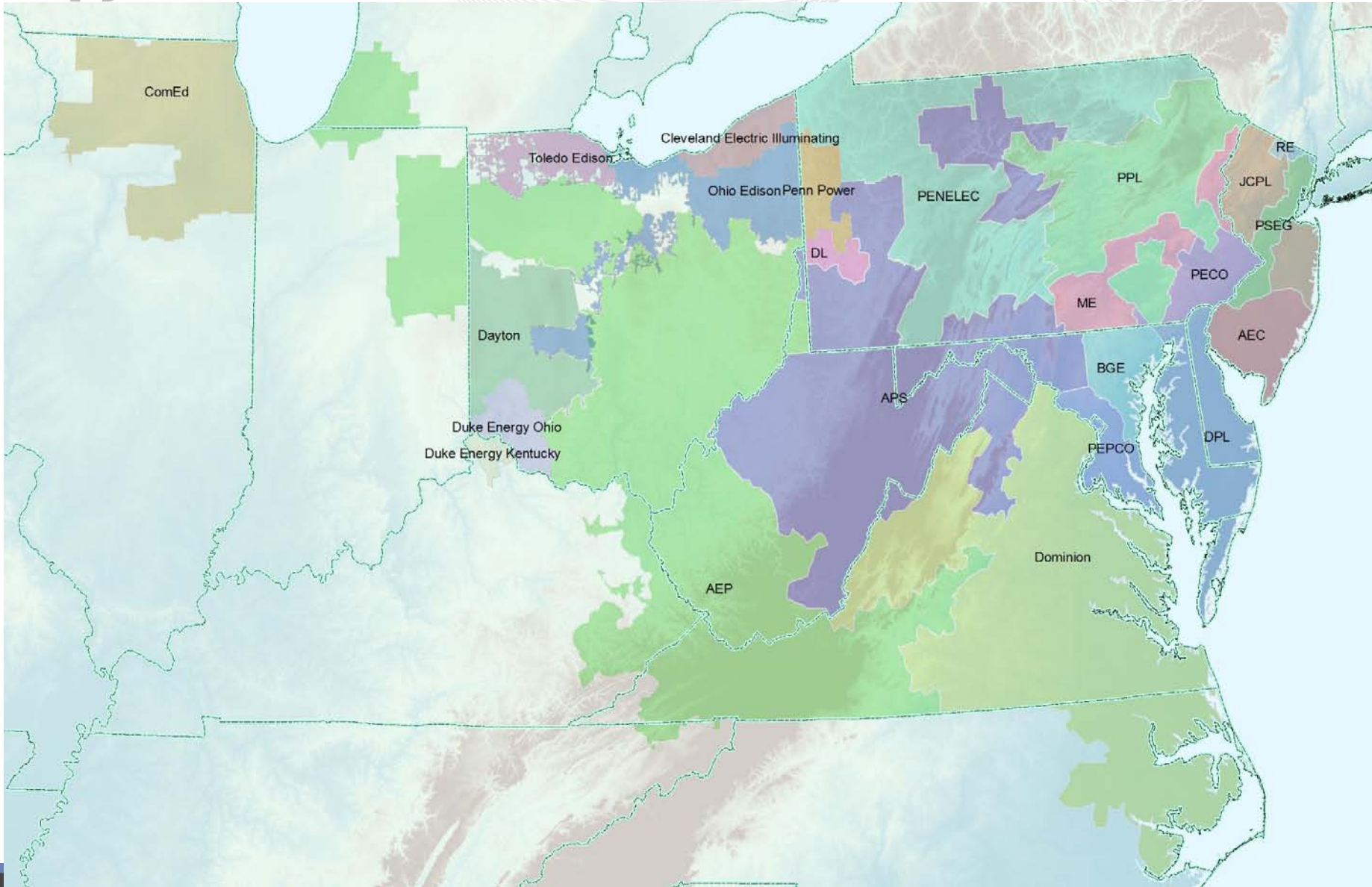
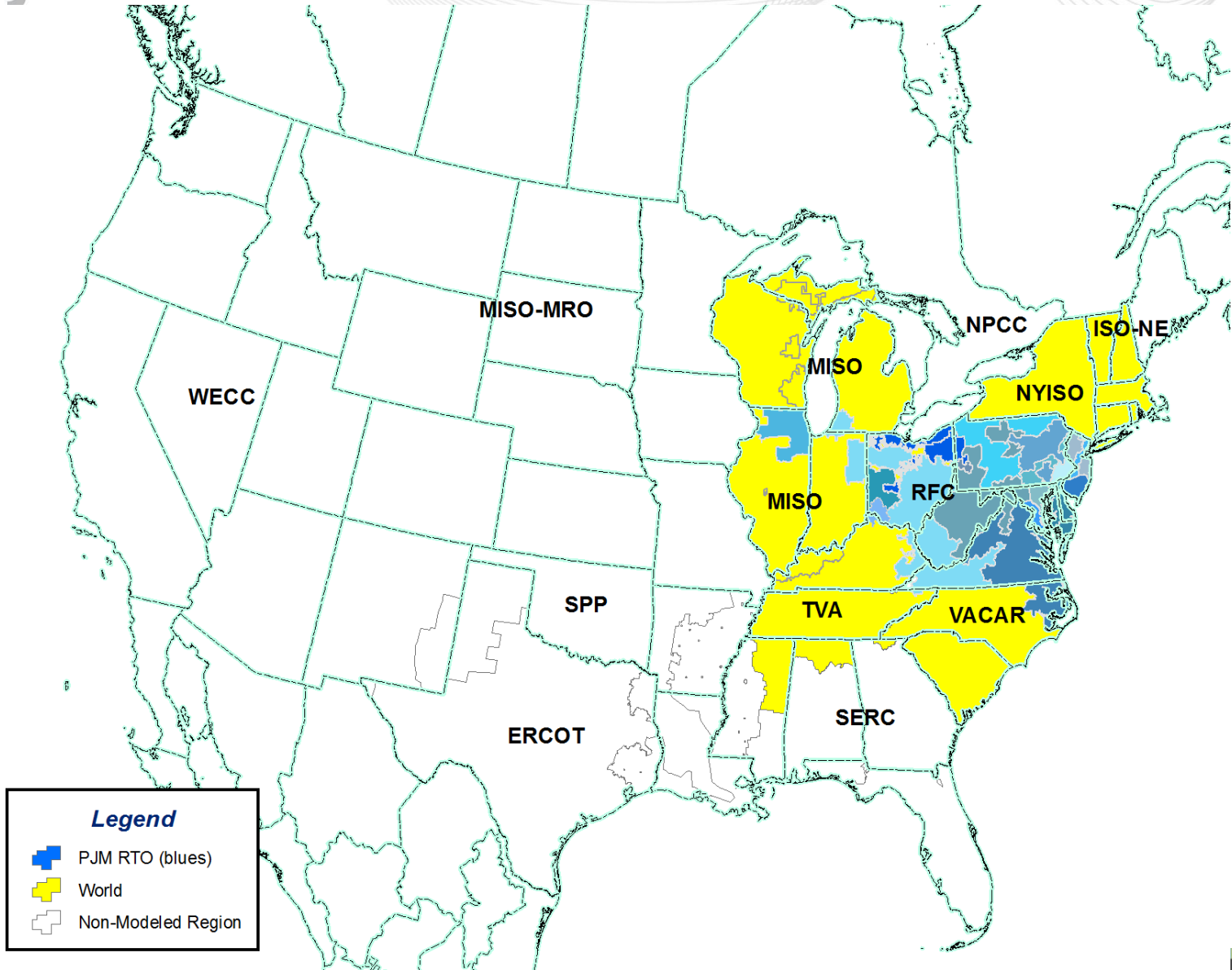


