

OFFICIAL PROCEEDINGS
CITY COUNCIL
ELECTRICAL ADVISORY COMMITTEE
CITY OF ESCANABA, MICHIGAN
Special Joint Meeting
Tuesday, September 20, 2016

Pursuit to a meeting notice posted August 17, 2016, the meeting was called to order by the Mayor Marc D. Tall at 4:00 p.m. in the Council Chambers of City Hall located at 410 Ludington Street.

Present: Mayor Marc D. Tall, Council Members, Patricia A. Baribeau, Ronald J. Beauchamp, Ralph B. Blasier, and Michael R. Sattem.

Absent: None.

Present: Electrical Advisory Committee (EAC) Members: Chairperson Tim Wilson, John Anthony (left at 5:14 p.m.), Glendon Brown, and John Mellinger.

Absent: Electrical Advisory Committee Member Ann Bissell.

Also Present: City Manager James V. O'Toole, Deputy City Clerk Tammy Weissert, Electric Superintendent Mike Furmanski, Power System Engineering (PSE) Representatives Tom Butz, and members of the public and media.

ADJUSTMENTS TO THE AGENDA

Blasier moved, Sattem seconded, **CARRIED UNANIMOUSLY**, to approve the Joint City Council & Electrical Advisory Committee Agenda as submitted.

CONFLICT OF INTEREST – None

UNFINISHED BUSINESS – None

NEW BUSINESS

Update – Electric Department –General Operations.

Electric Superintendent Mike Furmanski provided an update on departmental projects and operations at 3rd Avenue North, OSF St. Francis Hospital, and Red Pines Industrial Park.

Discussion/Presentation(s) – Future Power Purchases.

City Council and Electrical Advisory Committee heard from representatives from NextEra and Great Lakes Utilities (GLU) power provider who presented various options available to the City regarding future power purchases through 2024.

NextEra Energy, Inc. provided a power point presentation regarding various options

available to the City regarding future power purchases. (See Attachment – A)

Great Lakes Utilities (GLU) provided a power point presentation regarding various options available to the City regarding future power purchases. (See Attachment – B)

After discussion, Council directed Administration to provide a recommendation for future power purchases in the next 30 days.

GENERAL PUBLIC COMMENT – None

COUNCIL/COMMITTEE, STAFF REPORTS – None

ADJOURNMENT

Hearing no further public comment, or further reports from the Electrical Advisory Committee or Council, the meeting adjourned at 6:12 p.m.

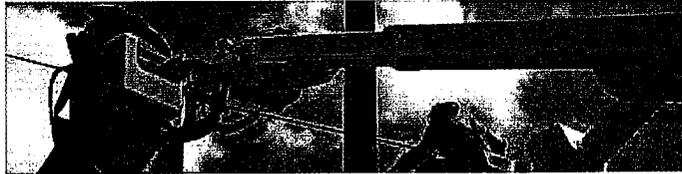
Respectfully submitted,

Tammy Weissert
Deputy City Clerk

Approved: _____
Marc D. Tall, Mayor



City of Escanaba Power Supply Proposal



September 20, 2016

Proprietary & Confidential Information

NextEra Energy, Inc. is a Fortune 200 corporation with two principal subsidiaries, Florida Power & Light and NextEra Energy Resources

NextEra Energy, Inc. Overview



\$55 billion market capitalization⁽¹⁾
46 GW in operation⁽²⁾
\$82 billion in total assets
Strategic partnership with **NEXTERA ENERGY PARTNERS**



One of the largest electric utilities in the nation by retail MWh electric sales



The leader in North America in electricity generated from the wind and sun

Project Development

Hedging, Asset Optimization, & Risk Management

Presence in all major North American power markets

(1) As of March 30, 2016; Source: FactSet

(2) Megawatts shown include Megawatts sold to NextEra Energy Partners as of December 31, 2015

Note: All other data as of December 31, 2015

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Credit Ratings

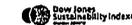
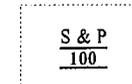
	Fitch	Moody's	S&P
NextEra Energy, Inc.			
Corporate Credit Rating	A-	Baa1	A-
Outlook	Stable	Stable	Stable
NextEra Energy Capital Holdings, Inc.*			
Sr. unsecured debentures	A-	Baa1	BBB+
Commercial paper	F-1	P-2	A-2
Outlook	Stable	Stable	Stable
Florida Power & Light			
First mortgage bonds	AA-	Aa2	A
Commercial paper	F-1	P-1	A-2
Outlook	Stable	Stable	Stable

* NextEra Energy Capital Holdings, Inc. is the guarantor of NextEra Energy Power Marketing, LLC.



