

2011 Summer Capacity Presentation

May 23, 2011





Presentation Team

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Overview

- Safety
- Environmental Rules
- Summer Preparedness
- Generation
- Transmission & Distribution
- Technologies & Renewables



Summer 2011 Preparation:

Pete Unit 1 Major Outage--Spring 2011 Turbine Overhaul

Safety



4

Safety OSHA Total Recordable Injury & Illness Case Rate (TRII) IPL vs EEI Average Peer Group



Environmental Rules

Potential Impact of Federal Environmental Rules

Rule	State of Rulemaking	Expected Compliance Date	Keylssues
GHG	 indefinite delay of "cap and trade" legislation new source performance standard 	TBD	 Potential tax discussion to address deficit Carbon capture and sequestration NSPS - efficiency driven
HAPS/MACT	 Proposed rule issued on 3/16/11 Final Rule by 11/2011 	1/2015	 EPA limited flexibility in rule timing and est of standards Short compliance timeline (3 years) 1 yr possible extension by IDEM Availability of contractors/outage schedules
Ash	 EPA Proposed Rule: 6/2010 Final Rule: likely after 2012 election 	12/2017	 Possible hazardous waste designation; close ponds Limited beneficial use allowed
NSR	Ongoing settlement discussions with EPA	Varies	Unit controls and limits
CAIR/CATR	Final rule 7/2011	2012 / 2014	 Trading allowed; allocation process
РСВ	 EPA Notice of Rulemaking: 2010 Proposed Rule: 2012 Final Rule: 2013 	Test: 2014 Replace: 2020	Test equipment and replace in 2015, 2020, and 2025 depending on PCB
316(b)	 Proposed Rule Issued 3/28/2011 Final Rule by 7/2012 	2015	 Allow site specific cost benefit vs. mandated "one-size-fits-all" Cooling towers could still be required
Effluent Rule	EPA Proposed Rule: 7/2012 Final Rule: 1/2014	2017	Treat water effluent prior to ponds





IPL Summer Peaks and Demand Response



Demand Response Options Summer Demand Impacts (MW)

Rider		2010	2011
14	Real Time Interruptible	0	12
15	Customer-owned generation	36	32.3
17	Curtailment with notice	3.4	2.2
ACLM	ACLM Demand Response	24.4	28.2
	Total	63.8	74.7



Planning Reserve Requirements (MW)

	<u>Jun</u>	Jul	<u>Aug</u>	<u>Sept</u>
UCAP Planning Requirement	2,972	2,998	2,998	2,718
IPL Resources (MISO UCAP Ratings)	2,959	2,959	2,959	2,959
IPL Position Prior to Accounting for Capacity Sales & Purchases	-13	-41	-41	+241
IPL Net Sales (-) & Purchases (+)	+50	+50	+50	0
Current IPL Position	37	9	9	241





Georgetown



Generation

Harding Street



Eagle Valley



Generation



Generation



Equivalent Forced Outage Rate (EFOR)—Coal Fired



EFOR is an industry measure that represents the effect on unit reliability due to unit forced outages and/or unplanned derates.

Latest available NERC 5 yr average EFOR of 7.46% is used

Generation



Maintenance Plan Large Coal-Fired Units

- 10-year incremental plan for the 5 Large Coal Units
- Addresses major components that are approaching normal design life
- Correct emerging reliability issues
- Increases predictive and proactive maintenance



Pete Unit 1 Spring 2011 Major Outage--Removal of Turbine Shell



Transmission & Distribution

Transmission & Distribution



Power Delivery Major Projects

- Transmission
 - Petersburg to Thompson—upgrade and rerate
 - Petersburg—upgrade auto transformers
 - Wheatland Breed-upgrade
 - I-69 Line Relocations
- Central Business District
 - Georgia Street
 - Cultural Trail



Transmission Tower—I-69 Project

Transmission & Distribution

Downtown Network System

- Preventative Maintenance Measures

 Inspect nearly 300 manholes per year (5 year cycle)
 - Preventative maintenance testing on 100
 Network Protectors annually
 - Transformer oil dissolved gas analysis

Transmission & Distribution Downtown Network System

Historical Manhole Pressurization Events Past 5 Years

- Massachusetts Ave, Primary Splice Failure on UG Network Cable
 - One Manhole Cover Dislodged
- E Michigan St & New Jersey, Secondary Cable Failure
 - Three Manhole Covers Dislodged over a matter of minutes
 - IPL Cable Damage in only one manhole
 - IFD Dispatched on report of gas odor prior to the event
- 20 W Court, Customer Service Cable Failure
 - One Manhole Cover Dislodged
 - Customer Owned Service Wire Initially Short Circuited















Transmission & Distribution **Downtown Network**System

- New Initiatives
 - Network SCADA (DOE Project)
 - Primary Cable fault detectors (DOE Project)
 - Install cable limiters at select locations
 - Evaluate Thermal Imaging for elevated temperatures on components
 - Combination Locking & Pressure relieving manhole covers



1.