# 2010 IRM Study

Planning Committee  
September 8, 2010





RRS Year	Delivery Year Period	Calculated IRM	Recommended IRM	Avg. EFORd *	Recommended FPR	Recommended DR Factor
2010	2012 / 2013	15.5%	<b>15.5%</b>	6.26%	<b>1.0827</b>	<b>0.954</b>
2010	2013 / 2014	15.3%	<b>15.3%</b>	6.25%	<b>1.0809</b>	<b>0.956</b>
2010	2014 / 2015	15.3%	<b>15.3%</b>	6.25%	<b>1.0809</b>	<b>0.956</b>

- PJM RTO includes ATSI
- World at 15.74% Installed Reserves
- Duke OH and Duke KY modeled in World Region.

RRS Year	Delivery Year Period	Calculated IRM	Recommended IRM	Avg. EFORd *	Recommended FPR	Recommended DR Factor
2009	2012 / 2013	15.4%	<b>15.4%</b>	6.28%	<b>1.0815</b>	<b>0.955</b>
2009	2013 / 2014	15.3%	<b>15.3%</b>	6.30%	<b>1.0804</b>	<b>0.957</b>

\* EFORd does not include Outside Management Control generator outage events.

SEASON*	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	diversity range	14 year avg
Winter*	3.96%	6.56%	3.71%	5.10%	10.15%	5.53%	7.67%	11.25%	6.51%	5.65%	6.76%	10.82%	7.72%	5.72%	1995 - 2007	7.03%
Summer	3.74%	4.08%	3.31%	2.01%	4.64%	4.46%	2.78%	2.88%	8.50%	5.22%	4.19%	2.74%	5.45%	5.56%	1995 - 2008	4.25%
Spring	4.37%	3.44%	5.66%	4.57%	5.18%	3.48%	6.03%	11.12%	14.05%	4.41%	6.66%	1.19%	5.76%	15.03%	1996 - 2008	6.50%
Fall	5.52%	3.38%	1.42%	3.76%	4.51%	4.54%	5.17%	3.42%	8.94%	4.73%	5.42%	5.43%	4.12%	7.85%	1997 - 2008	4.87%

