	\$ 555,000
Current Portion of LTD	\$ 390,000	\$ 410,000	\$ 455,000	\$ 480,000	\$ 510,000	\$ 30,000
Short Term Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Debt	\$ 2,830,000	\$ 2,440,000	\$ 2,030,000	\$ 1,575,000	\$ 1,095,000	\$ 585,000
Other Current Liabilities						
Other Current Liabilities	\$ 333,558	\$ 917,914	\$ 863,990	\$ 785,864	\$ 598,906	\$ 578,366
Other Noncurrent Liabilities						
Other Noncurrent Liabilities	\$ 348,699	\$ 588,120	\$ 673,947	\$ 713,685	\$ 999,616	\$ 1,010,409
Net Assets (Retained Earnings)	\$ 9,001,267	\$ 9,495,532	\$ 9,863,186	\$ 10,375,046	\$ 10,916,030	\$ 11,451,466
Total Liabilities and Net Assets	\$ 12,513,524	\$ 13,441,566	\$ 13,431,123	\$ 13,449,595	\$ 13,609,552	\$ 13,625,241

2. Replacement Value of Assets Depreciated Approach

The replacement value of DEU assets depreciated (RCND) can also provide a value point. The original installed cost of Delano Electric Utility assets is \$18,282,662 at year end 12/31/2010. The accumulated depreciation balance was \$7,268,896, so the assets are 39.8% (\$7,268,896/\$18,282,662) depreciated. The approximate average service life on Delano Electric Utility assets is 27.9 years (See Attachment 2). Thus, the weighted average age of the Delano Electric Utility assets at the end of 2009 is 11 years (27.9 years x 0.398).

The replacement cost of DEU's electric assets can be approximated by inflating the original installed cost by an inflation factor over 11 years. The replacement cost estimate of DEU electric assets, assuming a 2% per year inflation for 11 years, would be \$22.7 million. DEU's electric asset RCND value would be approximately \$13.7M ((\$22.7M-(\$22.7M x 0.398)).

3. Comparable Utility Asset Sales Approach

The comparable utility asset sale approach to valuation looks at prices paid for comparable utilities. Utility asset sales are infrequent and the type of assets, size of the transaction, service territories, regulatory environment, investment environment and expected operational synergies may vary widely between utility asset sales. The price paid compared to net book value is a way to normalize the size differences in the transactions. We have developed an expected range in

price to net book value by looking at the Aquila’s sale of its Minnesota gas utility assets, discussion with a Minnesota Utility Executive and with an investment banker.

The sale of Aquila’s Minnesota gas assets to Minnesota Resources Corporation (Wisconsin Public Service Corporation) was approved by the Minnesota Public Utilities Commission on June 1, 2006. The purchase price was approximately 2 times book value. This purchase took place prior to the credit crisis and the increase in electric utility investment in renewable energy, pollution control and transmission. This multiple of book value would represent the maximum expected book value premium.

The Minnesota utility executive stated that valuations have gone down significantly since the credit crisis. The executive estimated that today the potential range in valuation over book value would be 1.25 – 1.5 times assuming no impairment in utility assets. This range is supported by the fact that Minnesota investor own electric utilities’ common stocks have recently been trading at approximately 1.4 times the book value. If utility rate base is funded 50% by debt and 50% by equity then the premium over book value would be approximately 1.2 times book value.

Table 4.2 provides a summary of the valuation approaches described above.

Table 4.2: DEU Valuation Summary (Total System)

Delano Electric Utility						
Total Electric Utility Valuation						
Method		Value Range				
Book Value Approach		\$11.6M				
Replacement Value Depreciated			\$13.7M			
Comparable Sales						
Low Range (Book Value)		\$11.6M				
Mid Range (1.25 to 1.5 Times Book)			\$14.5M		\$17.4M	
High Range (2 Times Book)						\$23.2M
Expected Value Range		\$11.6M		\$16.0M		

Our valuation summary indicates a total system valuation range of \$11.6M to \$16.0M. However, as shown in subsequent sections of this report, it should be noted that the net proceeds to the City of Delano will be significantly less than the valuations shown.

B. Valuation of Generation Assets Only

Table 4.3 shows that DEU's generation assets plant in service balance is \$8,305,458 at year end 12/31/2010. The corresponding accumulated depreciation balance was \$3,219,510 to yield a net plant balance of \$5,085,948. The installed capacity of DEU's generation facilities is approximately 25 MW. Thus, the installed capacity cost of generation is \$348/kW and the net investment is \$215/KW.

Table 4.3: Electric Generation Plant Investment

Delano Electric Utility							
Electric Generation Plant Investment							
			2006	2007	2008	2009	2010
Generation							
Plant			\$ 7,378,537	\$ 7,967,160	\$ 7,967,160	\$ 8,208,211	\$ 8,305,458
CWIP			\$ 324,866	\$ -	\$ 76,523	\$ 7,167	\$ -
Total Generation Plant			\$ 7,703,403	\$ 7,967,160	\$ 8,043,683	\$ 8,215,378	\$ 8,305,458
Accumulated Gen. Deprec.			\$ (2,276,821)	\$ (2,502,814)	\$ (2,738,730)	\$ (2,974,299)	\$ 3,219,510
Net Generation Plant			\$ 5,426,582	\$ 5,464,346	\$ 5,304,953	\$ 5,241,079	\$ 5,085,948
Gen. Related Inventory			\$ -	\$ -	\$ -	\$ -	\$ 41,755
Net Generation Assets			\$ 5,426,582	\$ 5,464,346	\$ 5,304,953	\$ 5,241,079	\$ 5,127,703
Installed Generation Capacity (kW)							
			23,856	23,856	23,856	23,856	23,856
Gross Investment/kW							
			\$ 323	\$ 334	\$ 337	\$ 344	\$ 348
Net Investment/kW							
			\$ 227	\$ 229	\$ 222	\$ 220	\$ 215

There is a surplus of capacity in the MISO footprint at present owing largely to the impacts of the recession. As a result of this surplus, short-term capacity is very inexpensive. Consequently, selling only the generator assets may not be an economically viable option. Furthermore, the generation is all diesel fueled which makes it very expensive to operate. Also, the units have not been brought up to RICE standards estimated to cost \$587,000. While DEU purchases almost all of its energy requirements from CEMPA, the generation is used to fulfill capacity obligations for long term reliability and resource adequacy. MISO requires that load serving entities have enough accredited capacity to meet peak load requirements plus a planning reserve margin. This indicates a strategic benefit to DEU by keeping the generation as a locally-owned resource.

