

# ITC Midwest

## Key Drivers of 2015 Projected Formula Rate

- FERC Refund & True-Up** { ~ \$4.5 million reduction in revenue requirements from 2014 due to a higher true-up offset by a one-time FERC refund to customers in 2014
- Return on Rate Base** { ~ \$ 16.8 million higher than 2014, primarily driven by higher projected plant balances, partially offset by a corresponding increase in deferred taxes and accumulated depreciation.
- Operating Expenses** { ~ \$ 16.6 million higher than 2014, primarily due to higher O&M (computer hardware, transformer maintenance, and vegetation management), depreciation expense, taxes, and A&G expenses supporting regulatory and compliance
- Revenue Credits and Offsets** { ~ \$ 14.6 million reduction in projected revenue requirements primarily due to higher credits resulting from higher in-service amounts for MVPs and higher point to point revenues.



## ITC Midwest 2015 Planned Capital Additions: Process Overview

- The development of the annual Rate Base begins with a forecast of planned capital additions.
- The ITC Midwest Planned Capital Addition slides identify expected line and substation construction projects as they are currently known.
- The projects identified represent our best estimates for projects to be initiated and completed.
- Note that many factors such as regulatory approvals, construction resources, availability of materials, weather and other unforeseen events, could alter projections and schedules.



## ITC Midwest - Step 1 2015 Planned Transfers to Plant in Service

MISO ID	Project name	Projected Amount*
<b>Reliability-Infrastructure Improvements</b>		
3053	Keokuk Hydro-Mess-Carbide 69kV Rebuild	\$ 565,933
3639	Rebuild Chariton Substation	2,829,763
3642	Chariton Melrose 69KV Rebuild	8,654,987
4103	N Burlington to N Burlington Tap	5,087,405
4123	Breaker Replacements	6,075,040
4124	BES Fiber Optic Static Add Program	2,181,429
4124	Fiber Optic Static Addition Program	4,010,451
4126	ITCMW Pole Top Switch Replacement	1,689,984
4127	ITCMW Relay Betterment Project	1,135,388
4128	Smart Grid ITCMW SCADA	634,548
4129	Wood Pole Replacement Program	3,940,997
4446	Control Relocations	1,632,098
4447	NERC Compliance Mitigation Upgrades	852,074
4448	ERUC-Reactionary Capital Work	1,090,733
4448	Miscellaneous - Reliability ITCMW	7,766,604
4449	Poor Performing Circuit Replacement	4,540,901
3628 & 4107	Mason City Lehigh Sub Relocation	7,220,932
	ITCMW Right of Way Acquisition	1,641,003
	ITCMW Road Move Projects	196,517
	ITCMW Tower/Pole Signage	1,132,044
	Minnesota Site Transfer Upgrade	383,483
	NERC Alert Ratings Analysis	19,872,461
various	34.5kV to 69kV Conversion Phase 1	86,255,786
	Lore 69KV Reliability Rebuild	1,460,183
<b>Total for Reliability-Infrastructure Improvements</b>		<b>\$ 170,850,744</b>

\* Totals may not reconcile due to rounding



## ITC Midwest - Step 1 (Cont.)

### 2015 Planned Transfers to Plant in Service - *Continues*

MISO ID	Project name	Projected Amount*
<b>Reliability-Sys Capacity Improvements</b>		
3213	MISO MVP Project #4	\$ 97,836,494
3629	8th Street to Salem 161KV Line	2,378,069
4122	Cross arms Replacement Program	506,385
4122	ITCMW Arrester Replacement	224,369
4122	ITCMW Insulator Replacement Program	679,226
4122	Pole Guying Replacement	453,220
4465	Marshalltown-Stoney Point 161kV Conversion	3,078,111
	ITCMW - Other Misc Projects	139,526
<b>Total for Reliability-Sys Capacity Improvements</b>		<b>\$ 105,295,399</b>
<b>Customer Connection Request/Generator Interconnections</b>		
3412	East Fort Madison Substation	\$ 1,812,986
4121	Hedrick Substation	1,294,971
4121	John Deere Substation Work	301,252
4457	Independence 69kV line and breaker	5,786,614
4457	Independence 69kV line in town Customer	1,647,164
4466	Dubuque 17th Upgrades	2,841,249
4808	Jefferson WCC Breaker Addition	912,367
4809	Perry Distribution Substation Inter	5,297,334
3785	H021-ITCM Funded 161/69KV NU	2,079,976
	Freeborn-Winnebago	\$22,534,206
	Barton Windpower G540/547 Network Upgrade	766,621
4373 & 3828	Nelson Dewey Retirement	32,288,897
<b>Total for Customer Connection Request/Generator Interconnections</b>		<b>\$ 77,563,638</b>
<b>General Plant/Other</b>		
	Contractors - ITCMW	\$ 2,773,508
	Information Technology - ITCMW	3,360,698
	ITCMW Facilities	2,905,807
	Security Installations - ITCMW	566,022
<b>Total for General Plant/Other</b>		<b>\$ 9,606,036</b>
<b>Grand Total for ITC Midwest's Planned Transfers to Plant in Service</b>		<b>\$ 363,315,816</b>



\* Totals may not reconcile due to rounding



# Iowa Regulatory Update



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## 34.5 kV to 69 kV Franchise Update

### • Approved/Not Built

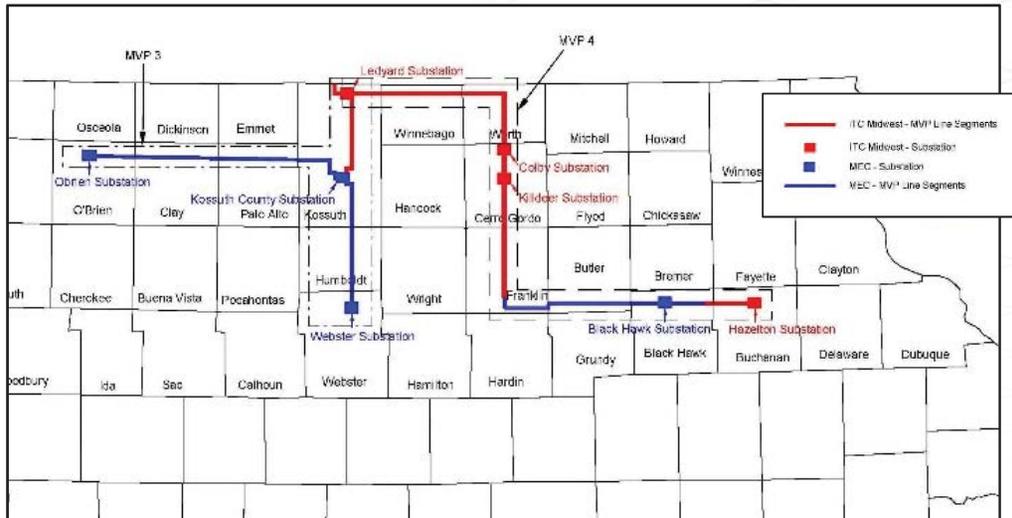
- Timber Creek – Rebuild to Melbourne (Marshall)
- Mt. Vernon to Linn TWP REC (Jones)
- Midway to Lafayette (Linn)
- Midway to Center Point (Linn)
- Midway to Troy Mills (Linn)
- Thompson Corner to Menlo to Dexter (Guthrie)
- North English to South English (Iowa and Keokuk)