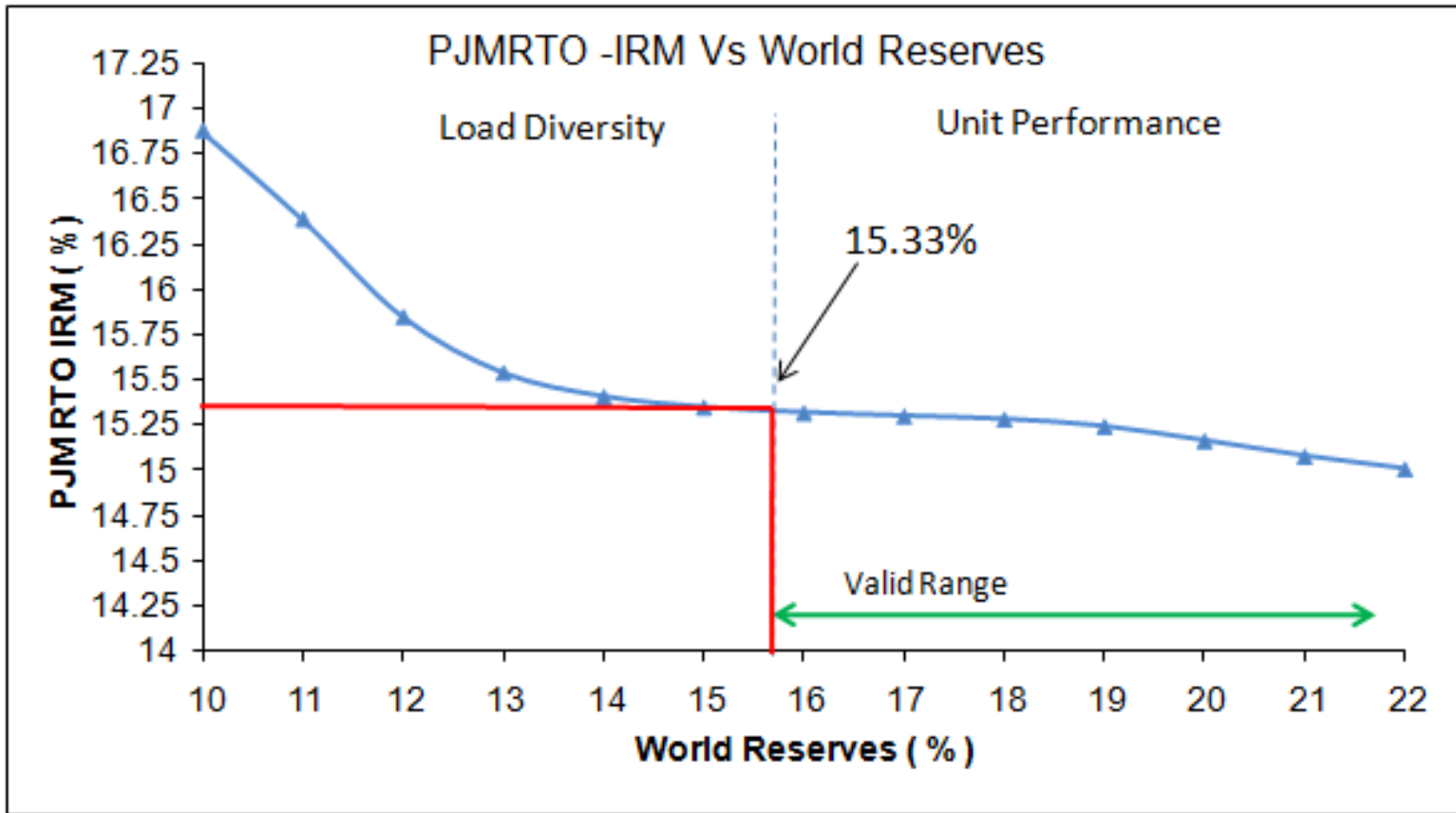
MONTH NUMBER	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	diversity range	Average Diversity Using Aug Peak Years Only
1	85.28%	87.72%	88.52%	78.45%	85.78%	92.95%	82.79%	77.23%	85.90%	89.04%	81.86%	69.22%	76.68%	85.59%	1995 - 2008	82.69%
2	86.61%	94.54%	80.88%	78.90%	79.20%	84.87%	76.20%	76.06%	82.79%	83.99%	73.56%	70.84%	80.82%	78.70%	1995 - 2008	81.26%
3	76.93%	85.81%	73.13%	80.97%	77.20%	74.18%	74.37%	73.43%	74.89%	77.65%	72.65%	67.40%	70.56%	75.26%	1995 - 2008	74.79%
4	70.10%	73.57%	71.77%	68.41%	67.82%	71.33%	68.91%	73.04%	72.09%	73.14%	64.08%	61.40%	64.68%	65.84%	1995 - 2008	69.77%
5	74.21%	88.86%	72.63%	83.94%	73.37%	86.53%	73.71%	75.37%	71.11%	85.45%	68.98%	82.15%	78.28%	72.19%	1995 - 2008	80.18%
6	89.24%	91.56%	98.03%	97.86%	95.64%	93.26%	89.12%	91.95%	94.48%	95.76%	91.14%	85.70%	92.51%	100%	1995 - 2008	91.79%
7	100%	98.01%	100%	100%	100%	94.20%	96.06%	98.47%	93.69%	98.64%	100%	97.07%	91.89%	99.26%	1995 - 2008	96.00%
8	99.91%	100%	91.01%	95.96%	96.87%	100%	100%	100%	100%	100%	99.56%	100%	100%	94.54%	1995 - 2008	100.00%
9	83.36%	92.54%	90.91%	86.71%	88.61%	98.73%	83.32%	92.00%	83.06%	88.94%	87.33%	72.01%	86.87%	87.08%	1995 - 2008	87.18%
10	70.80%	73.31%	78.51%	73.19%	70.24%	79.60%	67.97%	80.01%	72.35%	74.87%	74.90%	68.05%	80.41%	69.94%	1995 - 2008	74.57%
11	78.31%	80.58%	79.86%	72.60%	79.48%	83.93%	69.48%	71.37%	77.36%	79.27%	71.53%	67.86%	69.09%	74.94%	1995 - 2008	74.87%
12	86.60%	90.90%	83.00%	79.91%	80.14%	91.20%	73.13%	79.78%	83.08%	89.92%	80.00%	75.36%	76.84%	82.13%	1995 - 2008	82.52%