C. Net Proceeds of Potential Sale

To determine net sale proceeds, the following quantified items must be subtracted from the foregoing valuation:

a) Electric Utility Debt Refunding:	\$585,000
b) Liquidation of other Booked Assets and Liabilities:	(\$456,000)
c) Buyer cost to retrofit generation to RICE standards	<u>\$587,000</u>
Subtotal quantified subtractions	\$716,000

Additionally, the following items, not quantified, must also be considered:

- Debt retirement fees
- Legal and Transaction Costs
- Unwinding of CMMPA purchased power and energy contracts including cost of replacement of Midwest Independent System Operator (MISO) interface
- Employee Obligations
- Potential future property taxes if sold to a taxable entity would add costs for a purchasing entity but would add value to the City
- Increase in electric rates possibly resulting from a sale will negatively impact existing customers at the present time. The long term rate impact on existing customers is likely to be negative if a purchaser raises existing retail rates to area norms.
- Impact on water utility because of loss of shared resources.
- Potential transfer of electric utility headquarters may negatively impact local jobs and result in lost revenues to local support businesses.

D. Central Minnesota Municipal Power Agency (CMMPA) Membership and Contracts Impact on Valuation

DEU is a long term member of the Central Minnesota Municipal Power Agency (CMMPA). The CMMPA acts as a planning, scheduling, coordinating and negotiating agency for its members. CMMPA also serves as the MISO transmission agent, MISO hourly energy market scheduler, and MISO accounting agent for the City. The CMMPA services are secured via several contracts. DEU loads represent approximately 5.29% of CMMPA total load.

DEU's existing contracts with CMMPA and other suppliers will likely not be transferable to the potential buyer of Delano electric assets. Also, disclosure language required as part of DEU's

most recent debt issue indicates that DEU must provide 5-year advance notice prior to withdrawing from CMMPA. Cancelling contracts may also affect other CMMPA members. The actual cost of unwinding from CMMPA and other complications requires legal interpretation and negotiations outside the scope of this valuation study. Table 4.4 shows that almost all of DEU's energy requirements are purchased from CMMPA including amounts sourced from Xcel. This is because all of DEU's generation is oil-fired and is very expensive to operate. It is therefore likely to be dispatched by MISO only under extreme weather or system emergency conditions.

Table 4.4: DEU's Purchased and Generated Energy

Year	Generated		Sourced From XCEL by CMMPA		Others Purchases From CMMPA		Total	
	kWh	%	kWh	%	kWh	%	kWh	%
2010	38,856	0.1%	30,008,784	59.2%	20,636,752	40.7%	50,684,392	100.0%
2009	75,058	0.2%	24,005,600	48.3%	25,631,367	51.6%	49,712,025	100.0%
2008	-	0.0%	28,998,758	54.7%	24,063,019	45.3%	53,061,777	100.0%
2007	116,316	0.2%	22,065,800	41.8%	30,628,166	58.0%	52,810,282	100.0%
2006	266,502	0.5%	27,436,100	53.3%	23,749,843	46.2%	51,452,445	100.0%
Total	496,732	0.2%	132,515,042	51.4%	124,709,147	48.4%	257,720,921	100.0%

V. System Load Profile and Customer Mix

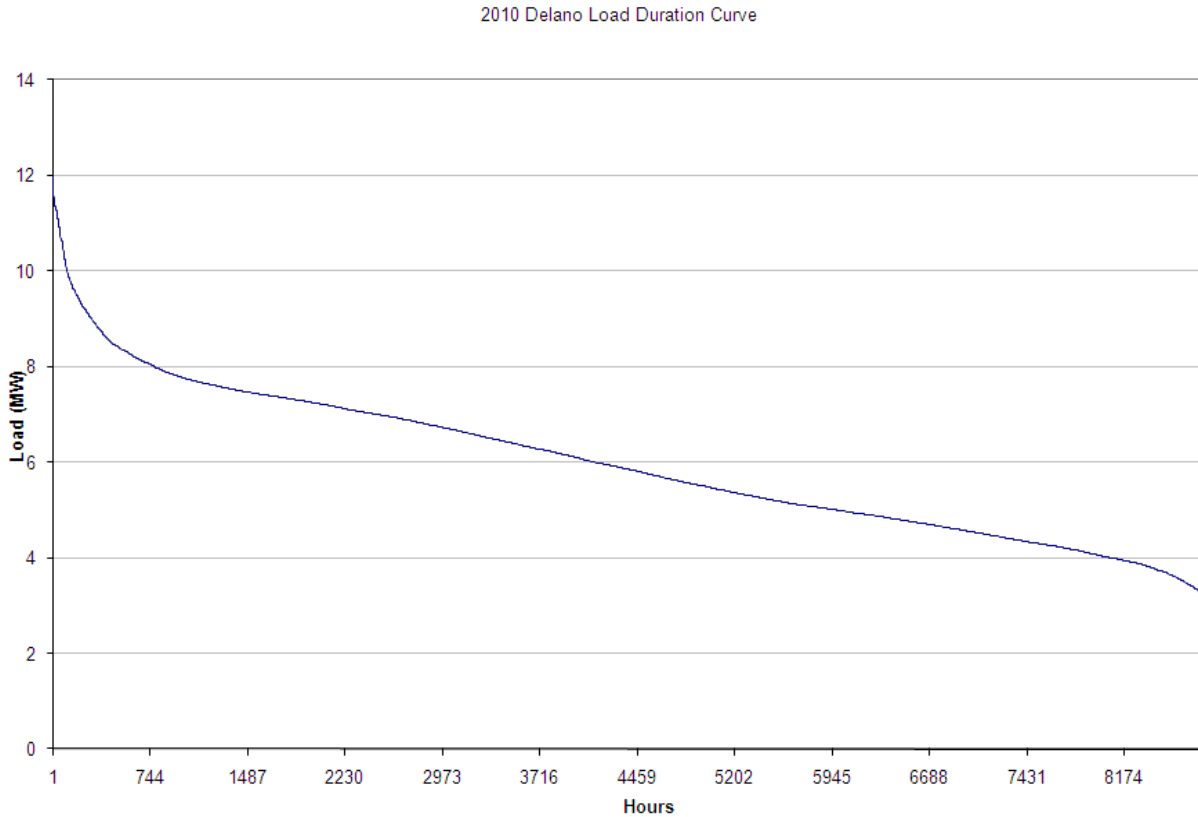
Aside from an assessing the value of DEU's assets, prospective buyers will also examine DEU's system load profile and customer mix to ascertain the type of resources such as base-load and peaking needed to fulfill its load requirements. DEU's current customer mix is shown as follows in Table 5.1.

