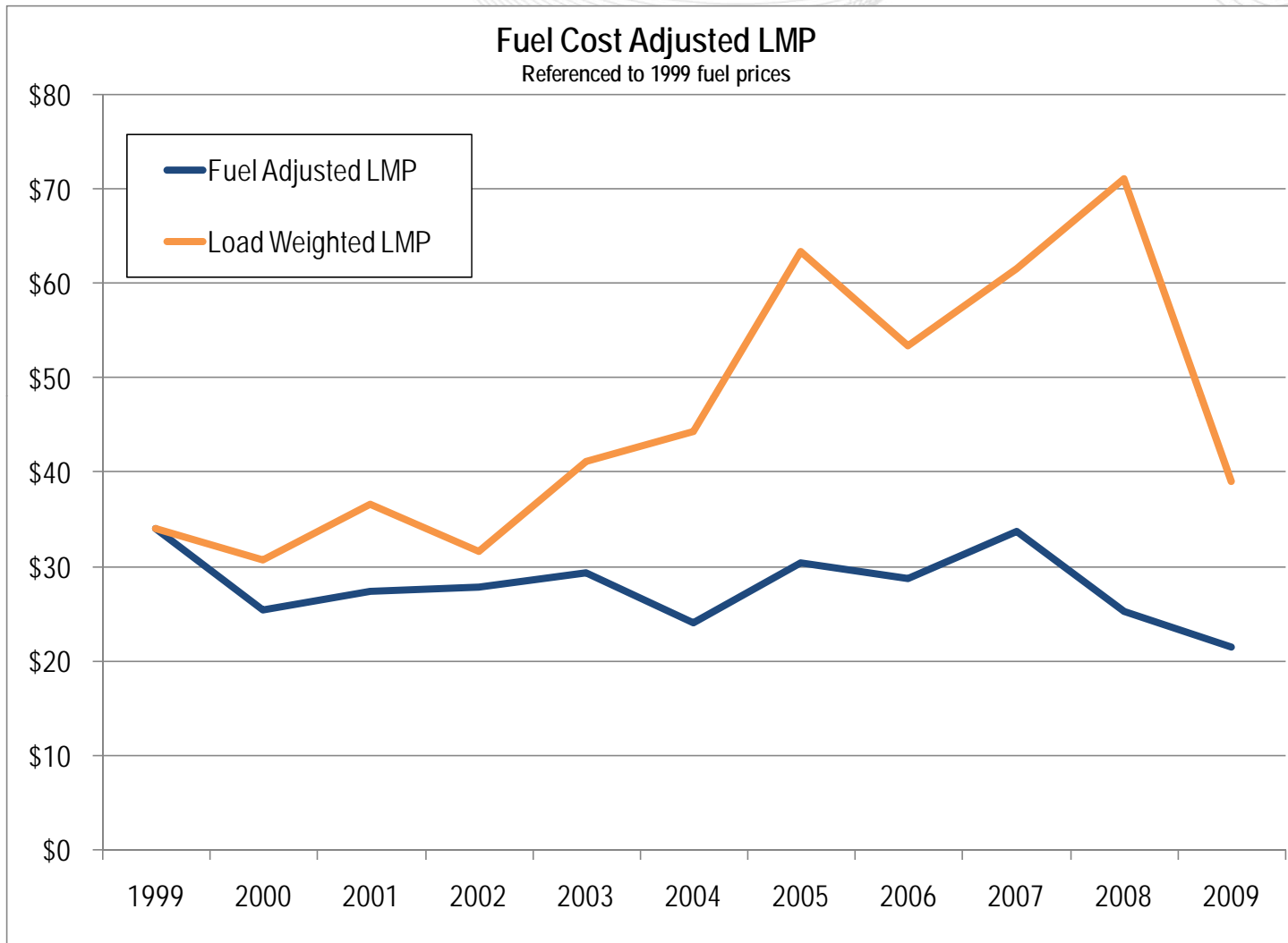




Introductory Remarks

Terry Boston
President & CEO
PJM Interconnection
OPSI Spring Meeting
April 7, 2010