\*January and February of each calendar year are rolled back to be considered with the December of the previous so that the winter can be considered as a whole.

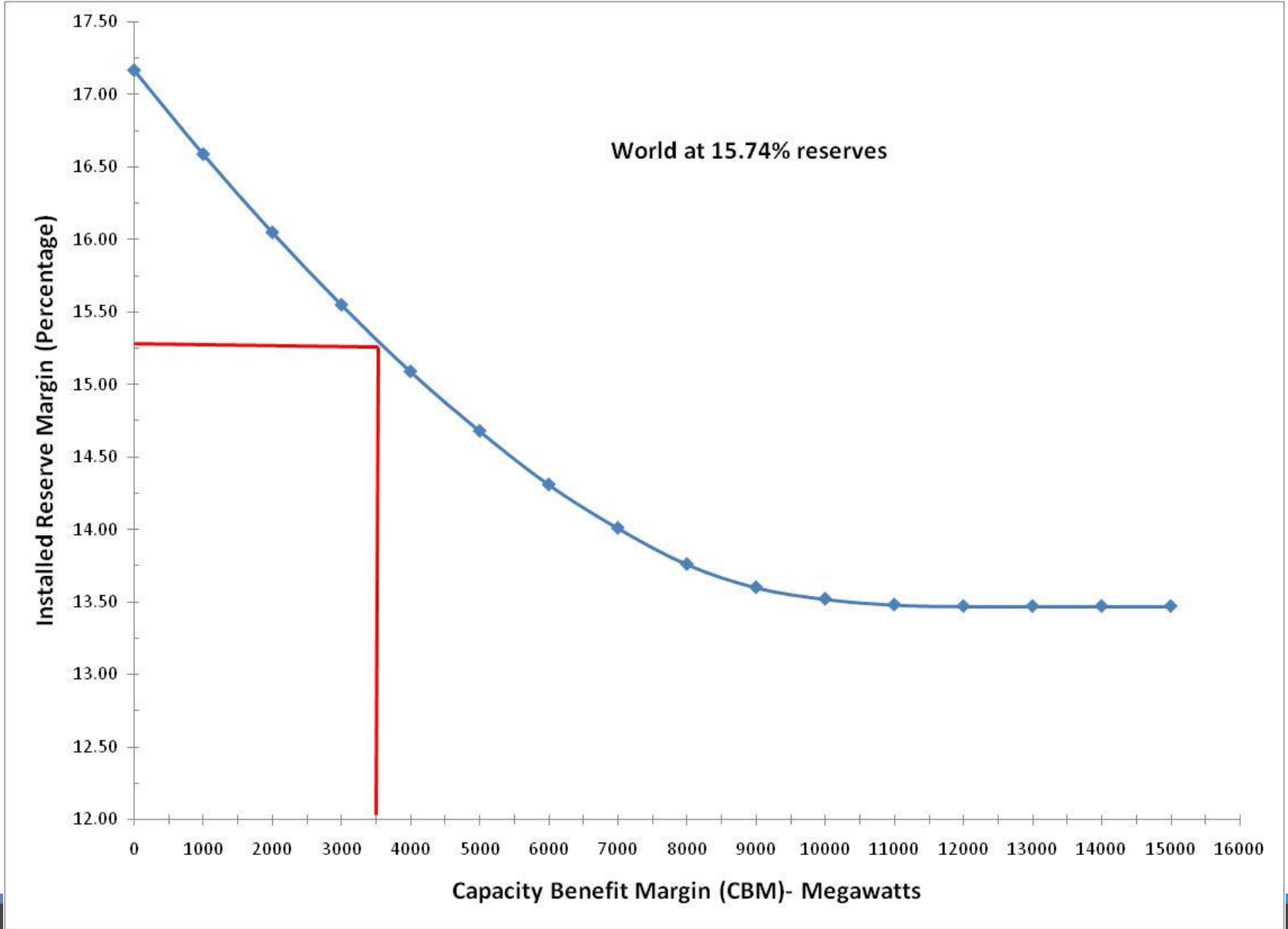
\*Diversity values for Winter 2008 only use one month of data, December 2008. This value should be disregarded.