Table 5.1: DEU Customer Mix

	Number	Annual Kwh	% of Total
Residential	1995	17,844,277.0	35.30%
Commercial	238	3,791,560.0	7.50%
Industrial	80	28,351,216.0	56.08%
Street Lights	n/a	386,067.0	0.76%
Security Lights	n/a	184,090.0	0.36%
		50,557,210.0	

Figure 5.2 indicates the load duration curve for Calendar 2010. It shows that DEU has a fairly steep curve with a load factor of approximately 50%. Based on our experience, investor owned utilities generally have a system wide load factor around 60% while the load factor for municipal utilities would generally be similar to DEU due to the dominant customers being residential or small commercial in nature, with typical characteristics for these classes. DEU system load factor could be improved by the addition of customers with three-shift operations such as round-the-clock data processing centers.

Figure 5.1: 2010 Delano Electric Utility Load Duration Curve



VI. DEU Retail Rates Comparisons

Aside from assessing the value of Delano’s infrastructure and other such related issues, another important aspect to evaluate is the City’s retail rate competitiveness to surrounding entities. Retail rates are an explicit and direct indicator of a utility’s financial and operational performance that will be scrutinized by potential buyers. DEU’s residential and business retail rate comparisons with other utilities provide an important indication of its relative competitiveness and are discussed below. All rate comparisons exclude the franchise fee.

A. Residential Rate Comparisons

Figure 6.1 (a) shows a chart of DEU’s month by month rate trend for the period January 2010 to December 2011. The unit rate was calculated for a 750KWh monthly use. Actual power cost adjustment costs were used for the period January 2010-April 2011. From May 2011, feedback from DEU indicated a negative power cost adjustment charge of $-\$0.015/\text{kWh}$. Furthermore, transmission credits were also included for 2011. As can be observed from figure 6.1 (a), the residential rates have decreased significantly since 2010, owing largely due to (a) 5% decrease in rates in 2011, lower power cost adjustment and transmission credits.

Figure 6.1(a) Residential Rate Trend

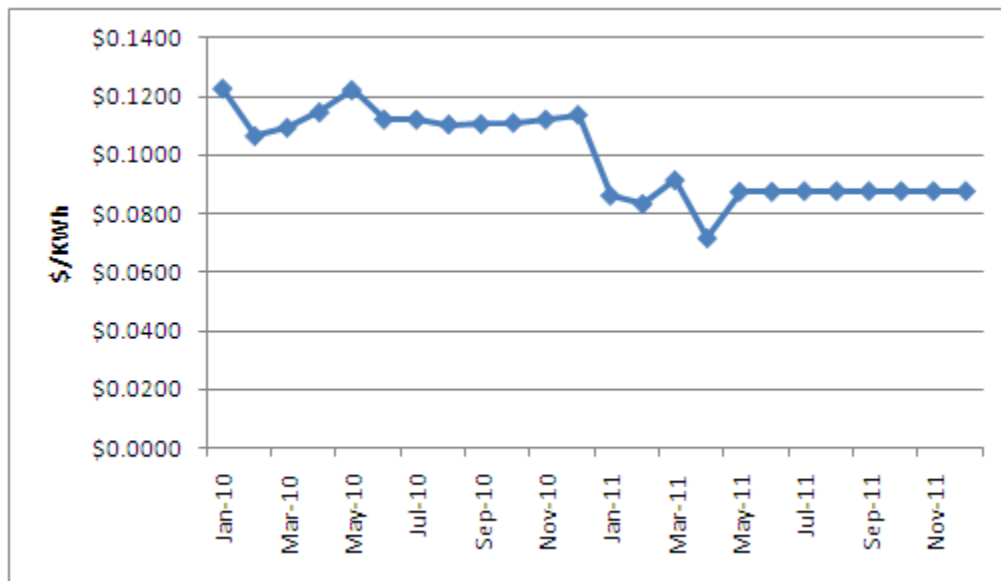
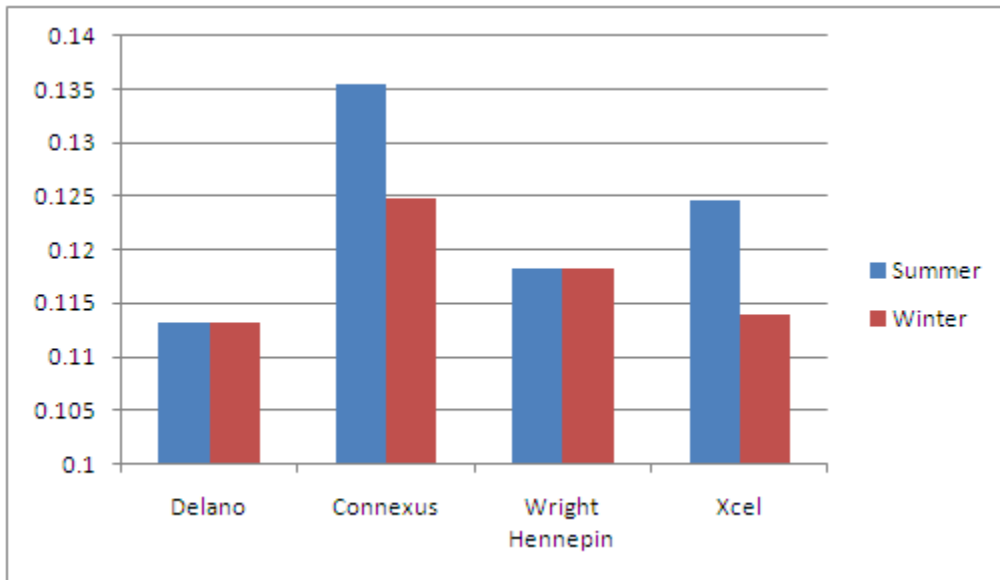