NextEra Energy, Inc. is an industry and environmental leader

- Recognized as one of Fortune Magazine's "America's Most Admired®" companies for 10 consecutive years and #1 among utilities for 9 of the last 10 years (2007-2014, 2016)
- Acknowledged as one of the "World's Most Ethical Companies" by *Ethisphere* magazine (2007-2011, 2013-2016)
- Named to the Forbes "100 Most Trustworthy Companies in America" (2015)
- In 2016, joined the S&P 100 Index, a subset of 100 large cap, blue chip companies within the S&P 500
- Named in 2009, 2010, 2011 and 2012 to the Dow Jones Sustainability Index (DJSI)



Over the last decade, NextEra Energy, Inc. has been consistently recognized for excellence

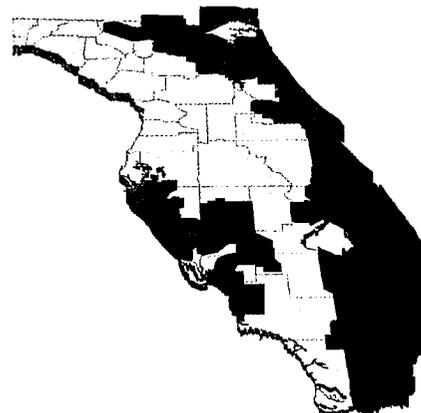
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FPL has a long history of successfully operating and serving customers in Florida

Florida Power & Light

- In operation since 1925
- One of the nation's largest retail rate-regulated electric utilities
- 4.8 MM customer accounts
- 26.5 GW in operation⁽¹⁾
- Service reliability greater than 99.98%
- FPL's typical residential bill is the lowest in FL and well below the national average⁽²⁾



(1) As of April 2016
 (2) Rates based on a typical 1,000 kWh residential bill in 2015
 Note: All other data as of March 31, 2016
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NextEra Energy Resources continues to be an important and growing part of the success at NextEra Energy, Inc.

NEER is a large U.S. based wholesale energy provider

- Portfolio includes 143 operating projects in 25 states and Canada
- The largest owner of wind and utility-scale solar energy projects in North America
 - More than 12,400 MW of wind capacity at 100 facilities⁽¹⁾
 - More than 1,000 MW of solar capacity in U.S. and Canada⁽¹⁾
- Experienced in managing and marketing a diverse range of power projects
- An active and experienced competitor in the wholesale power and fuels markets

Approximately 99% of NEER electricity is produced from clean or renewable sources including wind, solar, natural gas, and nuclear energy

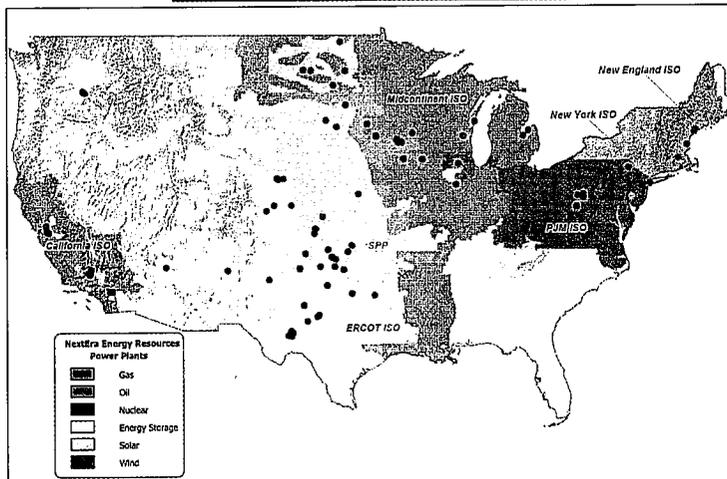
(1) Includes MW owned by NextEra Energy Partners portfolio
Note: All data updated as of December 31, 2015