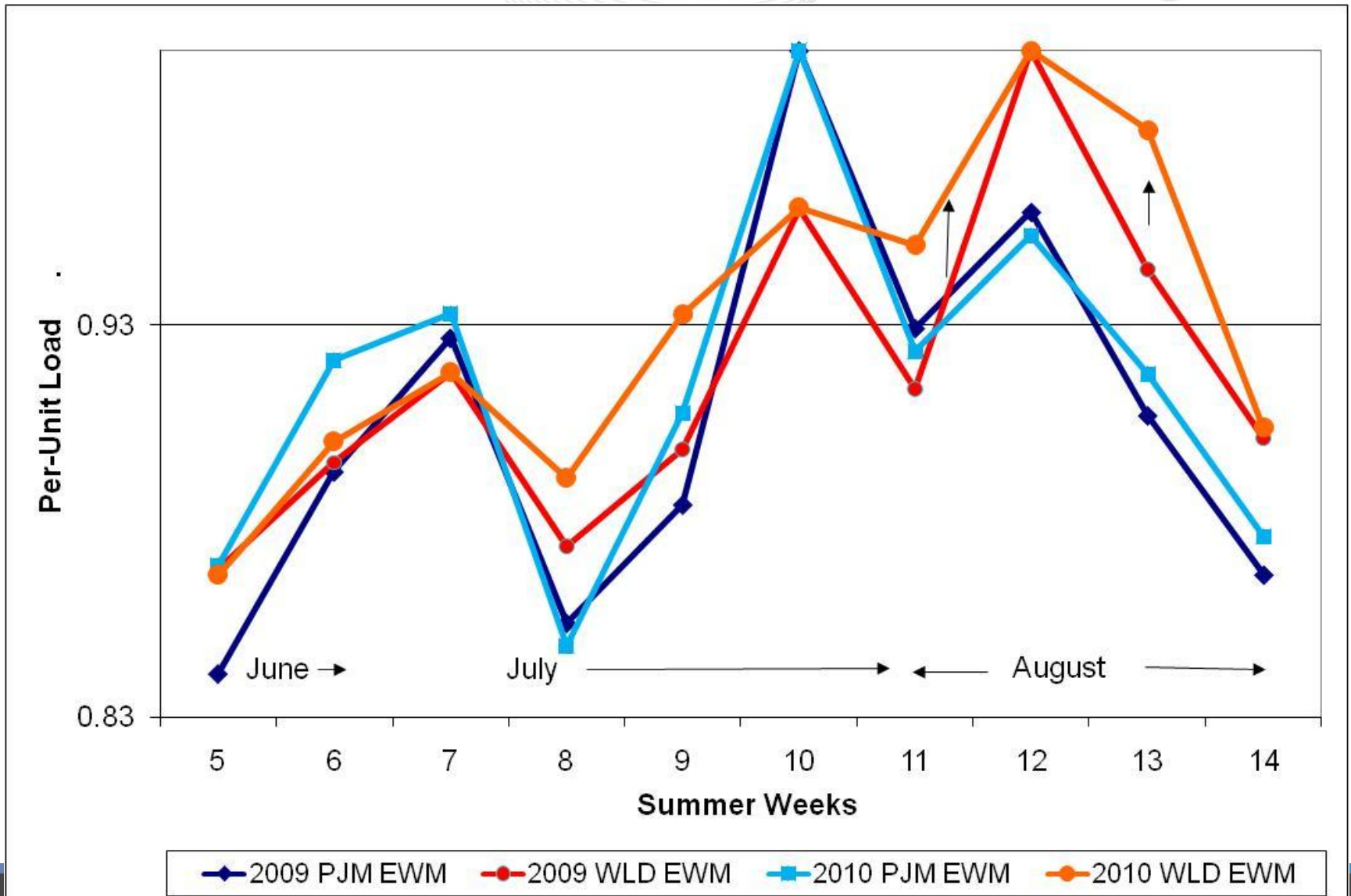
\*Average Diversity for Winter was recalculated to not include 2008.