Figure 6.1(b) shows a chart of residential rate comparisons with three surrounding utilities (Xcel, Connexus and Wright Hennepin) for 2010. This analysis was conducted using a summer month and a winter month and provided by the DEU electric utility personnel. As this chart indicates, DEU’s residential rates are the lowest compared to other neighboring utilities such as Wright

Hennepin, Connexus and Xcel Energy. With a 5% decrease in 2011 as well as a reduction in power cost adjustment and introduction of transmission credit, it is likely that DEU's residential rates are now below \$0.10/kWh and even more cost competitive relative to other utilities.

Figure 6.1 2010 Residential Rates Comparison (\$/KWh)



B. Business Rate Comparisons

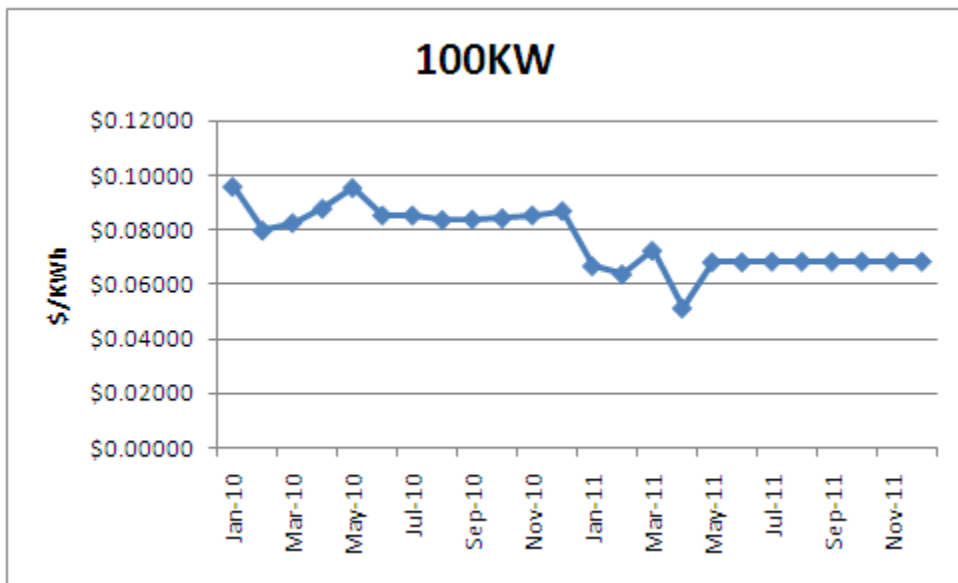
DEU's large general service rate, termed the Industrial Rate, consists of a non-seasonally and non-time differentiated demand and energy charges as listed in Table 6.2 below. As can be noted, the charges for 2011 were lowered by 5%. DEU rates include a power cost adjustment charge that changes on a monthly basis. In 2010, the average power cost adjustment was - \$0.0090/kWh. In 2011, the power cost adjustment has averaged -\$0.0204/kWh for the period January-April 2011. Feedback from DEU indicates that the power cost adjustment charge is expected to average -\$0.01500/kWh for 2011.

Table 6.2: Industrial Rate 2010 and 2011

	2010	2011
Industrial Monthly Minimum	\$25.28	\$24.02
Industrial Energy Charge (KWh)	0.07380	0.07011
Industrial Minimum Demand Charge (KW)	\$145.87	\$138.58
Excess Demand Charge (KW)	\$5.84	\$5.55

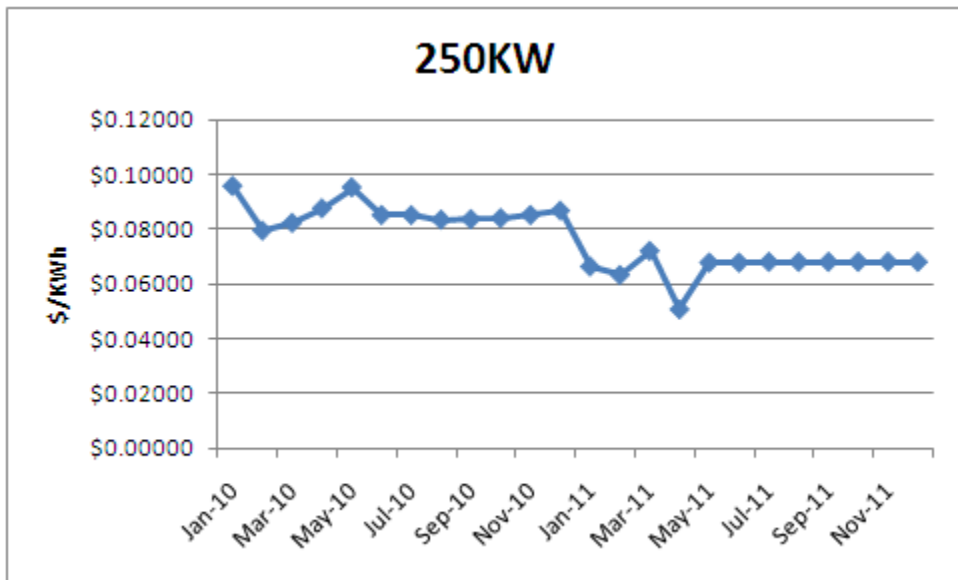
Efforts were made to simulate monthly charges for 100 KW, 250 KW and 500 KW loads with a 60% load factor. Figure 6.3 (a), 6.3 (b) and 6.3 (c) show the results. As can be indicated by these charts, the rates are lower in 2011 compared to 2010. This is attributable to (a) a 5% decrease in billing charge components, (b) lower power cost adjustment and (c) transmission credits.