### • Filed/Not Approved

- Menlo to Thompson (Guthrie)
- DAEC to Toddville (Linn)
- Traer Double-Circuit (Tama)



# MVP Regulatory Update



## MVP #4

- IUB order approving Black Hawk to Hazleton line received June 17, 2014
- IUB order approving Colby to Killdeer line received May 1, 2014
- Currently in litigation on the Killdeer to Black Hawk line
- Filed Ledyard to Colby Petitions March 31, 2014 (expect litigation)

## MVP #3

- Filed Kossuth County Petition October 25, 2014 (remainder of MVP #3 is in Minnesota)



## Hawkeye Land Court Decision

- On August 7, 2009, Hawkeye Land filed a complaint with the IUB against ITC Midwest, arguing Iowa Code § 476.27 (railroad crossing statute) does not apply to Hawkeye Land because Hawkeye Land is not a railroad or land management company.
- On Sept. 30, 2011, the IUB issued an order affirming an ALJ order which found that Hawkeye Land is a railroad as defined by the statute and that ITC Midwest is a public utility for purposes of the crossing statute.
- Hawkeye appealed the IUB decision arguing the IUB does not have jurisdiction because ITC Midwest is not a public utility, Hawkeye Land is not a railroad, and the law is unconstitutional.
- On December 31, 2012: District Court of Linn County affirmed the IUB order finding Hawkeye Land is a railroad, the crossing statute applies to ITC Midwest, and the law is constitutional.
- On May 23, 2014: Iowa Supreme Court reversed the District Court decision finding ITC Midwest is not a public utility for purposes of the crossing statute and that Hawkeye Land is a railroad. The constitutionality of the statute was not considered.
- ITC Midwest will be seeking legislation to expand the definition of public utility under the crossing statute.





**Questions?**

*Thank you!*

**ITC** ...*Our Vision Forward*

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Alliant Energy  
Transmission Stakeholders  
Meeting  
December 3, 2014

**ITC Midwest  
Project Planning**

Jeff Eddy  
Manager, Planning  
ITC Midwest

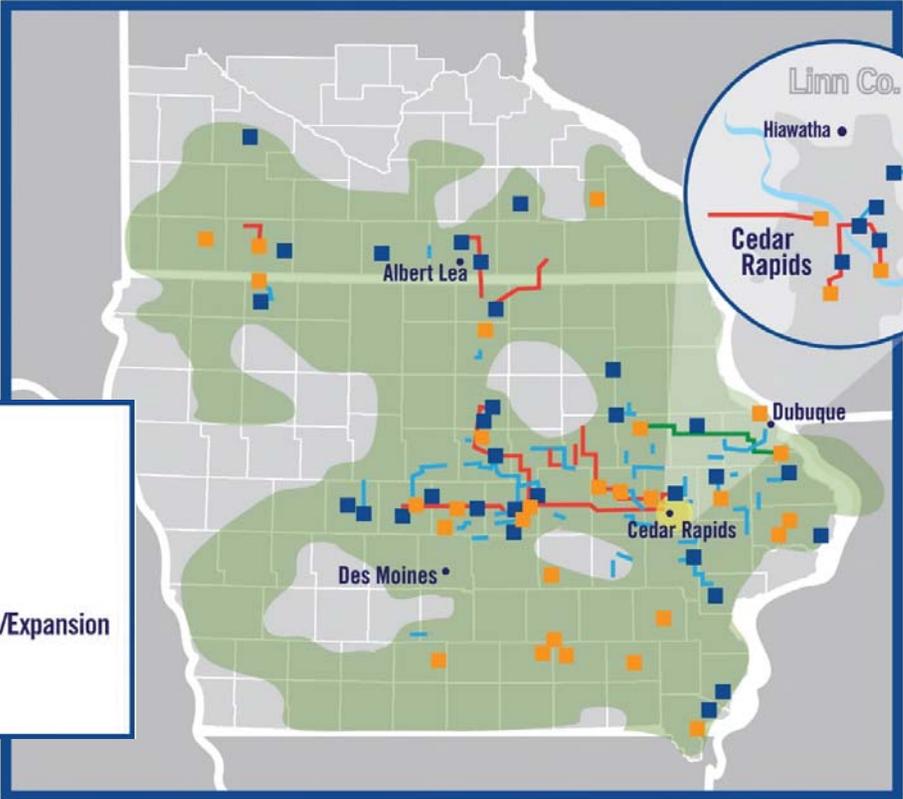


# Projects Completed Across Territory

ITC Midwest has completed variety of project across the territory in the past seven years

**Legend:**

- New 345 kV line
- New or Rebuilt 161 kV line
- New or Rebuilt 69 kV line
- New Substation
- Existing Substation Upgrade/Expansion
- ITC Midwest Service Area



# Project Initiated by Industrial Growth

## Dubuque 69kV Mississippi River Crossing Capacity Upgrade

- Industrial growth in Illinois resulted in need to increase capacity of existing 69 kV river crossing
- Relatively simple project (on paper) with numerous technical and permitting challenges
- Completed February 2014



# Project Initiated by Industrial Growth

Dubuque 69kV Mississippi River Crossing Capacity Upgrade



# Multi-Value Projects

- Portfolio of projects studied and designated “Multi-Value Projects” or “MVPs” by Midcontinent Independent System Operator (MISO)
- 17 total projects, warranting cost-sharing across entire MISO territory of 11 states
- In its evaluation, MISO identified more than a dozen benefits of these projects, including:
  - Improved reliability
  - Improved system efficiency
  - Support approved state and federal energy policy mandates
  - Job creation and investment
- ITC Midwest is building segments of 4 of 17 MVP projects – MVP3, MVP4, MVP5, & MVP7



Note: ITC Midwest is designated to build segments of projects in blue.



# Future Project

## South Loop Project

- Proposed ITC Midwest/CIPCO Project
- Support load growth along the I-380 corridor
  - 8% load growth over last 10 years
  - Existing transmission system will not be able to serve future load
- New 161 and 69kV lines along with load serving substations
- Project will span multiple years with first phase completed in 2019



Note: Final line routes will be determined through routing studies and regulatory processes

# Future Project

## Morgan Valley Project

- Provide voltage support to the entire Cedar Rapids area
  - 345 kV line into Beverly substation
  - 345/161kV transformer at Beverly
  - 33 MVAR capacitor bank at Beverly
- Expected in-service date is July 2017



Note: Final line routes will be determined through routing studies and regulatory processes



**Questions?**

*Thank you!*

**ITC** ...*Our Vision Forward*

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Appendix 12

# Alliant Energy and ITC Midwest outage coordination

Mike Dabney  
ITC Midwest  
Manager, Stakeholder  
Relations

Theresa Harsen  
Alliant Energy  
Manager, Account  
Management

December 3, 2014



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Appendix 12

# Planned outages



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Appendix 12

## Key service delivery

- High reliability
  - No or low outage impacts
  - Quick response to restoration
  - Corrective action
- Low cost
  - Cost of service
  - Cost of outages
- Information
  - When problems occur



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Appendix 12

# Customer engagement

- Reliability key factor to service delivery
  - Predictable maintenance
  - Preventative maintenance
- Proactive versus reactive-planned process
  - Schedule
  - Coordinate
  - Execute
  - Restore
  - Follow-up



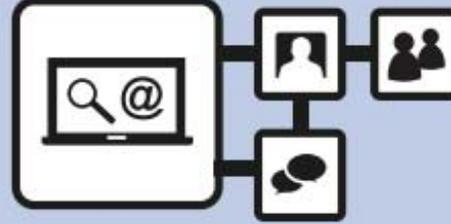
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Appendix 12