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NextEra Energy Resources provides primarily wholesale power to utilities, municipalities, and customers across North America via generation assets

NEER Generation Portfolio



(1) Generation portfolio as of 6/30/16, includes MW owned by NextEra Energy Partners portfolio.

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Source: Velocity Suite, ABB Enterprise Software

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NextEra Power Marketing (NEPM) is the energy marketing and trading arm of NextEra Energy Resources

NextEra Energy Power Marketing LLC

- **A top five power marketer**
- **Market maker in many products across the power trading landscape**
 - Active in power, fuel, capacity, basis and renewable credits markets
- **Proven track record of executing structured transactions**
 - Full requirements service; term power and fuel purchase/supply agreements; unit contingent arrangements
- **Manages the power marketing and fuel acquisition needs for all of NextEra Energy Resources' merchant asset portfolio**
- **Third-party energy management services book of over 6,800 MW**

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Disclaimer

This presentation was prepared by NextEra Energy Power Marketing, LLC ("NEPM") exclusively for the City of Escanaba's benefit and internal use. This presentation was prepared in order to assist in evaluating a possible transaction or transactions and does not convey any right of publication or disclosure, in whole or in part, to any other party. These materials are provided for discussion purposes only and are incomplete without reference to, and should be viewed only in connection with, the accompanying oral presentation provided by NEPM. Such materials are presented for discussion purposes only and are not an offer or a commitment of NEPM or any parent or affiliate of NEPM. The transaction or transactions described herein is subject to further review and approval of NEPM and may require revised or additional provisions or the execution of other agreements. Without limiting any of the foregoing, credit approval will be required for this transaction and all of its terms and provisions. Please also be advised that NEPM makes no representations as to the actual value which may be received in connection with a transaction, nor the legal, tax or accounting effects of consummating a possible transaction. Neither this presentation nor any of its contents may be disclosed by the Company without the prior written consent of NEPM.

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Great Lakes Utilities

For

City of Escanaba

September 20, 2016



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Outline of Presentation

- Introduction
- GLU Organization
- Escanaba Current Power Supply
- GLU Risk Management Strategy
 - ❖ Power Supply Planning
 - ❖ Daily Operations
- Summary
- Discussion/Questions



2

What is Great Lakes Utilities

- Great Lakes Utilities (GLU) is a municipal – **Joint Action Agency** formed under Wisconsin Statutes, Section 66.0825
- GLU was formed on February 15, 2000 as a “**project based**” agency - an alternative to the “full requirements” joint action agency model.
 - Only such agency in Wisconsin/Upper Michigan offering a full range of services, including power supply
 - Member chooses level of participation in projects – more autonomy
- GLU is a public body but does not have taxing power



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Membership of GLU

Existing Members:

Bangor Municipal Utility
Clintonville
Cornell Municipal Electric Utility
Escanaba
Kiel Electric Utility
Manitowoc Public Utilities
Marshfield Electric & Water
Medford Electric Utility
Shawano Utilities
Trompealeau Municipal Electric Department
Wisconsin Rapids Water & Light



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GLU – Aggregated Demand (capacity) and Energy

	2015 Peak Demand (MW)	2015 Load (MWh)	Load Factor
Bangor	5.6	27,725	56.86%
Clintonville	19.5	118,975	69.51%
Wis. Rapids	54.9	277,476	57.74%
Trempealeau	3.9	15,529	44.94%
Kiel	16.0	87,105	62.03%
Cornell	2.5	13,174	59.00%
Medford	24.1	129,886	61.59%
Escanaba	28.0	145,462	59.26%
Shawano	53.6	265,186	56.52%
Manitowoc	102.6	549,173	61.12%
Marshfield	69.0	384,389	63.59%
	379.7	2,014,079	60.55%