Table 6.3 (a): DEU’s Industrial Rate – 100 KW with 60% load factor



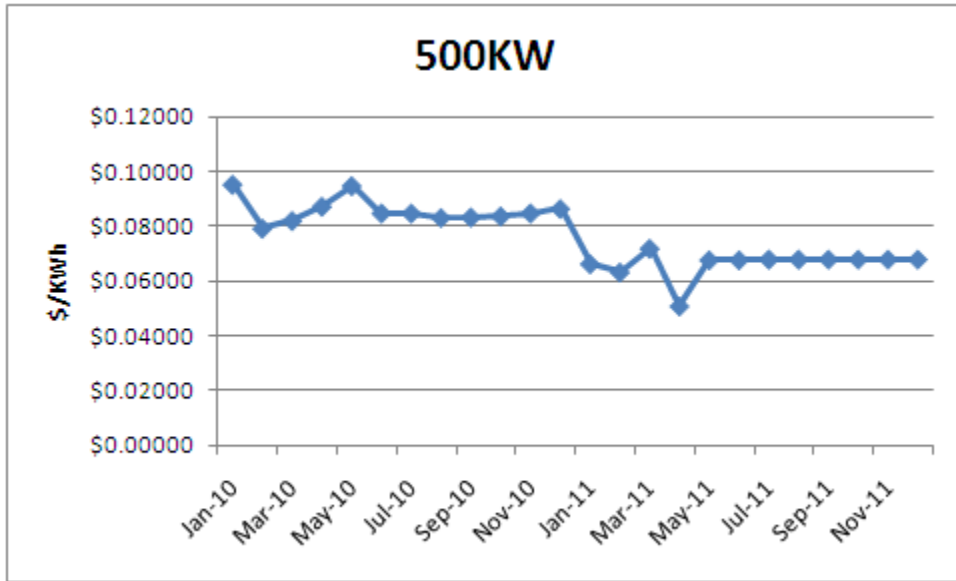
** Jan 2010-April 2011 Actual Rates; May-Dec 2011 Projected Rates

Table 6.3 (b): DEU’s Industrial Rate Trend – 250 KW with 60% load factor



** Jan 2010-April 2011 Actual Rates; May-Dec 2011 Projected Rates

Table 6.3 (c):DEU 's Industrial Rate – 500 KW with 60% load factor



** Jan 2010-April 2011 Actual Rates;May-Dec 2011 Projected Rates

Aside from specifically analyzing DEU’s rate, a separate analysis was also conducted to compare commercial and industrial (C&I) rates for the following sized loads with 40%, 60% and 80% load factors respectively with other utilities:

- 100 KW
- 250 KW
- 500 KW

These sizes were chosen as they are typical of size range of C&I customers served by municipal utilities. DEU’s large general service rates discussed earlier for 2010 and 2011 were compared with rates from NSP, Wright Hennepin and Connexus. Figures 6.3 (a) and 6.3 (b) indicate the comparisons for 2010 and 2011 for 100 KW with 40%, 60% and 80% load factors respectively¹. In 2010, while the rates for lower load factors were comparable across all the utilities, unit costs for higher load factor loads were more expensive for DEU than others. In 2011, it appears that the unit costs for all load factors are the lowest for DEU relative to others. As discussed earlier, this is attributable to the fact that DEU lowered its rates for 2011, projects a higher negative power cost adjustment compared to the previous year and also includes transmission credits that are being passed on to retail customers. At the same time, NSP’s rates have a 7.58% interim rate adjustment, higher projected power cost adjustments and Wright Hennepin and Connexus have higher projected power cost adjustments in 2011 compared to 2010.

¹ These rates were developed by simulating a summer month and a winter month to derive an average annual rate (summer month was multiplied by 4 and winter month by 8). Average power cost adjustment factors were used for all utilities.