# Planned electric transmission service outage

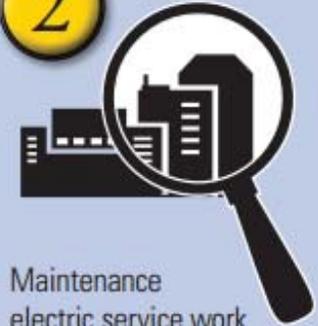
1



Alliant Energy's Key Account Manager (KAM) contacts customer to discuss proposed electric maintenance plan

- May utilize holidays, seasonal shutdowns or periods of load reduction to complete work
- During our urgent electric service outages, there may be less flexibility in scheduling outage at optimal time

2



Maintenance electric service work is identified as needing to be completed

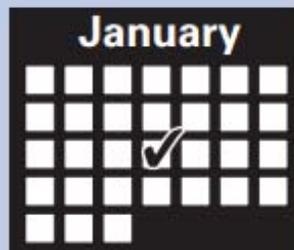
- Work with customers to identify optimal time to complete work

3



ITC Midwest and Alliant Energy teams discuss the scope of work and draft plan to complete work

4



Schedule is established to complete work

5



Alliant Energy's Distribution Dispatch Center (DDC) works with ITC Midwest team and (ULC) crews to take customer off-line for planned outage

6



Maintenance electric service work is completed

7



Planned outage is completed and electric service is restored to customers

Appendix 12

# Priority approach

- Key industrial customer outage communication – TIME SENSITIVE
  - Planned outage process
  - Account Management contacts shared
  - Advance contact to track progress
  - Notification of time disparity
    - Early or late RTS expected
    - On-time – run as planned



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Appendix 12

# Unplanned outages



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Appendix 12

# Mother Nature and electric infrastructure



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Appendix 12

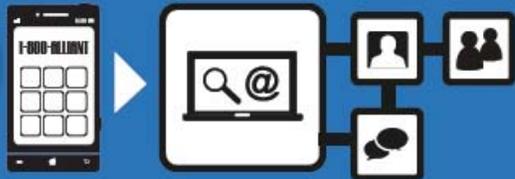
# The steps of power restoration

1



**Electric outage occurs**

2



**Customer contacts Alliant Energy Action Desk**

- Electric outage orders entered into the system are analyzed and grouped based on the current electrical distribution system status
- Key Account Manager is notified

3



**Distribution Dispatch Center (DDC) dispatches Alliant Energy crew to restore outage**

- Transmission electric service outage – work with ITC Midwest or other transmission providers to identify problem

4



**Crews respond to outage and begin to locate source of outage or 'fault'**

5



**Fault is located and crews work with DDC to either back feed the customers or make repairs**

- Provide communication to customers on estimated restoration time and extended service outages

6



**Electric service is restored to customers**



Appendix 12

# Communication with customers during electric outages

- Contact Alliant Energy Action Desk
  - Service outages orders entered into system
  - Analyzed and grouped based on current electrical distribution system status
  - Expedites restoration process
  - Key Account Manager (KAM) is notified as soon as call logged with Action Desk
    - KAM stays in touch with customer throughout restoration process



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Appendix 12

## Coordination with ITC Midwest

- Planned outages
  - Many different components to coordinate
    - Transmission provider – Alliant Energy - customer
    - Eight weeks notice
      - Minimizes potential work disruptions for customers
    - Information is kept confidential
- Unplanned outages
  - ITC Midwest and Alliant Energy work together to identify problem and restore service as quickly and safely as possible
  - Contact action desk – do not directly contact ITC Midwest



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# QUESTIONS?

# Thank you for your business!!



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# IPL Transmission Stakeholder Meeting Review



December 3, 2014



# Distribution Dispatch Center (DDC)

- 24x7 Monitor & Control Electric/Gas
  - Resources
    - 1 Switching Coordinator
    - 7 Senior Resource Coordinators
    - 3 Relief Resource Coordinators
    - 14 Resource Coordinators
      - Combination 12 and 8 hour shift rotations
  - Support
    - 2 Supervisors
    - 1 DDC Coordinator



# Monitor and Operate

## Monitor and Operate Electric and Gas Distribution Systems

- SCADA
  - Monitor both IPL and WPL system
  - 630 Substations
  - 2,320 Breakers/Reclosers
  - 301 Circuit Switchers/Motor Operated Switches
  
- DMS
  - Outage Management
  - GIS



# Dispatching and Scheduling

- Respond
  - Customer Requests
  - Outages
  - Emergencies
- Schedule/Assign
  - Approximately 200 Responders
  - 33,750 per month

Appendix 12

# Monitor & Control - Electric System Technology Overview



**GDC**



SCADA

**ITC**  
Other  
Transmission  
Providers



SCADA

**DDC**



**SCADA**  
**OMS**

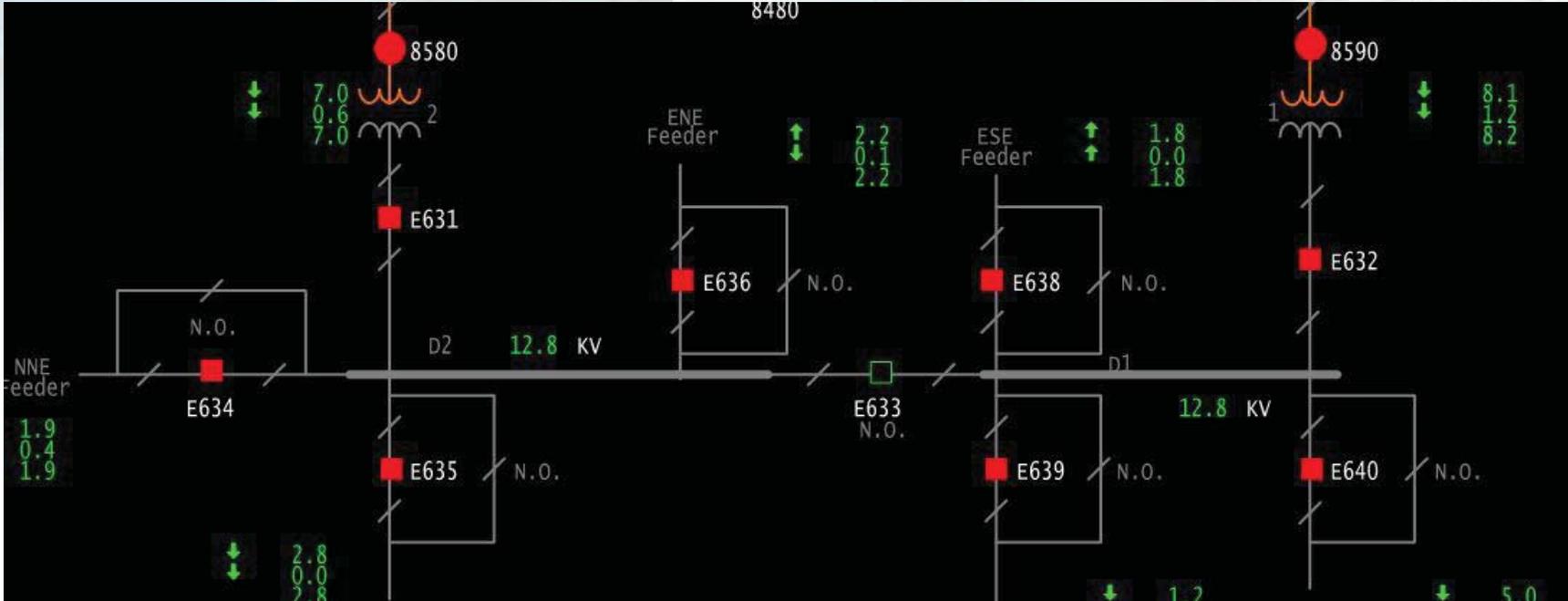
**CUSTOMER  
CALLS**



**OMS**



# SCADA





# Life-Cycle of an Outage



**Transmission Provider, DDC SCADA, "Customer" notification of outage**



1

**ITC and/or DDC- identify closest field resource and sends to location**

2

Field resource travels to site to determine cause of outage



3

Resource notifies ITC/DDC with cause, estimated restoration time and/or if additional resources are needed