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Mission and Vision

- Mission Statement
 - *Great Lakes Utilities is dedicated to provide its member public power communities a reliable and low cost wholesale power supply.*

- Vision Statement
 - *Enhance the benefits of municipal public power ownership*
 - *Develop economical and competitive power supply plans and projects*



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GLU - Benefits of Joint Action Project Based Agency

- Allows members to buy lower cost power together through competitive pricing.
- Hence more and lower cost purchase options than as individual City/Utilities.
- Attracts **multiple** wholesale power suppliers interested in doing deals – IPP, Power Marketers, IOU, cooperatives, etc.
- Lowers purchased power needs through aggregation of load i.e. economies of scale
- GLU as a Project agency allows member Cities to choose the level of service desired.



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How is GLU Organized?

- Board is made up of representatives from each municipality
- As a project agency, GLU's members participate in projects or services required of their choice
- When fewer than all members participate in a project or service, a project committee is formed to manage all aspects of the project with only those members with similar interest
- Decisions of the project committee are submitted to the GLU Board for formal approval or disapproval; however, the Board may not alter, amend, or modify project committee decisions.



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How is GLU Organized?

Board of Directors

Bangor (S. Baker)	Clintonville (B. Ellickson)
Cornell (D. DeJongh, Treas.)	Escanaba, MI (M. Furmanski)
Kiel (D. Dederling, Secretary)	Manitowoc (N. Kothari)
Marshfield (B. Trussoni)	Medford (J. Fales)
Shawano (B. Knapp, Vice Chair)	
Trempealeau (K. Wood)	
Wisconsin Rapids (J. Brown, Chair)	

Lakeswind Project Committee
(John Fales)

Power Supply Committee
(Jem Brown)

GLU West Project Committee
(Dave DeJongh)

Administrative and Operating Services (MPU)



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GLU Committees

Power Supply Committee

- Total peak load over 200 MW in MISO Zone 2
- Full or partial power supply provided to members in ATC footprint since 2004
- Large pool reduces risk
- Provide long-term stable rates
- Oversee power supply related activities like MISO, ATC, NAEMA – power marketers, power supply contracts, etc.

MISO Energy Services Committee

- Provides MISO market services under GLU umbrella
- 24-hour desk on an as needed basis to members
- Reduce costs for members by avoiding duplication
- Monitor changing MISO market filings at FERC on the regulations



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GLU Committees

Wind Project Committee

- Formed to allow members to participate in Lakeswind project
- Allows project to be managed as one facility
- The operational costs are distributed according to the member's allocated percentage of the project
- Project in MISO Zone 1

GLU-West Power Supply Committee

- Formed in 2013; MISO Zone 1
- Initiated Power Supply Planning Process for GLU-West members
- Obtained favorable energy prices for 2018 thru 2024
- Obtained favorable capacity prices to serve member needs beginning in 2016
- Long-term full requirements contracts signed with GLU in 2014



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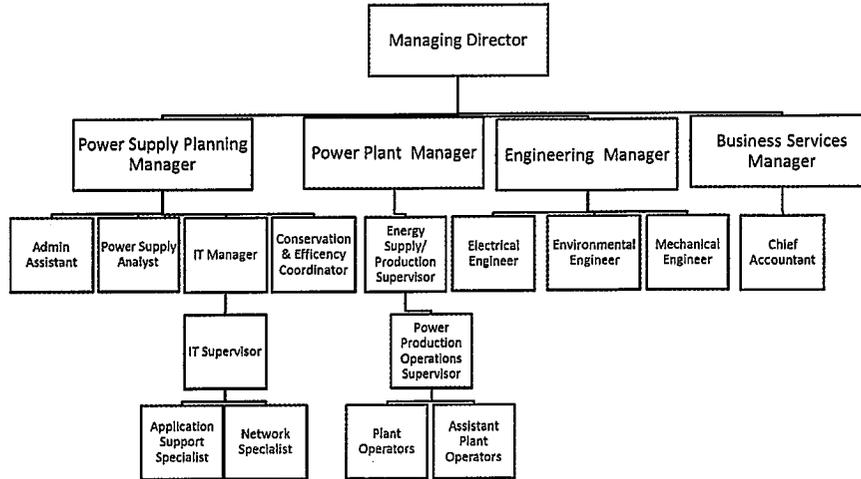
How is GLU Managed?