Figure 6.3(a): 2010 Business Rate Comparisons for 100 KW

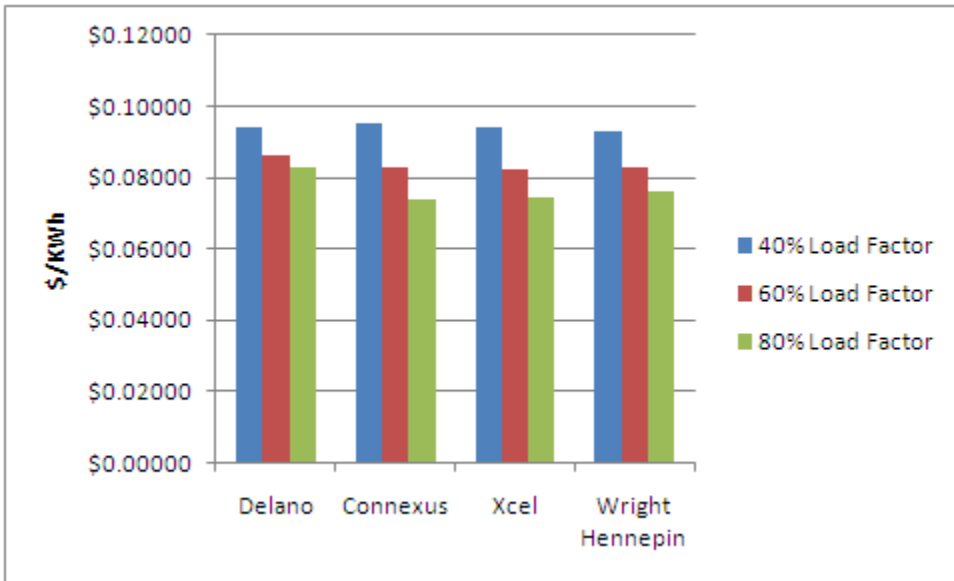
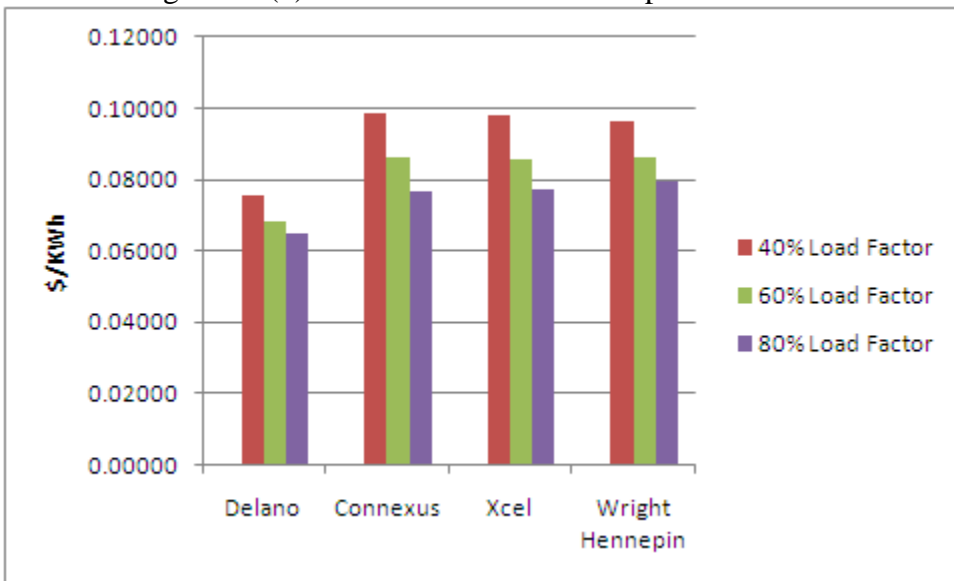


Figure 6.3(b): 2011 Business Rate Comparisons for 100 KW



Note: DEU franchise fee not included

Tables 6.4 and 6.5 indicate the unit costs for the various sized loads and load factors respectively. For 250 KW and 500 KW loads with varying load factors, the results are similar to what is observed for 100 KW load discussed above.

Table 6.4: 2010 C&I Rate Comparisons

2010 Rates	Delano	Connexus	Xcel	Wright Hennepin
100 KW				
40% Load Factor	\$0.09382	\$0.09536	\$0.09404	\$0.09317
60% Load Factor	\$0.08640	\$0.08290	\$0.08201	\$0.08299
80% Load Factor	\$0.08268	\$0.07369	\$0.07422	\$0.07614
250 KW				
40% Load Factor	\$0.09328	\$0.09481	\$0.09349	\$0.09270
60% Load Factor	\$0.08603	\$0.08253	\$0.08164	\$0.08268
80% Load Factor	\$0.08241	\$0.07342	\$0.07394	\$0.07609
500 KW				
40% Load Factor	\$0.09309	\$0.09462	\$0.09255	\$0.09255
60% Load Factor	\$0.08591	\$0.08241	\$0.08077	\$0.08258
80% Load Factor	\$0.08231	\$0.07333	\$0.07310	\$0.07601

Table 6.5: 2011 Business Rate Comparisons

2011 Rates	Delano	Connexus	Xcel	Wright Hennepin
100 KW				
40% Load Factor	\$0.07539	\$0.09853	\$0.09825	\$0.09624
60% Load Factor	\$0.06832	\$0.08607	\$0.08544	\$0.08607
80% Load Factor	\$0.06478	\$0.07686	\$0.07725	\$0.07921
250 KW				
40% Load Factor	\$0.07484	\$0.09798	\$0.09765	\$0.09577
60% Load Factor	\$0.06795	\$0.08570	\$0.08504	\$0.08575
80% Load Factor	\$0.06451	\$0.07659	\$0.07696	\$0.07916
500 KW				
40% Load Factor	\$0.07466	\$0.09779	\$0.09744	\$0.09562
60% Load Factor	\$0.06783	\$0.08558	\$0.08490	\$0.08565
80% Load Factor	\$0.06442	\$0.07650	\$0.07685	\$0.07908

Currently, DMU's total annual retail rate revenue advantage based on DMU's 2011 expected annual retail sales volumes is shown in the following table:

<u>Utility</u>	<u>2011 Revenues</u>	<u>Variance</u>
DMU Rates	\$4.19 million	-----
Xcel Rates	\$4.76 million	\$0.567 million
Wright-Henn Rates	\$5.21 million	\$ 1.013 million

In conclusion, DEU C&I retail electric rates continue to be lower than rates of surrounding utilities in 2011. Based on the rate comparisons conducted for residential customers, it appears that residential rates are the lowest competitive relative to other surrounding utilities as well. DEU's current rate levels are highly dependent on its cost of market energy related purchase power which has been relatively low priced over the last few years due in part from the slow economy. DEU's generation is used for peaking capacity and not base load energy production. DEU has passed on these market energy savings to their customers through lower rates. If market energy prices increase, DEU will likely have to raise their rates faster than other utilities that have included base load generation in their supply mix and base electric rates. The DEU current favorable retail rate differential may be reduced in the future as market energy prices increase.

The DEU current cost competitive aspect may be viewed favorably by potential buyers who may use a potential to raise rates to support and price premium and acquisition costs. If DEU is sold under soft economic conditions that currently exist, existing DEU customers may see an immediate rate increase to the purchaser's system wide rate levels. For example, a typical residential customer's annual bill could increase 4% (\$39) to 13% (\$136) or more depending on the entity that buys the utility to bring it to par with its own residential rates.