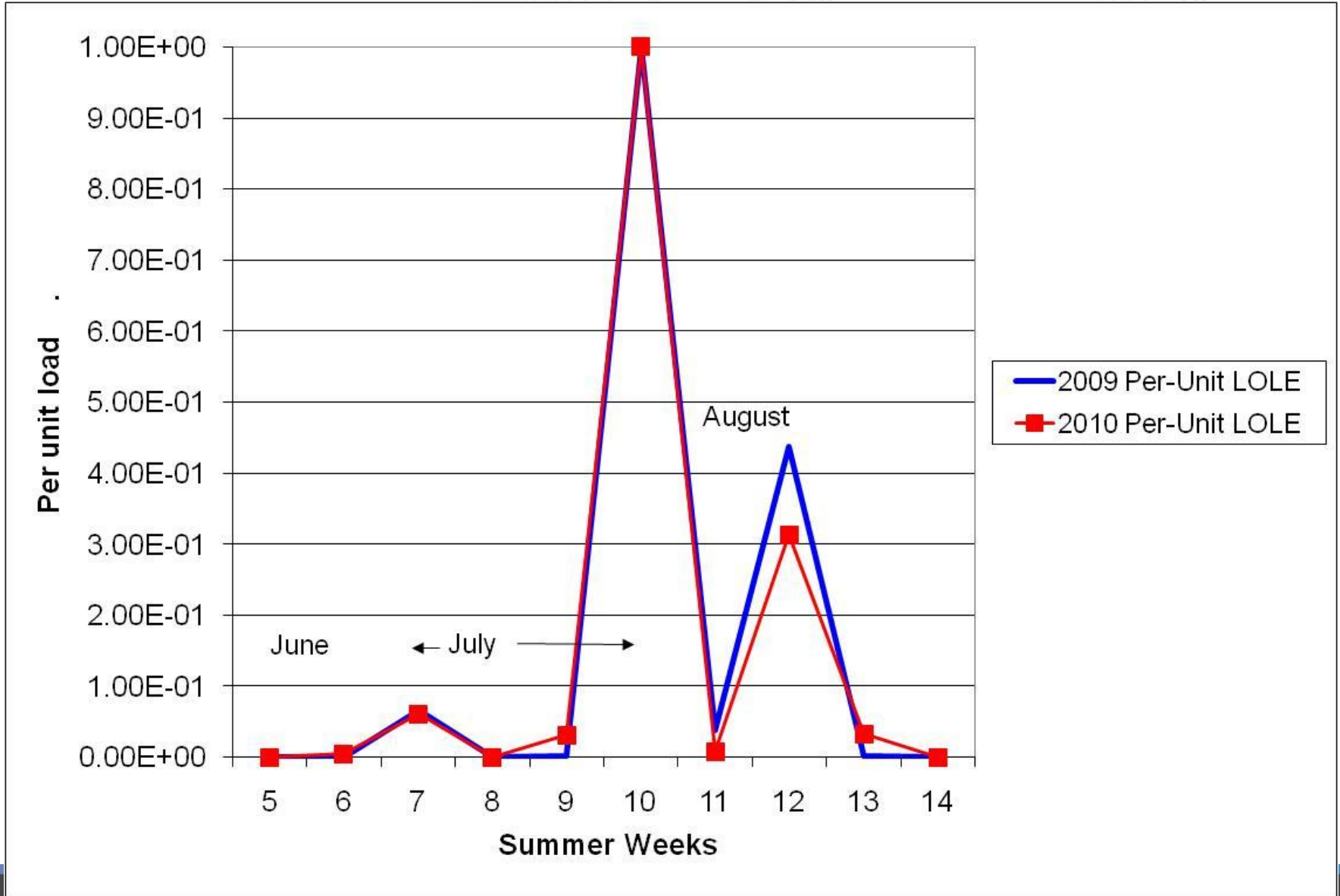
	NCP 2010	IRM	Diversity	CP 2010	LM 2010	LM as % NCP	NCP- LM (NID)	CAP based on NID	CP- LM	Reserves as % of CP	Reserves as % of CP- LM
NY	33441	18.00%	0.9575	32020	1972	5.90%	31469	37133	30048		
NE	28160	12.60%	0.9575	26963	528	1.88%	27632	31114	26435		
MISO	81055	15.40%	0.9575	77610	4630	5.71%	76425	88195	72980		
TVA	33219	18.00%	0.9575	31807	1644	4.95%	31575	37259	30163		
VACAR	64688	18.00%	0.9575	61939	1822	2.82%	62866	74182			
Dominion	19779				120	0.61%	19659				
VACAR Other	44909	18.00%	0.9575	43000	1702	3.79%	43207	50984	41298		
<b>Total Composite Region =</b>	<b>220784</b>			<b>211401</b>	<b>10476</b>	<b>4.74%</b>	<b>210308</b>	<b>244684</b>	<b>200925</b>	<b>15.74%</b>	<b>21.78%</b>