- Administrative and operational services provided under agreement with Manitowoc Public Utilities and overseen by GLU Board of Directors
- Why MPU (win-win situation):
 - Largest Municipal public power utility in Wisconsin
 - Only base load generating municipal utility in WI with over 100 years of experience
 - Total generating capacity: 105 MW
 - Peak load of 105 MW
 - Annual operating budget of \$70 million
 - Number of Employees: 90
 - 24 hour operation
- Outside Consultants & Energy Advisors as required.



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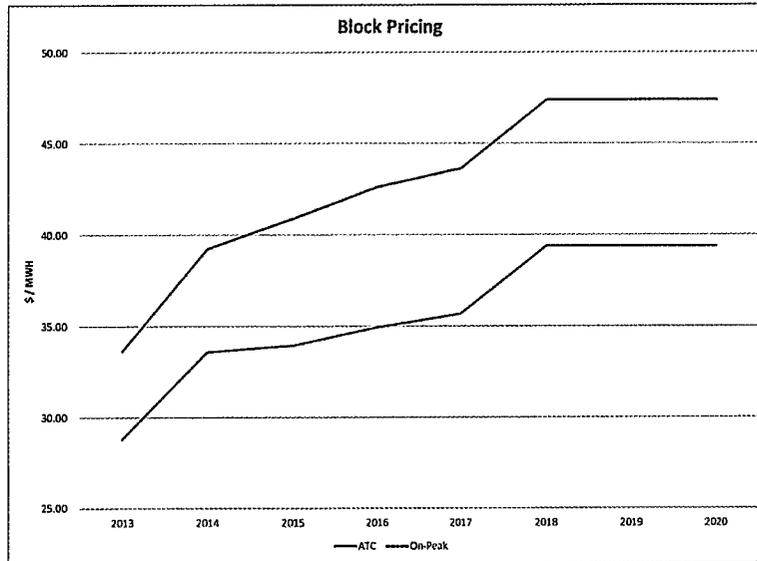
MPU Resources Shared with GLU (MISO Zone 1 & 2)



Escanaba Current Power Supply



Block Energy Pricing from Annual RFPs



ATC = Around the Clock (7 days – 24 hours), On-Peak = M-F, 6a – 10p

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Energy Only Comparisons – PY13/14 & PY 14/15

PY2013-14 Block w FTR				PY2014-15 Block w FTR			
	Volume (MWhs)	Average Rate (\$/MWh)	Total Cost		Volume (MWhs)	Average Rate (\$/MWh)	Total Cost
Baseload block			2,771,148	Baseload block			2,952,276
Baseload balancing			(215)	Baseload balancing			(1,446)
Base Load	87,589.0	\$ 31.64	\$ 2,770,933	Base Load	87,547.1	\$ 33.71	\$ 2,950,830
Intermediate block			2,106,096	Intermediate block			\$ 1,982,515
Intermediate balancing			(209,408)	Intermediate balancing			\$ 188,170
Intermediate Load	62,432.6	\$ 30.38	\$ 1,896,688	Intermediate Load	58,087.6	\$ 37.37	\$ 2,170,685
Peaking block			-	Peaking block			\$ -
Peaking balancing			29,939	Peaking balancing			\$ 22,262
Peaking Load	412.3	\$ 72.61	\$ 29,939	Peaking Load	108.2	\$ 205.79	\$ 22,262
FTR Cost			\$ 834,150	FTR Cost			\$ 540,349
GLU Services			\$ 50,000	GLU Services			\$ 50,000
	150,433.9	\$ 37.10	\$ 5,581,710		145,742.8	\$ 39.34	\$ 5,734,125