www.pjm.com



Source: Monitoring Analytics, 2009 State of the Market Report



Annual average congestion component of LMP: Calendar years 2008 to 2009

Control Zone	2008		2009	
	Day Ahead	Real Time	Day Ahead	Real Time
AECO	\$7.93	\$10.77	\$2.03	\$1.83
AEP	(\$9.56)	(\$10.46)	(\$2.12)	(\$2.16)
AP	(\$0.50)	\$0.29	\$0.62	\$1.32
BGE	\$10.96	\$11.06	\$3.33	\$3.04
ComEd	(\$11.37)	(\$13.46)	(\$5.09)	(\$5.61)
DAY	(\$10.04)	(\$11.18)	(\$2.77)	(\$2.72)
DLCO	(\$11.77)	(\$14.47)	(\$3.37)	(\$3.02)
Dominion	\$8.07	\$8.76	\$2.47	\$2.37
DPL	\$7.63	\$7.69	\$2.25	\$2.32
JCPL	\$7.92	\$8.64	\$1.82	\$2.01
Met-Ed	\$6.59	\$6.51	\$2.10	\$2.03
PECO	\$5.93	\$6.11	\$1.87	\$1.71
PENELEC	(\$0.91)	(\$2.33)	(\$0.10)	(\$0.06)
Pepco	\$12.28	\$12.40	\$3.75	\$3.74
PPL	\$5.62	\$5.50	\$1.88	\$1.75
PSEG	\$7.76	\$8.92	\$2.12	\$2.27
RECO	\$6.55	\$7.62	\$1.47	\$1.55

Total
congestion
cost down
66%

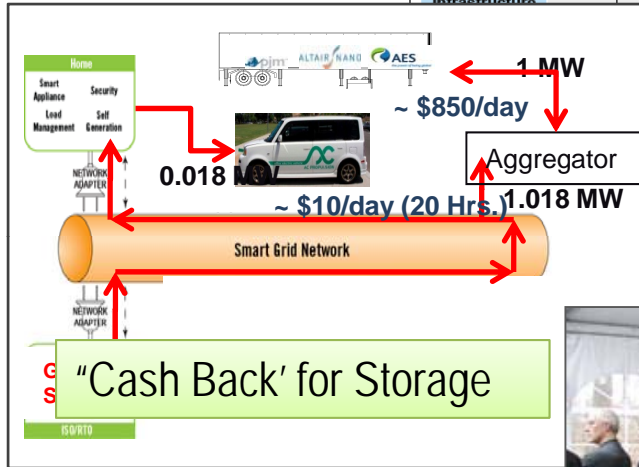
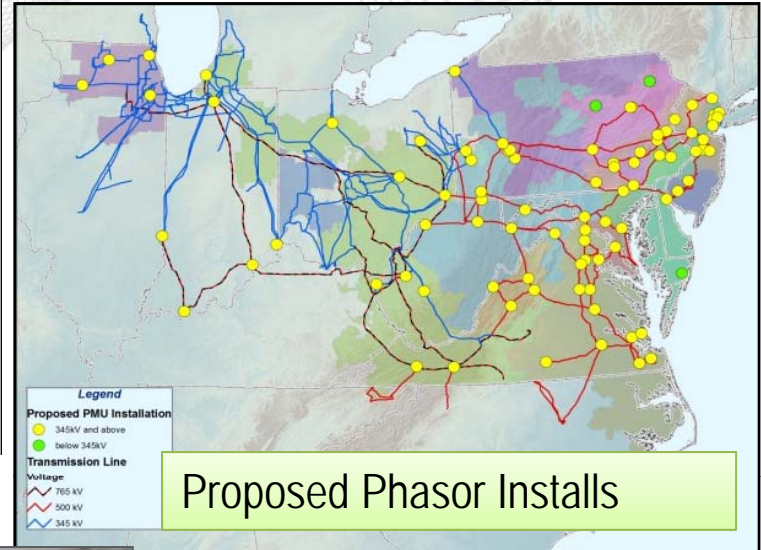
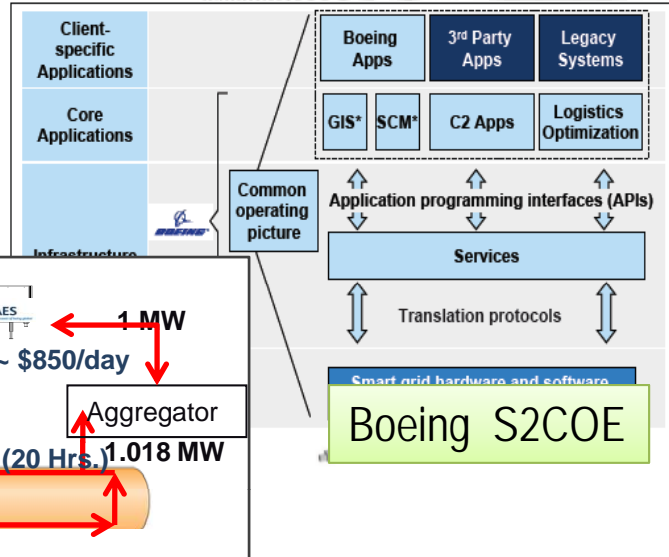
Source: Monitoring Analytics; Table 7-4, 2009 State of the Market Report