4

Area is isolated for repairs

5

Repairs are made and system is put back to normal



**CUSTOMER** is updated via **Key Account Manager**



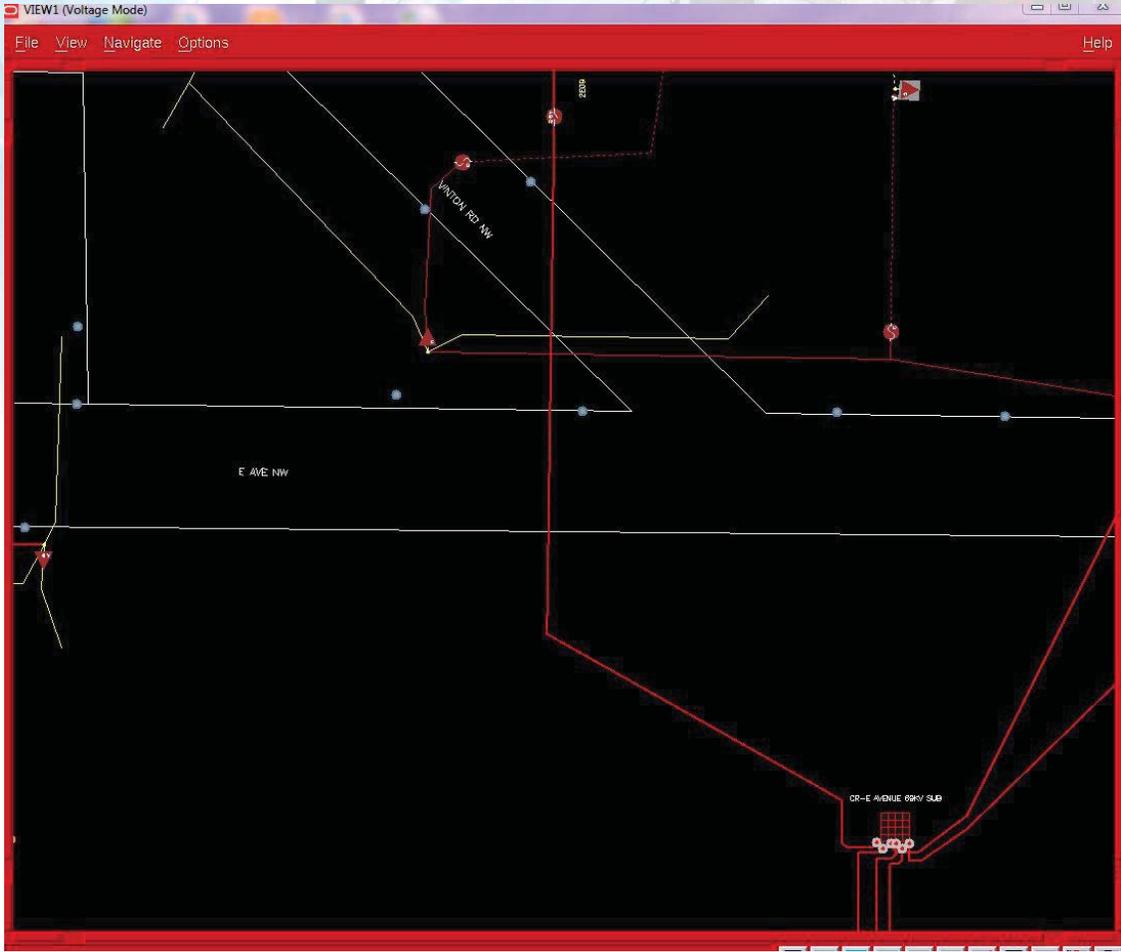
**Outage Management System (OMS)**



Appendix 12

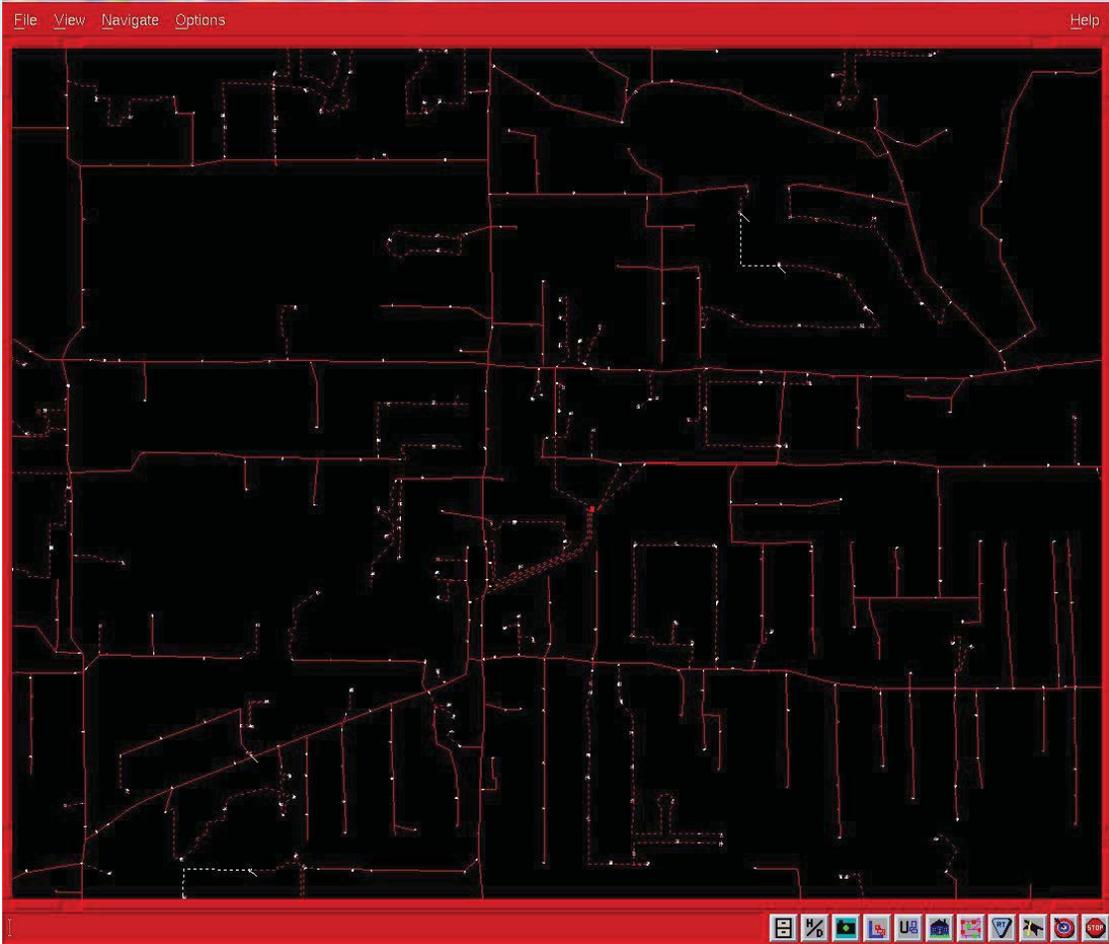


# OMS



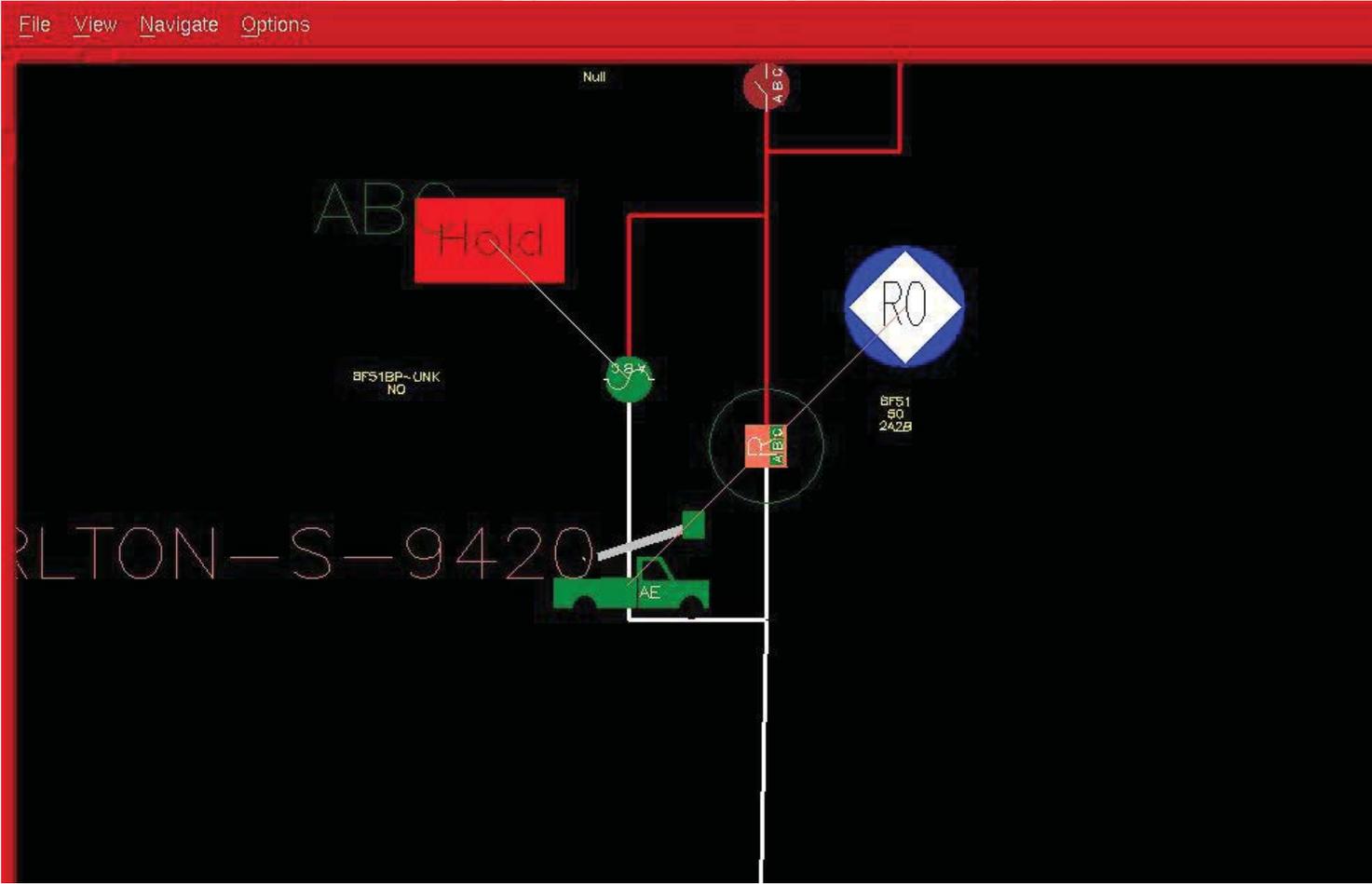


# OMS





# OMS Outage





# Maintenance & Emergency Switching (Lockout/Tag-out)

- Emergency & Planned “Switching”
  - Direct all Switching Operations 34.5 kV and below
    - Emergency/Prescheduled
    - 140 lockout/tag-out clearances per month
    - 7,000 “one-shots” per year
- Planned Switching
  - Transmission Planning
  - Distribution Switching Coordinator





# Transmission Collaboration

## Planned work

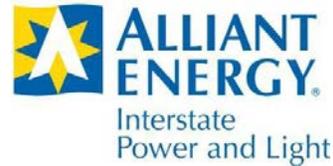
- ITC/DDC/CUSTOMER identify necessary work on electric system
- Customer contacts Key Account Manager to initiate planned switching request
- Switching order submitted at least 8 weeks in advance
- ITC/Alliant Transmission/Distribution designated groups coordinate switching activities
- Work is scheduled
- ITC/DDC/Customer/Local Leadership/Field Resources collaborate to finalize scheduled work
- Work is completed



# Questions?

**Appendix 13 – Follow-up Questions and Responses from IPL Transmission  
Stakeholder Meeting, December 3, 2014**

(The following includes links to additional materials, as well as references to attachments which are included with this Report as Attachments B, C and D.)



### Follow-up Questions and Responses from

#### December 3, 2014 IPL Transmission Stakeholder Meeting

The following are responses to those questions that Interstate Power and Light Co. (IPL) indicated would be followed-up on afterwards with participants.