PY2013-14 Load Following				PY2014-15 Block w FTR			
	Volume (MWhs)	Average Rate (\$/MWh)	Total Cost		Volume (MWhs)	Average Rate (\$/MWh)	Total Cost
Base Load	87,589.0	\$ 57.10	\$ 5,001,330	Base Load	87,547.1	\$ 57.10	\$ 4,998,939
Intermediate Load	62,432.6	\$ 57.10	\$ 3,564,903	Intermediate Load	58,087.6	\$ 57.10	\$ 3,316,800
Peaking Load	412.3	\$ 57.10	\$ 23,543	Peaking Load	108.2	\$ 57.10	\$ 6,177
FTR Cost			\$ -	FTR Cost			\$ -
	150,433.9	\$ 57.10	\$ 8,589,776		145,742.8	\$ 57.10	\$ 8,321,916



FTR = Financial Transmission Rights – used for congestion hedging

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Power Supply Planning



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Objectives of Power Supply Planning

- Provide reliable low cost power with **minimal cost risks**
- Develop flexible plan that allows utility to:
 - Take advantage of low market prices and
 - Decrease **risk of cost** during market extreme high scenario
- Utilize past experiences and anticipate future events – MPU's 40+ years and GLU's 10+ years of experience.



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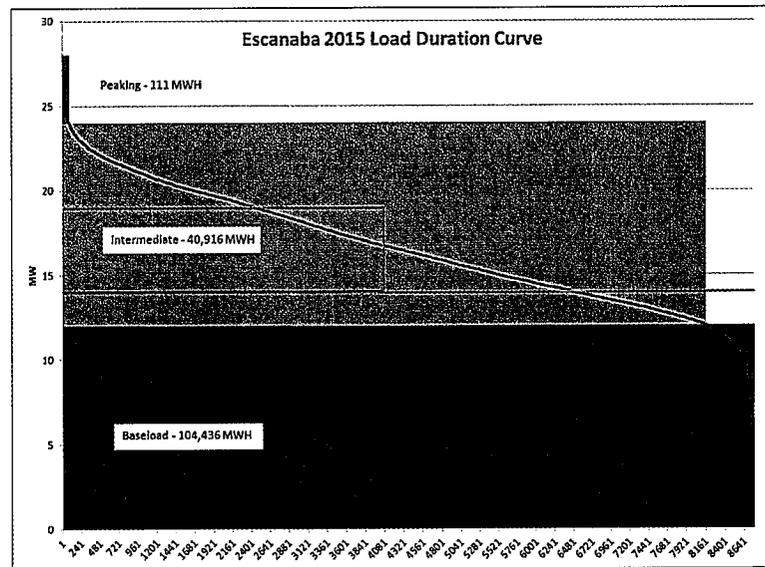
Planning Steps

- Gather Information on Load Profiles
- Develop Load Duration Curves (Current & Future)
- Define and Match Potential Resources to Load
- Issue Request for Proposals (compliment with own resources, if any)
- Review proposals and negotiate power supply Agreement
- Develop Power Supply Plan – Scenario Analysis/Models
 - Long Term
 - Intermediate Term
 - Short Term



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Load Duration Curve – Escanaba



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GLU Power Supply Portfolio – Risk Management

- Power Supply portfolio consists of a diverse set of power supply resources
 - Long-Term contracts – WE, WPS, Alliant, etc.
 - Intermediate contracts – Calpine, Ameren, EDF
 - Leased generation assets - MPU
 - Short-Term contracts or market purchases – MISO, Cargill, NextEra
- Power supply resources have varying levels of flexibility that allows the supply to be adjusted to meet member requirements or take advantage of market conditions
- Scenario analysis studies to determine the exposure limits of various power supply portfolios
- Energy purchase transactions at load nodes or FTRs purchased to hedge delivery risk