C. Franchise Fee/Property Tax

DEU charges a franchise fee based on the units of energy delivered to any class of retail customers within the corporate limits of the City. The current fee is \$0.00317 per kWh delivered. The corresponding annual electric franchise revenue is approximately \$158,500 based on 50 million annual KWH sales. The franchise fee will continue to be in effect if the electric utility is sold and would be charged back to customers served in DEU as a franchise fee the rate tariffs of

a purchasing entity. DEU's effective franchise fee as a percentage of revenue is approximately 3.3% based on 2010 total annual electric revenue of \$4,744,361.

The City would gain a new source of property taxes if the electric assets are sold to a taxable entity. For example if the assets are sold for book value of \$11.6M and the effective tax rate is 1.5% for the first \$150,000 and 2% for the balance, the sale would yield \$231,000 of additional property taxes. However, the City's share would only be approximately 46% of the total tax or \$106,000. It should be noted that DEU donated \$70,000 to the City "In Lieu of Taxes" in 2011, thus the net gain to the City would only be approximately \$36,000 per year. The estimate of additional property taxes may be impacted by the purchase price, asset additions, retirements and property tax mill rates.

VII. Delano Electric Utility Assets ²

A. Substations

DEU has a double-ended substation (Substation A and Substation B) which is located at the DEU power plant site. Each substation consists of:

- (1) 69 KV circuit switcher and associated equipment.
- (1) 69 KV – 12.47 KV, 10 MVA transformer.
- (1) 12.47 KV switchgear lineup. (Includes tie to the other 12.47 KV switchgear)

Substation B also includes a tie to a 7.5 MVA, 12.47 – 4.16 KV transformer which feeds the 4.16 KV switchgear. This switchgear has the 4.16 KV generators on it, power plant auxiliary loads, and also one City feeder – Feeder #3. The 12.47 KV switchgear includes the city distribution feeders as well as the feeders for the local power plant generators.

The substation and switchgear systems are modern, well maintained, well designed, and provided flexible service and operating options for the distribution system.

B. Generation

DEU has seven engine-generators and one gas turbine-generator. These generators are of various vintages. The total DEU generating capability is approximately 25 MW.

² Attachment 3 provides a detailed site report

The DEU generators are all oil fired and consist of the following:

Unit #	Manufacturer	MW	Install Date	Estimated Cost to Retrofit (\$50/kW)
1	Fairbanks-Morse	0.85	Sep-46	\$42,500
2	Fairbanks-Morse	3.02	Apr-99	\$151,000
3	Fairbanks-Morse	1.14	Mar-51	\$57,000
4	Fairbanks-Morse	1.16	Feb-73	\$58,000
5	Fairbanks-Morse	1.34	Sep-88	\$67,000
6	Mitsubishi	1.13	Aug-92	\$56,500
7	Fairbanks-Morse	3.10	Jun-99	\$155,000
9	Rolls-Royce Turbine	12.92	Jan-00	N/A
TOTAL		24.66		

The estimate cost to retrofit pertains to EPA RICE requirements and was developed by CMMPA working with the generator manufacturers. However, it is unclear if all of the units can be retrofitted due to technical issues, such as the ability of the units to come up to temperature in a short period of time. This is especially true for the oldest of units.

Older FM units may not be able to reach RICE standards due to running temperature issues. It is unclear if the two older DEU FM units can be retrofitted. If FM units can be brought up to RICE standards, it does not appear that physical space will limit the required equipment. The FM units have large mufflers and any required equipment would likely replace the muffler equipment.

The RICE standards do not pertain to the combustion turbine-generator, Unit #9.

The generators are all well maintained and are in good working order. The associated generating equipment, including cooling systems, fuel containment systems, etc. are also of proper design, and are well maintained.

The DEU generators are regularly performance tested under MISO “URGE” rules. These test results have been supplied as part of the study information requests.

C. Transmission Lines

The primary Xcel 69 KV transmission line passes through the City of Delano on an east-west direction. This Xcel line is connected to an Xcel substation in both the east and the west direction. DEU taps this line, south of the DEU power plant with a recently built, steel structured 69 KV line.

There is also a 69 KV backup line from a sub west of town (Crow River Sub) to the DEU substation that features a wood structure design. Therefore, the DEU system has access to three Xcel 69 KV substations, which provides good utility source reliability.

D. Distribution System

The overall condition of the DEU electrical distribution system is excellent. In general, the distribution system is relatively new as the distribution, in recent years, has undergone a conversion from OH to URD.

At present, DEU has approximately 7 circuit miles of OH feeders and 47 circuit miles of URD feeders (circuit miles can be either single-phase or three-phase). DEU has approximately 457 transformers (single-phase and three-phase total) in operation, not counting spares.

The remaining OH to URD conversions is planned in 2011.

The DEU 12.47 KV loop system is approximately 75% complete. It is anticipated that 100% completion of the loop system will require approximately 5 more years as future developments are completed.

In general, the DEU electrical distribution system is very modern, flexible, and well designed and installed. DEU has provided customer outage history for the calendar years 2009 and 2010. The history shows only one outage in 2009 resulting in 450 customer hours of outage and 5 outages in 2010 resulting in 187 customer hours of outage.

Reliability reports regarding customer reliability reported to the MN PUC by IOU's are based on the following indices:

1. System Average Interruption Frequency Index (SAIFI): The number of interruptions lasting 5 minutes or more that an average customer experienced during the year. Typical is in the range of 1.0 to 1.5.
2. Customer Average Interruption Duration Index (CAIDI): The average length of time that a customer was without service during an interruption. Typical is in the range of 60 to 90 minutes.

3. System Average Interruption Duration Index (SAIDI): The average minutes of sustained interruption per customer during a year.

Our analysis of the reliability data provided by DEU and our calculations with respect to the foregoing indices (based on an average of 2400 customers) indicates that DEU 's reliability is far better than typical values for the foregoing indices. This leads to our conclusion that DEU provides highly reliable electric service. Attachment 5 provides the DEU's statistics.