1. **It is observed that the change in IPL Regional Transmission Service (RTS) Factors from 2014 to 2015 is less on a percentage basis than the ITC Midwest (ITC-M) change in posted MISO Attachment O rates.**
  - a. **Can you please provide a reconciliation of what the change is in year-over-year transmission costs components from 2014 to 2015?**
  - b. **Can you please do so in sufficient detail that the transmission cost changes are shown before considering the offsetting ITC-M and IPL true-up adjustments from previous years?**

Response:

- a. Yes. In comparing IPL's 2015 transmission expense forecast to the 2014 forecast used in establishing the 2014 RTS factor, the total dollar increase to overall Iowa retail electric customers is approximately \$5 million, which equates to almost a 2% increase in transmission costs. (As described previously, this equates to an increase of less than 0.5% in the overall price to customers from 2014 to 2015.). This modest increase to the 2015 RTS factor is less than the percentage change in the underlying transmission expenses IPL anticipates for 2015. The bulk of IPL's transmission expenses (approximately 85%) are comprised of ITC-M Attachment O rates. The projected ITC-M Attachment O increase in 2015 is about 5% compared to 2014 rates driven by higher levels of ITC-M capital investment and operating expenses. The impact to Iowa retail customers of this increase is largely offset by a reduction in IPL's expected load. IPL's projected load for 2015 is expected to be over 5% lower than 2014, which contributes to a reduction of approximately 5% to IPL's 2015 RTS factor.<sup>1</sup>

The following table represents the key drivers that comprise the almost 2% increase to 2015 forecasted transmission expense used in calculating the RTS factor.