2009 PJM Accomplishments – Member and Industry Impacts

Member and Industry Impacts In 2009, PJM made significant financial and business impacts on PJM members and the Regional Transmission Organization/Independent System Operator (RTO/ISO) industry.	Value Impact
Accelerated Settlements: In addition to \$2.9 billion risk reduction, implementation of weekly settlements resulted in the return of collateral requirements to our members.	\$1,005 million
Department of Energy Grants: Project Boeing Smart Grid Solution: Grant approved for software development designed to be scalable, secure, and compatible with multiple systems to help RTOs and utilities improve grid reliability and efficiency. SynchroPhasor Project: Grant approved to deploy SynchroPhasor technology across the PJM footprint. Eastern Interconnection Planning Collaborative (EIPC): Grant awarded for an interconnection-wide analysis of existing and projected regional transmission plans.	\$17 million \$27.8 million \$16 million
Cost Efficiency: Cumulative income tax benefit resulting from the Total Rewards Changes.	\$26 million
Perfect Dispatch: Performance in dispatching the system in the most efficient manner possible and optimizing locational pricing resulted in savings to members.	\$122 million / year (30 yr. NPV = \$1.51 billion)

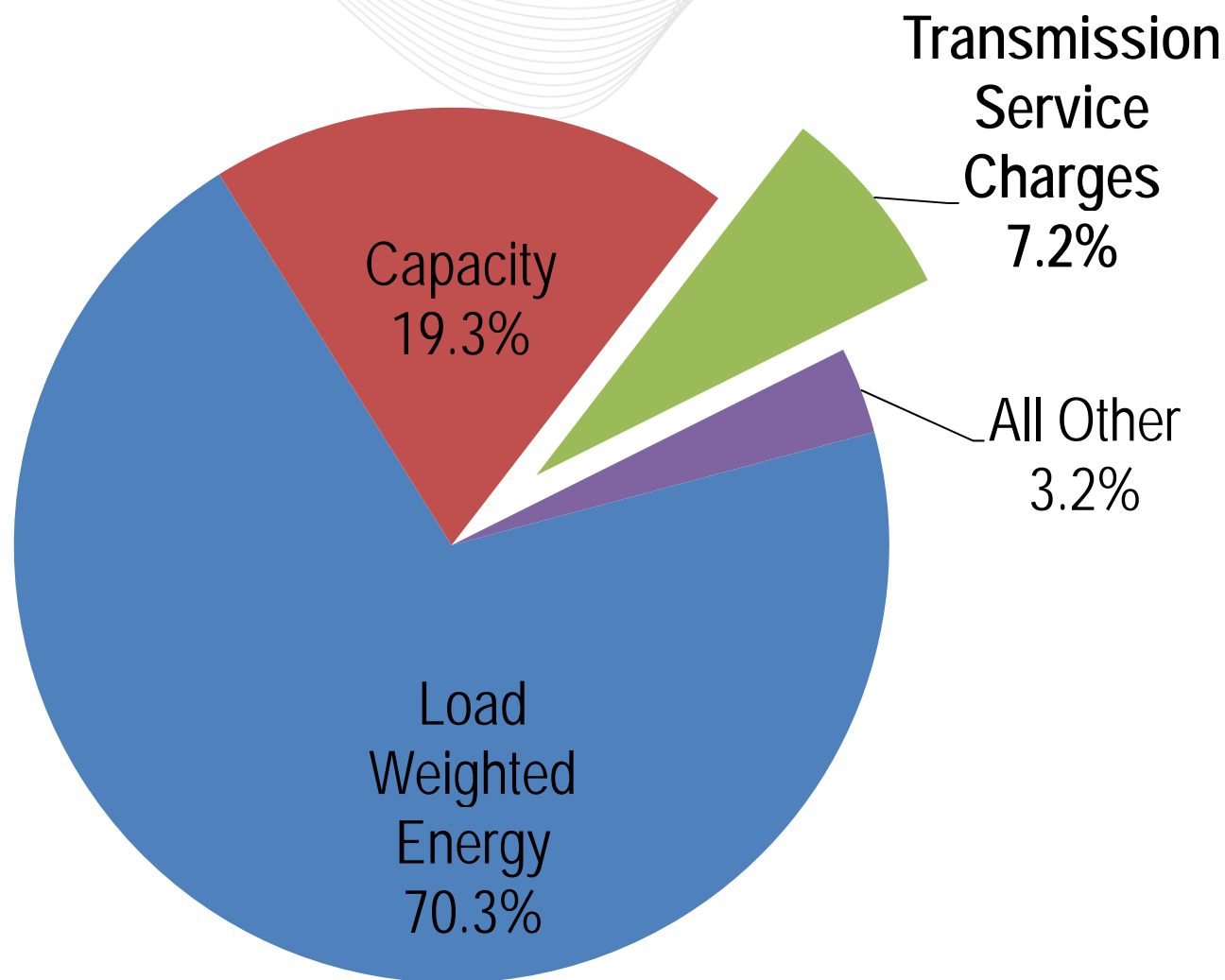
Significant Accomplishments