VIII. Other Value Considerations

A. Service Territory/Customer Base

The Delano service territory is a small stable service territory with limited growth potential for a potential buyer. The following table provides 5 years of historic year customer count, energy sales and revenue. The changes in revenues are primarily due to the cost of purchase power in this time period.

Delano Electric Utility						
Historic Sales and Customer Count						
	2006	2007	2008	2009	2010	
Customers (Yr. End)	2,436	2,358	2,377	2,377	2,395	
MWH	48,998	51,028	50,933	48,228	50,558	
Revenue	\$ 5,008,333	\$ 5,403,316	\$ 4,740,520	\$ 4,431,986	\$ 4,744,361	

B. Internal Value Considerations

1. Office and SCADA System

The DEU office area is modern. DEU is presently installing a new computer/SCADA system which enables monitoring of the DEU electrical distribution system, generators, etc. DEU is now moving forward with a remote metering reading system which will also enable automatic billing.

2. Buildings and Vehicles

Power plant buildings and warehouse are in good shape and are well maintained. The remote warehouse is in good shape and is well maintained.

The fleet of DEU trucks was observed and is in good shape and well maintained. This fleet includes a digger derrick truck and an aerial bucket truck. Most of the utility trucks are stored at the remote warehouse site.

3. Local Control and Economy

The City of Delano and the DEU currently control the operations and business practices of the electric utility. Offices and operations are conducted with the City and support the local economy. Attachment 4 shows that electric related vendor purchases within the City were \$31,177 in 2010. The selling of the electric utility assets will result in the loss of control and potential reduction in direct spending in the City. If the potential purchaser cannot provide lower electric rates to offset the DEU local spending, the economic impact to the City will likely be negative.

IX. Potential Buyers

The DEU's small size, physical location and limited growth potential will likely limit the interest of potential buyers in the service territory and distribution assets. Service territory/distribution asset buyers will likely be in close proximity to Delano. DEU's operations could be merged with the purchasers operation to gain efficiencies.

Northern States Power Company (NSP) Minnesota is a subsidiary of Xcel Energy. Based in Minneapolis, Minnesota, Xcel Energy operates in 8 Western and Midwestern states and provides a comprehensive portfolio of energy-related products and services to 3.4 million electricity customers and 1.9 million natural gas customers through its regulated operating companies. Xcel Energy is a major U.S. electric and natural gas company, with annual revenues of \$11 billion. Xcel Energy communities served: Colorado, Michigan, Minnesota, New Mexico, North Dakota, South Dakota, Texas, Wisconsin.

Wright-Hennepin Cooperative Electric Association is member-owned, nonprofit electric utility distributing electricity to more than 46,000 homes, businesses and farms. Wright-Hennepin is headquartered in Rockford, Minnesota which is located approximately 5 miles from Delano. Wright-Hennepin is a member of Great River Energy, a not-for-profit electric Generation and Transmission Cooperative.

Allete/Minnesota Power, Otter Tail Power and Alliant/Interstate are other investor-owned electric utilities operating in Minnesota. These investor-owned utilities, although not operating in as close proximity as NSP or Wright Hennepin Coop, may be interested in a potential purchase but would likely not pay a high premium above book value.

X. Future of DEU

The following are our observations and recommendations regarding the future of DEU:

- 1. Sales and Growth Potential.** The DEU service territory is a relatively small stable service territory with limited growth potential for a potential buyer. However, the comparative rate and reliability evaluations in this report indicate that the utility is well run, efficient, reliable, and competitive.
- 2. Peaking vs. Base Load Strategy.** Although DEU's peaking units are older and expensive to operate, these units serve as a hedge to avoid capacity purchases and to allow low-cost energy market purchases via CMMPA accessing the MISO hourly energy market. While energy sales along with hourly prices have been depressed, these conditions could change as the economy recovers and as base load energy prices increase.

A key reason to be aware of potential base load price increases involves current actions being taken by the federal Environmental Protection Agency (EPA). This Agency is engaged in a number of rulemaking and regulatory efforts that may have the effect of shutting down older, coal-fired power plants that serve Minnesota as well as increasing the cost of those units which survive. The EPA has recently issued or is now in the process of promulgating new rules on carbon, mercury, fine particulate matter, NO_x, SO_x, ozone, cooling water discharge, coal combustion byproducts and other emissions associated with coal power. A December 2010 study by The Brattle Group consultancy estimates that up to 50,000 MW of coal power (1/5 of the U.S. fleet) would need to be retired as a result of these regulations. Of this total, some 16,000 to 20,000 MW would be retired in the "Midwest ISO" region, which serves Minnesota, up to 28 percent of the coal fleet in the area.

- 3. Strategic Plan** As a result, DEU working with CMMPA and others to retain and improve its competitive position should investigate ways to retain favorable energy rates while continuing to use the peaking units as a capacity hedge. The Minnesota Hub is an

established trading point where future energy prices can be hedged. Bilateral over-the-counter contracts also serve this purpose. This investigation should result in a strategic energy plan. The plan should also include an assessment of future transmission costs without an ownership portion of the Brookings County-Hampton Corner 345 KV line. We understand that CMMPA is presently completing a new strategic plan which will include input and feedback from all its members.

- 4. Viability of Peaking Generation.** Because of the value of DEU's peaking generation as a hedge against capacity purchases and ultra-high energy costs during hot weather and other adverse conditions, it is important that DEU commit to a RICE Rule conformance plan in anticipation of the effective date of these new federal rules.

- 5. Industrial Incentive Rate.** Because of the relatively small industrial component in DEU's sales revenue engaged in 3-shift operations, DEU should consider an industrial incentive rate priced above marginal cost to attract new business. Such a rate typically includes a sliding demand charge forgiveness provision phased out over five years.

- 6. Automation Systems.** DEU should continue to place high priority on completing its System Control and Data Acquisition (SCADA) and Automatic Meter Reading (AMR) automation systems now in process.