Distribution Equipment

SILVERSTRIKE
SILVERSTRUNG

• Distribution Automation

- Installation of 318 network protector relays
- Installation of 250 feeder relays and approximately 90 LTC control



- Installation of 178 new reclosers
- Replacement of 1,350 one-way capacitor controls with two-way controls



Advanced Metering

- Advanced Metering Infrastructure (AMI)
 - New 2-way RF communication system installed
 - All demand meters are being replaced (~6,400)
 - 4,000 energy-only meters will be installed



IPL Metering installs new AMI demand meter at an IPS school.



Electric Vehicles Project

- Deploying Electric Vehicle Supply Equipment (EVSE)
- EV Time of Use charging rates available
- Will measure grid impacts from EV charging







Cyber Security

- Critical Infrastructure Program (CIP)
 - Implemented Compliant Critical Infrastructure
 Protection (CIP) Program
 - Cyber Security Monitoring
- Smart Grid Security
 - Implementing a DOE approved Cyber Security Plan (CSP)
 - Implementing risk management program

Customer-Sited Renewable Resources



- Net Metering expanded in 2010
- Feed-In Tariff for largerscale renewables at customer locations





Summary



Summary

- STATISTICS IN THE REPORT OF IT
- IPL is well positioned to serve our customers this summer and be in compliance with MISO's planning reserve margin
- We are also taking steps to be prepared for summers to come



APPENDIX

Appendix IPL Generating Stations—Coal Fired Details

	Unit #	Fuel	Commercial Date Age	MW	NOx Controls	SO ₂ Controls
	1	Coal	Jun-67 44	232	LNB/OFA NN (2004)	FGD
	2	Coal	Dec-69 42	435	LNB/OFA SCR (2004)	FGD
Petersburg	3	Coal	Nov-77 34	540	SCR (2004)	FGD (upgraded 2006)
	4	Coal	Apr-86 25	545	Improved LNB (2001) NN (2001)	FGD (upgrade under construction)
Harding Street	5	Coal	Jun-58 53	106	LNB/OFA SNCR (2004) NN (2004)	_
	б	Coal	May-61 50	106	LNB/OFA NN (2004) SNCR (2004)	_
	7	Coal	Jul-73 38	427	SCR (2005) LNB/OFA NN (2000)	FGD (2007)
Eagle Valley	3	Coal	Dec-51 60	43	_	_
	4	Coal	Jan-53 58	56	OFA (2004) LNB (2004)	_
	5	Coal	Dec-53 57	62	OFA (2004) LNB (2004)	—
	6	Coal	Oct-56 55	99	LNB/OFA NN (2004)	

IPL Generating Stations—Other Fuel Details

		Unit #	Fuel	Commercial Date Age	MW
	Petersburg	DG	Diesel	Aug-67 44	8
		3	Oil	Sep-41 70	35
	Harding Street	4	Oil	Jun-47 64	35
		CT-1	Oil	May-73 38	20
		CT-2	Oil	May-73 38	20
		CT-3	Oil	May-73 38	20
		CT-4	Oil/Gas	Apr-94 17	82
		CT-5	Oil/Gas	Jan-95 16	82
		CT-6	Gas	May-02 9	158
		DG	Diesel	Apr-67 44	3
	Eagle Valley	Unit 1	Oil	Mar-49 62	39
		Unit 2	Oil	May-50 61	39
		DG	Diesel	Apr-67 44	3

Appendix

IPL Generating Stations—Other Fuel Details



	Unit #	Fuel	Commercial Date Age	MW
Coorgotown	GT-1	Gas	May-00 11	79
Georgetown	GT-4	Gas	Feb-02 9	79
Hoosier Wind Park		Wind	Nov-09 1	100
Lakefield Wind Park		Wind	Under Construction— Planned COD Sep-11	201