My Acknowledged Events • 6				Other Acknowledged Events • 3			
558	13:11	SPS	DPL Fruitland-Loretto	DPL	COM		
554	12:31	Thermal	Washington Xfmr #4 for	DCN	COM		
553	13:11	Emergency	Declaration during	PJM	COM		
552	13:11	EMS	SA non-convergence	PJM	COM		
557	12:59	Stability	Byron Stability Trip during L0621 outage	TEL	COM		

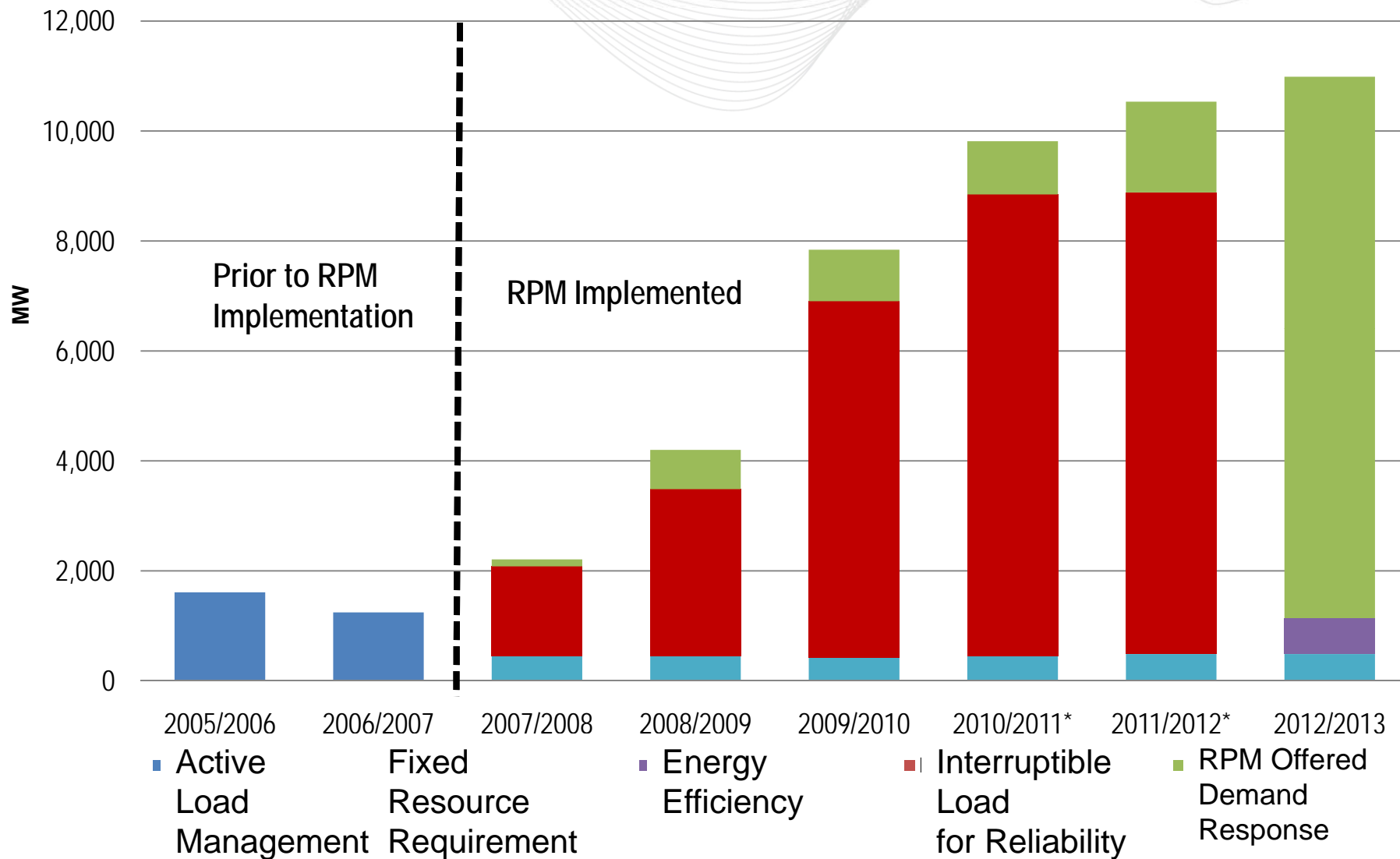
New Events • 6				East			
561	13:17	Switching	Actual Thermal Control for East-Sayre North Wavery 115kV	PN	COMED		
560	13:14	SPS	Actual Thermal Control for Portland-Kittatiny	JC	COMED		
559	13:13	Switching	Thermal contingency for Brunner Island-West Hempfield	PL	COMED		
556				DM	COMED		
555				HO	COMED		
551				MI	COMED		