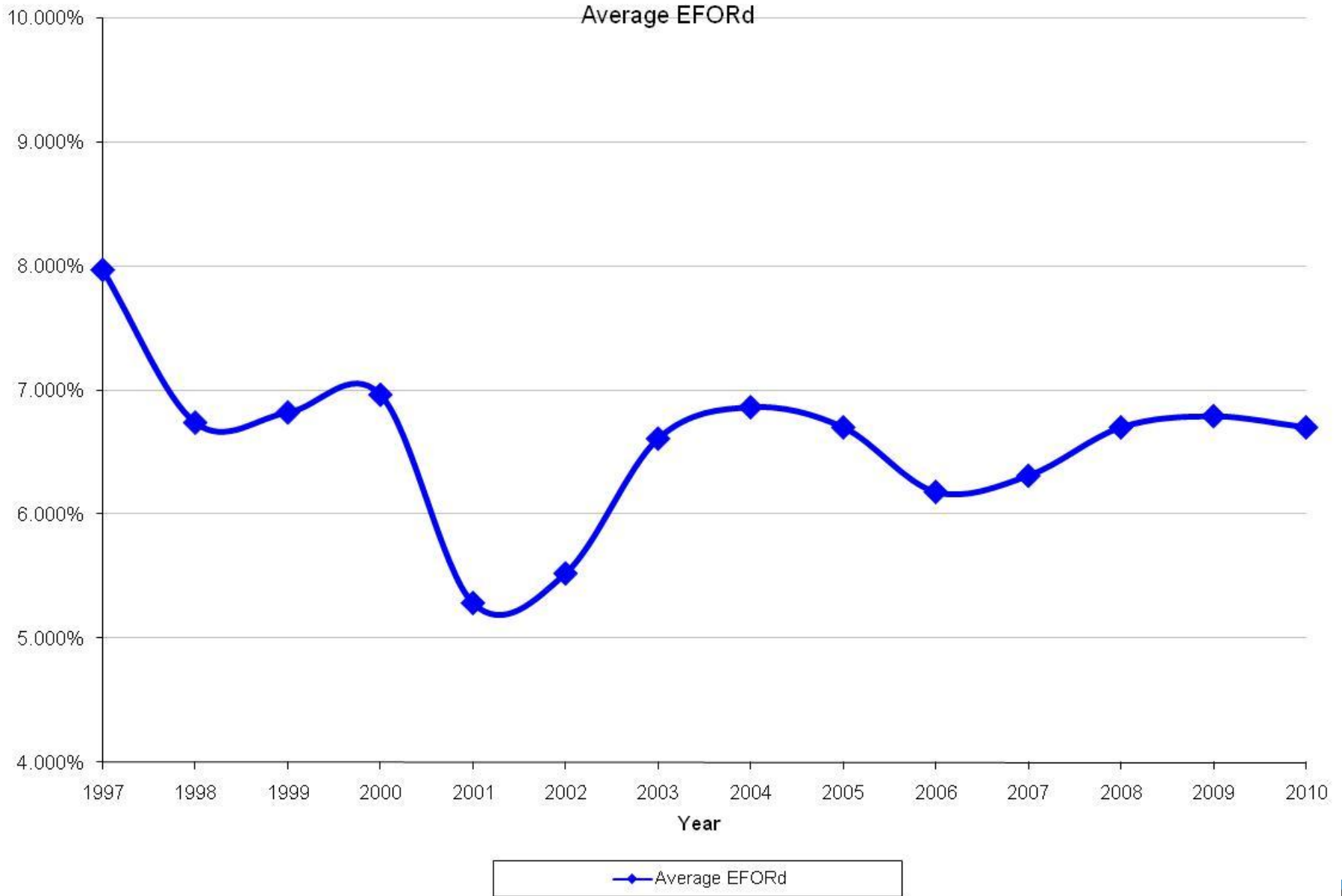


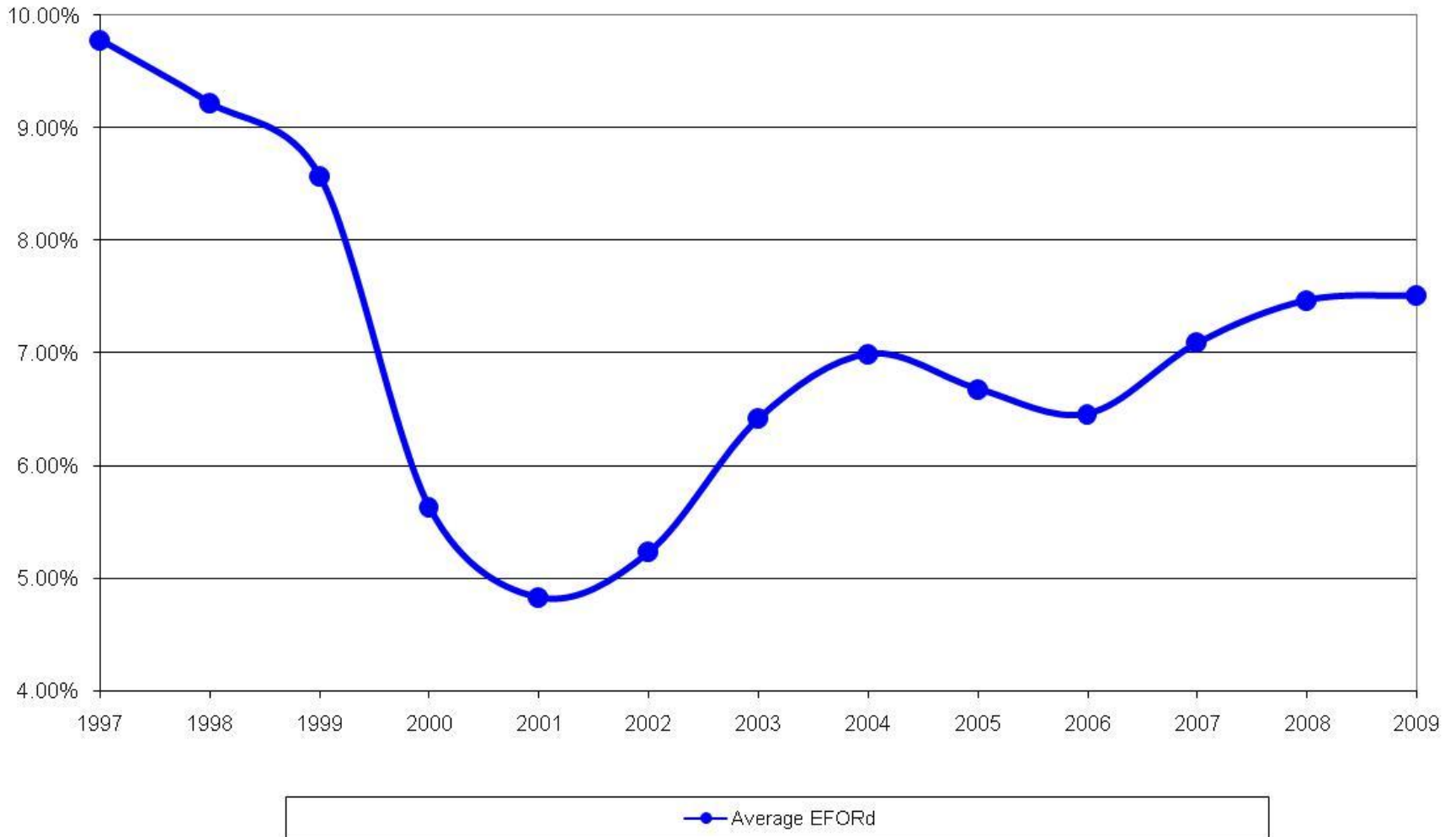
World reserves varied, PJM RTO solved for 1D 10 Yr - Mixed Mode Solution