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<sup>1</sup> ITC-M develops its own demand forecast in the determination of its rate. IPL develops its own demand forecast and applies ITC-M projected rate in the determination of the RTS factors.

<u>\$(in millions)</u>	<u>Key Driver</u>	<u>% of 2014 Expense</u>
\$ 15.3	Higher infrastructure costs and operating expenses (ITC-M Attachment O)	5.1%
3.9	Reduction in credit for IPL revenue over-collection in 2015 RTS Rider factor	1.3%
1.9	Less of overall transmission expense assigned to wholesale/Minnesota	0.6%
<u>(16.0)</u>	<u>Projected IPL load reduction from 2014 to 2015</u>	<u>-5.4%</u>
\$ 5.0	Total change in net Iowa retail transmission expense	1.7%

Please see the “2015 Fcst vs 2014 Fcst” tab in the provided spreadsheet (Attachment B to this Report, in Excel format) for further detail on the changes in transmission expense categories from year-to-year, which were reflected in the development of 2014 and 2015 RTS factors. Specifically, the spreadsheet compares the 2015 forecasted expenses versus the 2014 forecasted transmission expenses by MISO Schedule.

IPL notes that the 2014 actuals used in the analysis above includes actual results through October and estimated information for the months of November and December.

- b. Yes. In comparing ITC-M’s 2015 Attachment O forecast to the 2014 forecast used in establishing the 2014 Attachment O rate, the rate increased from \$108,677/MW-year to \$113,972/MW-year, which is almost a 5% increase. In general, the increase in the 2015 rate is driven by higher levels of capital investment for infrastructure improvements, system capacity and customer interconnections, as well as higher operating expenses, partially offset by revenue credits associated with Multi-Value Projects. (Please refer to the “ITC Midwest Update” presentation given by Lisa Stump at the December 3, 2014 IPL Transmission Stakeholders Meeting for specific details on the key drivers of the 2015 projected formula rate.)

ITC-M also anticipates that its system wide load is going to be relatively flat from 2014 to 2015. This indicates that the rate is ultimately changing primarily due to spending increases. As mentioned in the previous response, this Attachment O rate increase for 2015 is largely offset by a reduction in IPL’s load. IPL’s projected load for 2015 is expected to be over 5% lower than in 2014. This leads to an expected overall reduction in MISO Schedule 9 charges of almost \$2 million from 2014 to 2015.

Please see the “ITC-M” tab in the provided spreadsheet. (Attachment B to this Report, in Excel format.) The spreadsheet provides a comparison and breakdown of the ITC-M 2015 Attachment O to the 2014 Attachment O (lines 10-15). Since the MISO Schedule 9 rate is a joint load zone rate (line 28), this spreadsheet also provides the forecasted expenses for the other transmission providers within the load zone (lines 17-21). The comparison indicates that the increase in the ITC-M rate (lines 3 and 28) is offset by the load reduction in the year over year forecast for IPL (line 1).

- 2. IPL and ITC-M discussed ITC-M’s intent to exercise the “self-fund” option of Attachment X of the MISO Tariff for construction of the transmission network upgrades needed for the interconnection of IPL’s Marshalltown Generating Station (MGS).**

(The self-fund option is established in [Attachment X, Article 11.3](#) of the MISO transmission tariff. The decision to exercise that option is at the sole discretion of the transmission provider (ITC-M). The self-fund option allows the transmission owner to fund generator interconnections, and then collect its costs from the interconnecting generator through a separate transmission service charge.)

- a. Did IPL perform an analysis comparing costs to IPL and its customers for the proposed transmission network upgrade costs associated with Marshalltown Generating Station (MGS) if IPL were able to fund the network upgrades directly versus ITC-M exercising the self-fund option?
- b. If so, what were the underlying assumptions used such as the project costs and discount rate, and what were the results?

Response:

- a. Yes. The analysis was done in late 2013 and early 2014, and showed that IPL customers are expected to be better off through ITC-M self-funding on a net-present-value basis.

	IPL Intangible Asset Scenarios		ITCM Ownership Scenarios	
			Direct Assignment Charge	
	Low Estimate	High Estimate	Low Estimate	High Estimate
NPV - 2016-2065	\$102,021,642	\$182,816,201	\$89,310,318	\$160,038,328
Discount Rate	8.00%			

That analysis is provided along with this response and consists of two files:

- i. MGS Transmission Network Upgrade Funding Whitepaper Jan 2014 (Attachment C to this Report, in PDF format).
  - ii. Marshalltown - Interconnect Transmission - cost analysis (Attachment D to this Report, in Excel format).
- b. Key assumptions in the analysis included:
    - Projected Network Upgrade Costs:
      - Low Estimate: ~\$80M; (~\$62M excluding gross-up)
      - High Estimate: ~\$144M; (~\$111M excluding gross-up)
    - Discount Rate Used for Net-Present-Value Calculations: 8%
    - Transmission book depreciation rates of: 2% (i.e. 50 year life)
    - IPL Intangible Asset Scenario:
      - IPL cost reflects the grossed-up cost.
      - Weighted Average Cost of Capital (WACC) based upon:
        - 11% ROE consistent with approval of Marshalltown Generation Station once in-service. (10.3% ROE for purposes of projected AFUDC calculations.)
        - 48.3% Common Equity ratio.
      - Cost recovery over 50 year life consistent with transmission book depreciation rates.
    - ITC-M Ownership – Self Fund:
      - ITC-M cost excludes gross-up from capitalized cost.
      - WACC based upon:
        - 12.38% ROE
        - 60% Common Equity ratio

- Cost recovery over 20 year life reflecting non-levelized payment stream consistent with traditional cost of service ratemaking.
- i. Analysis Result: IPL's analysis concluded that ITC-M's election to use the self-fund option would be in the best interest of IPL and IPL customers as the lower cost and timing risk means for funding the MGS network upgrades. The analysis shows that the lower IPL weighted average cost of capital is more than offset by the impacts of the requirement to gross-up the payment to ITC-M for the construction costs.

ITC-M has indicated it intends to use a levelized payment structure for the transmission service charge over the term of anticipated agreement, rather than the traditional declining revenue requirement form that was modeled in the earlier IPL analysis. In addition, ITC-M has indicated that the application of the self-fund mechanism and related levelized payment structure would adjust with any FERC decisions on ROE authorized for MISO transmission owners, including ITC-M, and would reflect only actual costs of the project upon implementation. However, these changes do not affect the previous conclusion that ITC-M self-funding will be lower cost to customers on a net-present-value basis.

Additional MISO studies are yet to be completed, which could change the cost and timing of required network upgrades for MGS. However, these changes are not expected to impact the fact that ITC-M self-funding the project will be in the best interests of customers as the lower cost and timing risk means for funding the MGS network upgrades.

**From:** Easler, Jennifer [OCA]  
**Sent:** Thursday, December 11, 2014 4:49 PM  
**To:** Weyer, John  
**Subject:** RE: Today's presentations from IPL Trans Stakeholder Mtg

John, could you provide more information on the project and costs related to Nelson Dewey retirement referred to in Lisa Stump's slides, p. 10 I think. Or, let me know if it would be best for us to request from ITCM.