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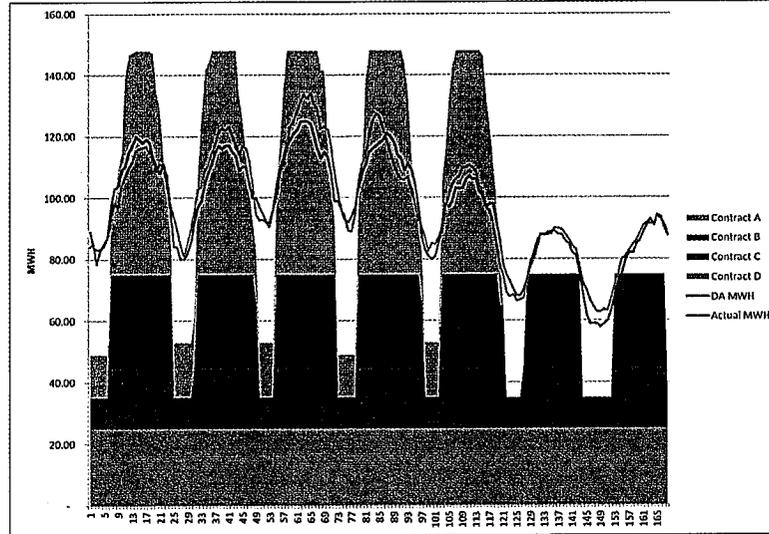
Load Management Process – Risk Management

- No active management (“do-nothing”) results in actual load volumes being purchased at Real-Time (RT) market prices
- Active management incrementally reduces volatility (risk) by:
 - Purchasing forecasted load volumes in the Day-Ahead (DA) market
 - Entering into bilateral contracts with counterparties
 - Acquiring FTRs (Financial Transmission Rights) to hedge locational pricing differences between load and contract settlement points



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Load balancing & Risk Mitigation Example



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GLU Power Supply Pool – Budget Performance

	Budgeted			Actual		
	Revenues	Expenses	Net	Revenues	Expenses	Net
2011	\$52,888,115	\$52,008,313	\$ 879,802	\$61,883,120	\$59,496,547	\$ 2,386,573
2012	\$79,778,734	\$78,997,159	\$ 781,575	\$82,354,049	\$76,557,058	\$ 5,796,991
2013	\$76,316,413	\$75,162,979	\$1,153,434	\$76,955,487	\$72,219,867	\$ 4,735,620
2014	\$77,409,541	\$74,803,134	\$2,606,407	\$77,272,270	\$78,027,007	\$ (754,737)
2015	\$79,597,545	\$79,676,745	\$ (79,200)	\$78,447,760	\$74,159,816	\$ 4,287,944
2016	\$46,456,010	\$46,262,375	\$ 193,635	\$45,570,379	\$42,014,305	\$ 3,556,074

- Net income – used for rate stabilization, rate reduction or returned to members
- GLU’s current cash reserves is \$20 million



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Summary

- GLU is Project Agency – Members choose service required
- Escanaba's current method of purchasing energy:
 - Limited to one supplier for energy – Does not result in lowest price
 - Escanaba capacity purchase through GLU's competitive pricing
 - GLU has been providing MISO services to Escanaba
- Utilize past experiences and anticipate future events – MPU's 40+ years and GLU's 10+ years of experience



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Summary

- GLU's Power Supply Experience
 - An annual power supply plan process in place
 - Manage load and supply resources on a daily basis
 - Risk management protocols in place
 - Operational Procedure Manual in place to guide daily operations
 - Multiple MPU employees involved with the daily operations
 - Successfully managing GLU power supply pool & West separately
 - GLU has a proven track record of supplying affordable, reliable power supply for its members since 2008



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Discussion

- What are Escanaba's concerns/issues:
 - Should Escanaba enter into a long term contract now or wait?
 - Benefits of energy purchase through GLU?
 - How does GLU manage risk: self-insured versus fixed price assurance?
 - Development of Escanaba's rate stabilization fund for risk management?
 - Process and time-frame for developing interim or long-term contract with GLU?
 - Should/can GLU create a partnership with NextEra?
 - How Escanaba-GLU can further strengthen relations?



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Discussion/Questions



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