Zone Name	Total Additions (MW)	Retirements (MW)	Total
AEC	599		599
AEP	1239		1239
Allegheny Energy (APS)	879		879
ATSI	0		0
BGE	19		19
ComEd	1304		1304
Dayton	33		33
DLCO	15		15
DomVP	956		956
DPL	0	91	-91
JCPL	339		339
ME	187		187
PECO	332	510	-178
PEPCO	359	774	-415
PPL	803		803
PennElec	455		455
PSEG	397	605	-208
UGI	126		126
<b>Grand Total</b>	<b>8,042</b>	<b>1,980</b>	<b>6,062</b>

Capacity Model based on Interconnection Queue and Retirement information from April 2010.

	Calculated IRM				Forecast Reserve					Assumed IRM	
	A	B	C	D	E	F	G	H	I	J	K
Delivery Year	% IRM PJM RTO	% IRM Outside World	Average PJM EEFORD %	Average Weekly Maintenance %	Capacity	Restricted Load	% Forecast Reserve PJM RTO	% Forecast Unrestricted Reserve PJM RTO	Neighboring World region assumed reserves %	Assumed % IRM PJM RTO	Reliability Index (single area) Years/Day
2010	15.6%	15.7%	7.4%	6.4%	183,492	143,868	27.5%	24.2%	15.7%	15.6%	5.3
2011	15.6%	15.7%	7.4%	6.2%	185,913	147,694	25.9%	22.3%	15.7%	15.6%	5.4
2012	15.5%	15.7%	7.3%	6.3%	187,265	149,795	25.0%	19.2%	15.7%	15.5%	5.4
2013	15.3%	15.7%	7.3%	6.3%	188,551	153,259	23.0%	17.4%	15.7%	15.3%	5.3
2014	15.3%	15.7%	7.3%	6.3%	189,503	155,721	21.7%	16.2%	15.7%	15.3%	5.2
2015	15.3%	15.7%	7.3%	6.3%	189,874	158,030	20.2%	14.8%	15.7%	15.3%	5.2
2016	15.4%	15.7%	7.3%	6.3%	190,036	160,031	18.7%	13.5%	15.7%	15.3%	5.1
2017	15.4%	15.7%	7.3%	6.3%	190,233	161,925	17.5%	12.4%	15.7%	15.3%	5.1
2018	15.4%	15.7%	7.2%	6.2%	191,397	163,709	16.9%	11.9%	15.7%	15.3%	5.2
2019	15.3%	15.7%	7.2%	6.3%	191,397	165,497	15.6%	10.7%	15.7%	15.3%	5.4
2020	15.3%	15.7%	7.2%	6.3%	191,397	167,352	14.4%	9.5%	15.7%	15.3%	5.3
11-year Average	15.4%	15.7%	7.3%	6.3%	189,005	156,989	20.6%	15.6%	15.7%	15.3%	5.3

- RRAWG meetings on September 21 and 29
  - Review and finalize IRM Study Report and develop recommendation to PC
- PC meeting on October 6
  - Review of IRM Study Report and vote on recommendation to MRC
- October – November
  - Review and recommendation at MRC and MC
- December - January 2011
  - PJM Board approval of IRM, FPR and DR Factor for 2012/13, 2013/14 and 2014/15