Thanks,

Jennifer

Jennifer Easler  
Attorney  
Office of Consumer Advocate  
1375 E. Court Ave.  
Des Moines, IA 50319-0063  
Tel. (515) 725-7224

.....  
**From:** Weyer, John  
**Sent:** Monday, December 15, 2014 5:01 PM  
**To:** 'Easler, Jennifer [OCA]'  
**Subject:** RE: Today's presentations from IPL Trans Stakeholder Mtg

Jennifer:

As you noted from Lisa Stump's presentation, there are two ITCM projects associated with the Nelson Dewey Retirement, MISO Project ID #s 4373 and 3828.

Both of these projects involve ITCM lines and substations located in NE Iowa near Dubuque. They are network upgrades required to maintain area reliability following the retirement of Nelson Dewey units 1&2, located across the Mississippi River in Wisconsin. The Nelson Dewey units have provided a measure of area voltage support that has benefited customers in the area, including IPL customers. Once the units retire, MISO has identified additional transmission capacity that is needed to provide sufficient voltage support under contingency conditions. These take the form of these two ITCM projects in Iowa, as well as ATC projects in Wisconsin.

These projects are listed in MISO's MTEP 14 Appendices A&B project table. This file can be found at:  
<https://www.misoenergy.org/Planning/TransmissionExpansionPlanning/Pages/MTEP14.aspx>, under "MTEP14 Appendices". I have also attached a copy to this note, and included a subset with the two ITCM projects below:

MTEP14 MISO Transmission Expansion Plan 2014

Appendices AB: Project Table 12/02/2014

Project Summary Information from Facility table

Appendices AB

Target Appendix	App	Planning Region	Geographic Location by TO Member System	ProjID	Project Name	Project Description	Stat	Stat	Allocation Type per FF	Share Status	Other Type	Estimated Cost	Expected ISD (Min)	Expected ISD (Max)	Max kV	Min kV	Req_ID
A in MTEP13	A	West	ITCM	3828	Lore-Turkey River-Stoneman 161kV Rebuild	Rebuild the Lore-Turkey River-Stoneman 161kV line to 446 MVA. Only the ITC owned portion of the Turkey River-Stoneman line will be rebuilt. This portion stops at the river crossing.	IA		BaseRel	Not Shared		\$23,694,600	12/31/2015	12/31/2015	161		
A in MTEP13	A	West	ITCM	4373	Hickory Creek 161 kV source	Add a 345 kV breaker to the Hickory Creek 345 kV ring to allow for the 345/161 kV transformer to a new three terminal 161 kV ring bus. Tap the Liberty-Lore 161 kV line into a new Hickory Creek 161kV ring bus.	IA		BaseRel	Not Shared		\$9,708,183	12/31/2014	12/31/2014	345	161	

Also attached is an overview of the projects from MISO Planning Advisory Committee (PAC) materials in 2013 for the MISO Attachment Y filing studies done for Nelson Dewey. These projects were approved by the PAC and the materials can also be found at: <https://www.misoenergy.org/Events/Pages/PAC20130828.aspx>

Hope this helps with your question, please let me know if you anything additional.

Thanks,

John Weyer  
 Manager - Transmission Services  
 Alliant Energy Corporate Services, Inc.  
 319-786-7112  
[johnweyer@alliantenergy.com](mailto:johnweyer@alliantenergy.com)

## **MGS Transmission Network Upgrade Funding** Analysis and Selection of Funding Option

### **Background**

In November 2013, ITCM advised IPL that it likely will pursue funding the MGS transmission network upgrades using a self-fund option identified in the standard MISO generator interconnection agreement (GIA) contained in Attachment X of the MISO tariff. The self-fund option, and its use, is discussed in FERC orders including the March 2011 E. ON and November 2013 Ameren/Hoopston orders referenced in this document. ITCM's intent to use this funding option differed from IPL's expectation that IPL would fund the transmission network upgrades pursuant to the funding option identified in Attachment FF of the MISO tariff. ITCM indicated that it believed the self-fund option was a viable approach for it to use, not only for MGS transmission network upgrades, but also for network upgrades related to other interconnection customers. ITCM's assessment that the self-fund option was viable and that ITCM had the right to use it for funding MGS network upgrades was predicated on FERC's issuance of an order<sup>1</sup> in November 2013 in which FERC addressed areas of disagreement regarding the self-fund option between Ameren Illinois, a transmission owner, and Hoopston, an interconnection customer.

IPL, upon learning of ITCM's intent to use the self-fund option, investigated and analyzed the funding options available. Based upon this investigation and analysis, IPL determined a course of action regarding how to proceed.

### **Network Upgrade Funding Options**

Two options are currently available for the transmission owner to select from to fund transmission network upgrades per MISO tariff:

- Generator Funds [Attachment FF – “Option 2”]: Under “Option 2” in Attachment FF, the interconnection customer [generator] provides the up-front financing for the network upgrades and, after construction of the network upgrades, either 0% or 10% of the cost of the network upgrades (depending on the voltage class of the upgrade) is refunded by the transmission owner and the interconnection customer has no further financial obligation for network upgrades.
- Transmission Owner Funds and Bills Generator [Attachment X – Article 11.3 of the pro forma GIA]: The transmission owner funds the capital [self-fund option] for network upgrades and establishes a direct assignment facility charge that it bills to the interconnection customer [generator] over a specified term. The direct assignment facility charge is equivalent to the annual revenue requirement for the return of and on the capital costs of the network upgrades. Terms and conditions associated with the direct assignment facility charge are identified in a service agreement that the transmission owner and interconnection customer negotiate as part of establishing the GIA.

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<sup>1</sup> Midcontinent Independent System Operator, Inc., 145 FERC ¶ 61,111 (2013)

## **MGS Transmission Network Upgrade Funding**

### **Analysis and Selection of Funding Option**

Attachment FF – “Option 1” was removed from the MISO tariff effective March 22, 2011 as a result of the application of a FERC order<sup>2</sup>. “Option 1” required the interconnection customer to provide the up-front funding and then, after completion of the network upgrades, the transmission owner would refund 100 percent of the cost of network upgrades to the interconnection customer and establish a monthly network upgrade charge that would be charged to the interconnection customer through a separate service agreement.

### **Funding Option Key Considerations**

- Either of the two currently available network upgrade funding options will result in the interconnection customer ultimately paying for the costs of the network upgrades. This is consistent with the outcome IPL requested and received in its complaint against ITCM’s Attachment FF.
- The self-fund option eliminates uncertainty regarding the potential need for a tax gross-up which is currently unclear with regard to Attachment FF - Option 2. The self-fund option does not require a tax gross-up.
- ITCM has the right to elect which funding option to use per the MISO tariff. ITCM selects the funding option it wishes to use when the GIA is established.
- While the transmission owner has the right to elect the funding option, FERC states in the Ameren Illinois / Hoopston order<sup>1</sup> that “it would be unduly discriminatory to give a transmission owner the discretion to unreasonably increase an interconnection customer’s costs by choosing the self-fund option as opposed to Option 2.”
- The MISO tariff does not address how costs are to be recovered from an interconnection customer when the self-fund option is elected.
- To recover costs from the interconnection customer when the self-fund option is elected, the transmission owner will need to establish a service agreement. The service agreement will identify the terms and conditions needed to establish the direct assignment facility charge and bill the interconnection customer for it. Any service agreement established will not conform to the pro forma MISO tariff and will require FERC approval. If the parties are in agreement, and, as a result, file executed agreements with FERC, FERC approval will likely be administrative in nature and occur via a delegated letter order. The service agreement will likely be established concurrently with the GIA.