Intelligent Event Processor

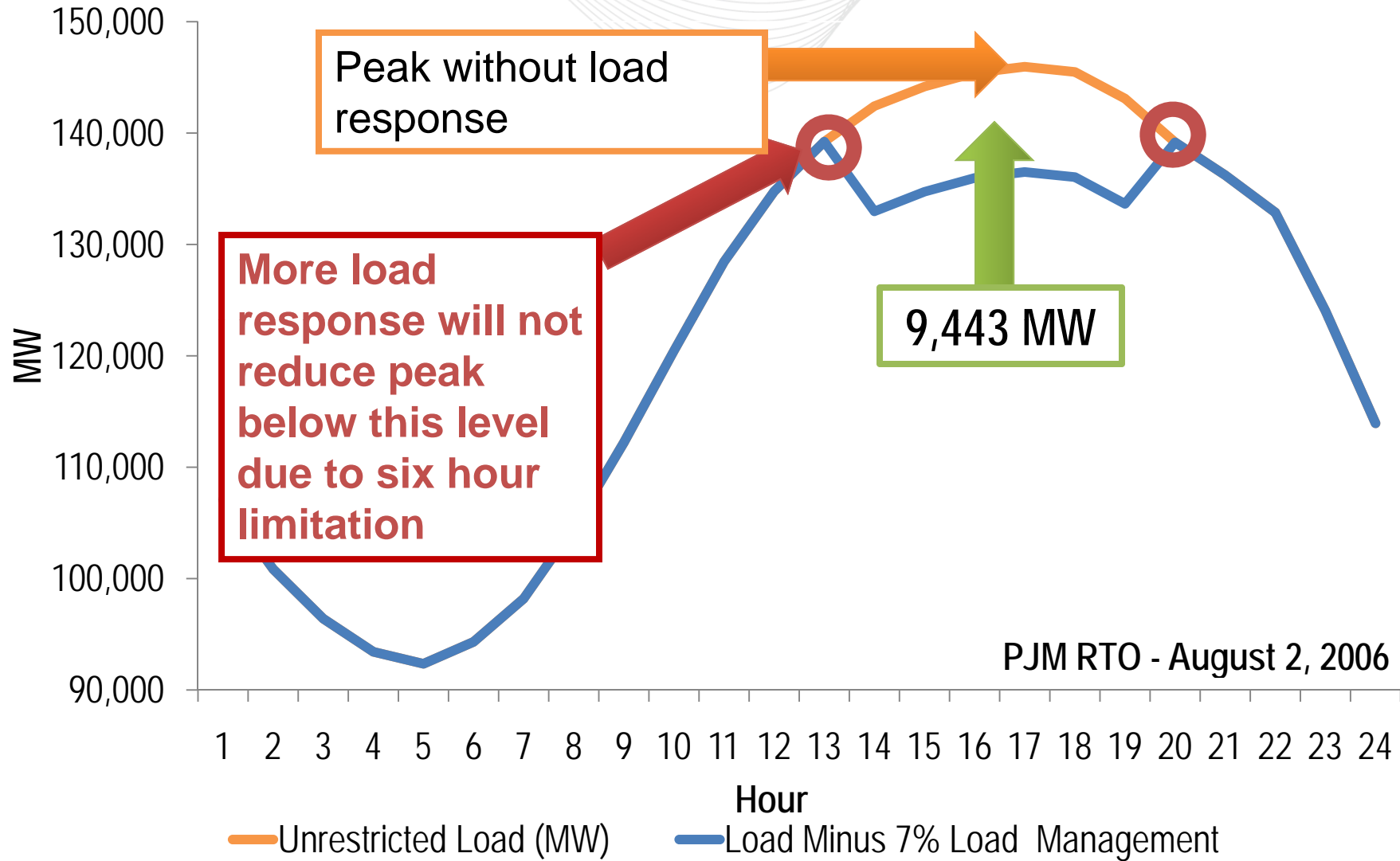




Offers of Demand-Side Resources as Capacity in PJM by Delivery Year

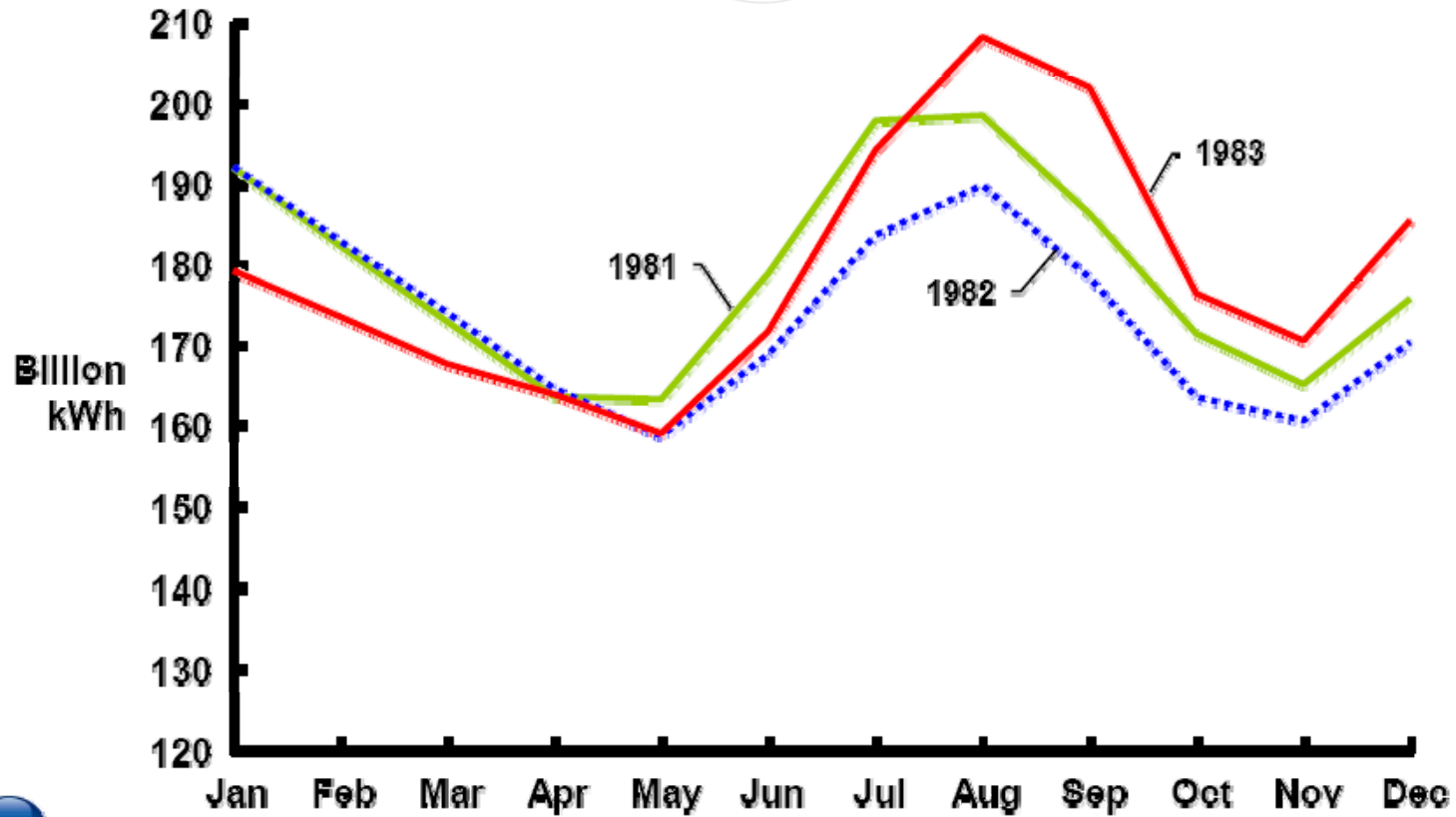


DR Saturation – Impact of Six-Hour Reduction Limitation



PJM RTO - August 2, 2006

Total US Electricity Use, 1981-83



Source: IHS Cambridge Energy Research Associates.
 Data source: US Energy Information Administration.
 Monthly US Electricity Use

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YES



PJM Long-Term Peak Load Forecast

PJM Interconnection
OPSI Spring Meeting
April 7, 2010

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- PJM publishes a load forecast report each January.
- PJM assumed the load forecasting function from the electric distribution companies in 2006.
- The forecast includes monthly and seasonal peaks and net energy for load for each zone, region, and the RTO. The forecast also includes projected amounts of load management and energy efficiency programs by zone. The forecast horizon is 15 years.

- The PJM load forecast model is an econometric model that is developed using:
 - Itron Inc.'s MetrixND
 - SAS
- Daily peaks are modeled as a function of three classes of variables:
 - Calendar effects
 - Economic conditions
 - Weather conditions

Calendar and Solar Effects:

- Day of the Week
- Month – Load is typically higher in summer and winter months than in spring and fall months.
- Weekend, Holidays – Load is typically lower on weekends and holidays.
- Minutes of Daylight – As the minutes of daylight increase, the lighting load will decrease, but the cooling load will increase.

Economic Conditions:

- The models use Gross Metropolitan Product (GMP), which measures the value of goods and services produced in a metropolitan statistical area (MSA).
- GMP for a metro area is synonymous with Gross Domestic Product (GDP) for the nation. Zone GMP is the aggregate of GMP data for all MSAs within the zone.
- PJM has contracted with an outside economic services vendor to provide economic forecasts for all areas within the PJM footprint on an ongoing basis.

Weather Variables:

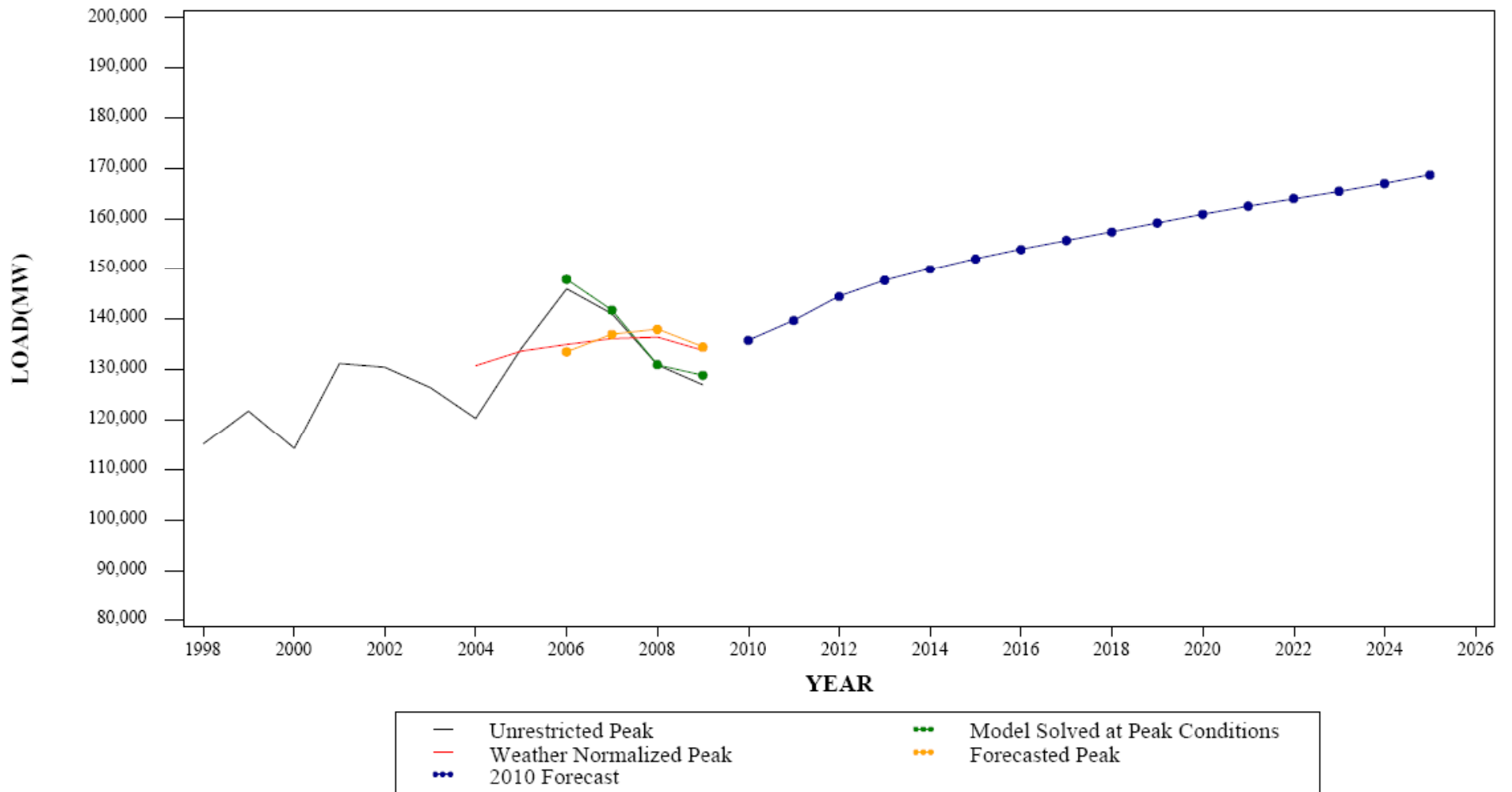
- Seasonal weather variables
 - Summer: Maximum Temperature-Humidity Index
 - Winter: Minimum Wind-Adjusted Temperature
 - Spring/Fall: Average Temperature
- Daily weather variables
 - Heating degree days (HDD) and cooling degree days (CDD)
 - Humidity, Wind Speed
- Interaction weather variables
 - GMP interacted with HDD and CDD to reflect increasing weather sensitivity of load

Weather Variables (cont.):

- The model lags weather data over several days to account for “build-up” of load over cold/hot spells
- PJM has access to weather data from approximately 30 weather stations across the PJM footprint.
- Zone weather is a weighted average of readings from selected stations within each zone

- A Monte Carlo process produces a wide range of forecasted loads (455) based on weather variations observed from 1974 onward
- All forecasted outcomes are ranked, then
 - Median (50th percentile) outcome is the official forecast used for RPM and other purposes
 - 90th percentile outcome (one-in-10) is used for transmission import capability analysis

SUMMER PEAK DEMAND FOR PJM RTO w/o ATSI GEOGRAPHIC ZONE



How is the PJM load forecast used?

- **Transmission Expansion (RTEP)** – Identifies needed system upgrades
- **Capacity Market (RPM)** – Sets capacity obligations
- **Emergency Import Capability (CETO/CETL)** – Measures transmission constraints within PJM
- **Reserve Margin (IRM)** – Sets the reserves required to maintain “1 day in 10 year” reliability
- **NERC, SERC and ReliabilityFirst** – Input to reliability assessments