### **Funding Option Impact on GIA Execution**

ITCM will select a network upgrade funding option at the time it prepares the GIA. If ITCM selects Option 2, ITCM will likely apply a tax gross-up. If ITCM applies a tax gross-up, IPL will likely request ITCM to seek a private letter ruling (PLR) from the IRS to eliminate the tax gross-up. If the tax gross-up is eliminated, this will need to be reflected in the executed GIA. If ITCM selects the self-fund option, the tax gross-up becomes a moot point and will not impact the GIA. However, in addition to the GIA,

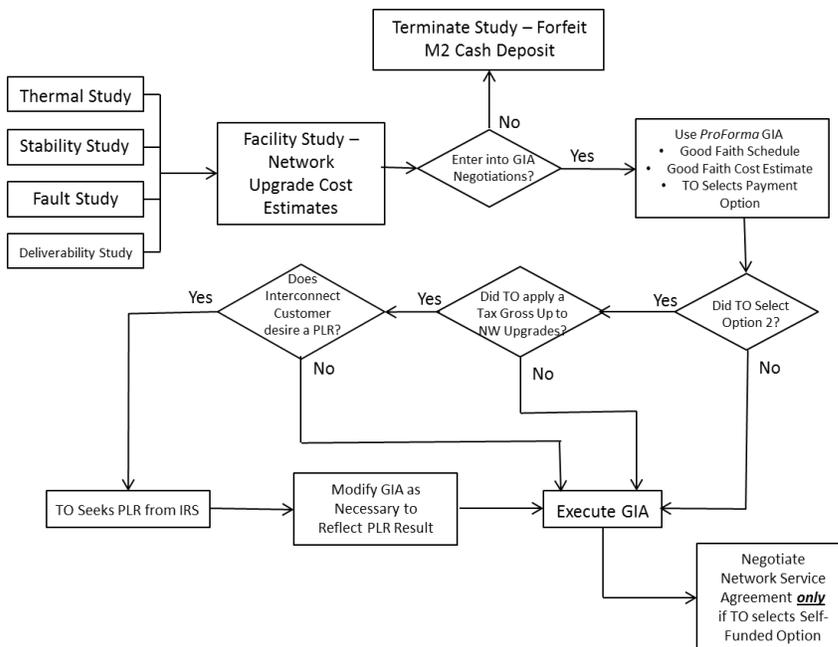
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<sup>2</sup> E.ON Climate & Renewables North America, LLC v. Midwest ISO, 137 FERC ¶ 61,076 (2011) (E.ON)

## MGS Transmission Network Upgrade Funding Analysis and Selection of Funding Option

ITCM and IPL will need to negotiate and execute a service agreement to establish the direct assignment facility charge needed for the self-fund option. If IPL believes ITCM choosing the self-fund option as opposed to Option 2 unreasonably increases IPL’s costs, IPL can decline to sign the GIA and request FERC to decide if the funding option selected by ITCM is unduly discriminatory. Figure 1 illustrates the different actions that need to occur based upon the funding option selected and how these actions fit into the overall MISO generator interconnection process.

**Figure 1: Funding Option Actions Associated With MISO Generator Interconnection Process**



### Financial Analysis

IPL analyzed the impact of the two currently available network upgrade funding options on the cost of the MGS network upgrades based upon preliminary information and estimates; we expect to update as solid information becomes available. The cost of using Attachment FF Option 2 was analyzed with and without the application of a tax gross-up. Both options were analyzed assuming a network upgrade cost ranging from a low estimate of \$62 million to a high estimate of \$111 million was recovered over a 35 year period. The net present value (NPV) of IPL revenue requirements was calculated over this 35 year period using a discount rate of 8%. A summary of this analysis is shown in Figure 2. Attachment FF Option 2 corresponds to the IPL intangible asset scenarios and the self-fund option corresponds to the ITCM ownership scenario.

**Figure 2: IPL MGS Network Upgrade Funding Option NPV Revenue Requirement (2016\$)  
Initial Analysis Summary**

Revenue Requirements	IPL Intangible Asset Scenarios				ITCM Ownership Scenarios	
	No Gross Up		Gross Up		Attachment GG	
	Low Estimate	High Estimate	Low Estimate	High Estimate	Low Estimate	High Estimate
NPV - 2016-2051	\$83,377,445	\$149,407,002	\$102,021,642	\$182,816,201	\$90,690,381	\$162,511,311
As compared to IPL/No Gross Up Scenario			22%	22%	9%	9%

## MGS Transmission Network Upgrade Funding Analysis and Selection of Funding Option

After completing its initial analysis, IPL also performed sensitivity analysis in which it varied the length of the period over which the network upgrade costs were recovered in the ITCM funding option and the return on equity (ROE) used by ITCM in establishing the revenue requirement to recover from IPL. A summary of this analysis is shown in Figure 3.

**Figure 3: IPL MGS Network Upgrade Funding Option NPV Revenue Requirement (2016\$ million)  
Sensitivity Analysis Summary**

	IPL Intangible Asset No Gross Up		ITCM Ownership	
	Low Estimate	High Estimate	Low Estimate	High Estimate
<i>Initial Analysis</i> 35 year ITCM recovery 12.38% ITCM ROE	\$83	\$149	\$91	\$163
<i>Recovery Period Sensitivity</i> 20 year ITCM recovery 12.38% ITCM ROE	\$83	\$149	\$89	\$160
<i>ROE Sensitivity</i> 35 year ITCM recovery 10.97% ITCM ROE	\$83	\$149	\$83	\$149

Figure 2 illustrates that the cost of the network upgrades is approximately 9% higher using the self-fund option instead of Attachment FF Option 2 assuming no tax gross-up is required; however, the self-fund option is less expensive if a tax gross-up is necessary. Figure 3 illustrates that changing the ITCM recovery period using the self-fund option has a relatively small impact on the NPV revenue requirement. However, if ITCM ROE drops to about 11%, the costs of the self-fund and the Attachment FF Option 2 options become equal.

### Funding Option Comparison

#### Generator Funds [Attachment FF – Option 2]

##### *Pros*

- Lower cost (without tax gross-up)
- Provides IPL with additional rate base / earnings potential

##### *Cons*

- Uncertain cost due to potential tax gross-up
- FERC unlikely to determine self-fund option unreasonably increases IPL's costs. This precludes IPL from using Option 2 unless ITCM allows IPL to do so.
- Resolving whether or not a tax gross-up is necessary or pursuing FERC approval to use Option 2 (assuming ITCM does not allow IPL to do so) requires additional time. This likely would negatively impact MGS schedule and in-service date which is a significant risk.

## **MGS Transmission Network Upgrade Funding**

### Analysis and Selection of Funding Option

#### Transmission Owner Funds and Bills Generator [Self-fund Option]

##### *Pros*

- Does not require up-front capital contribution from IPL (however likely will require some form of security during network upgrade construction)
- Eliminates uncertainty regarding need for a tax gross-up. No tax gross-up is required.

##### *Cons*

- Potentially higher cost (up to 10%)
- Does not provide IPL with additional rate base / earnings potential

#### **Outcome**

IPL should accept ITCM's anticipated selection of the self-fund option for the transmission network upgrades associated with MGS. Acceptance of this funding option will reduce the potential negative impact of transmission network upgrades on the cost and in-service date of MGS. IPL will address the self-fund option in greater detail with ITCM during the development of the GIA and the service agreement. During the development of the GIA and service agreement, IPL will attempt to mitigate identified issues or risks associated with the self-fund option and reduce, to the extent possible, the cost to the customer associated with using it.