



## California Energy Commission

# **Committee Workshop on 2010-2020 Revised Demand Forecast and Uncommitted Energy Efficiency**

## **SMUD Planning Area Forecast**

First Floor, Hearing Room A

Monday, September 21, 2009  
10 a.m.

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# SMUD Forecast Overview

- Consumption Forecast is over 4% lower than draft in 2010 recovering to less than 3% lower by 2018
- Consumption Forecast is still lower than CED 2007 by over 8% in 2018
- Peak forecast is similar to draft but still over 7% lower than CED 2007
- Consumption forecast includes self generation while peak excludes self generation
- Per capita consumption and per capita peak constant
- Load factor lower but remains constant



## SMUD Planning Area Forecast Results

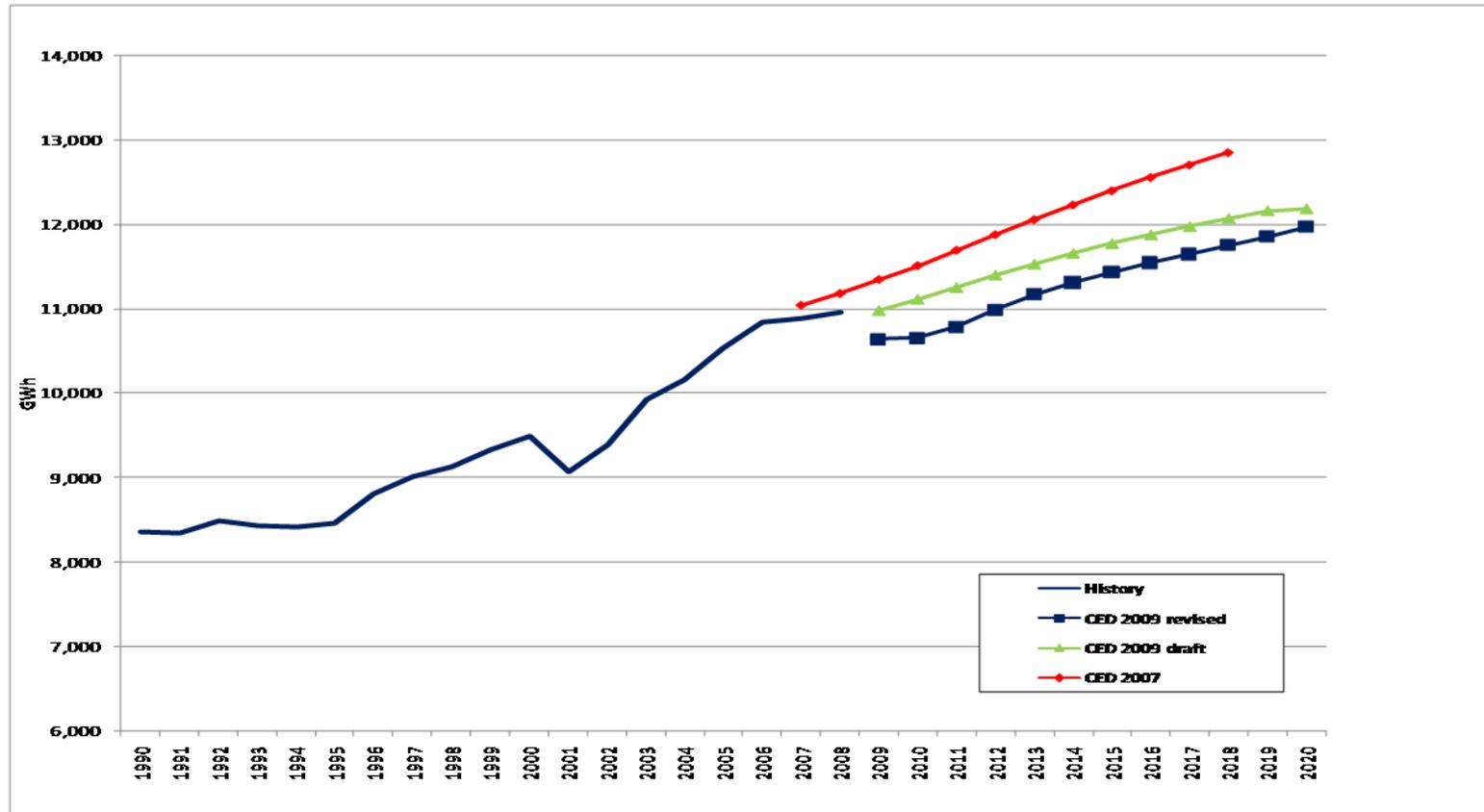
- Revised consumption lower (economic forecast), peak similar

Consumption (GWH)					
	<i>CED 2007</i> (Oct. 2007)	<i>CED 2009</i> <i>Draft</i> mid-rate case (June 2009)	<i>CED 2009</i> <i>Revised</i> (Sept. 2009)	Percent Difference <i>CED 2009</i> <i>Revised</i> / <i>CED 2007</i>	Percent Difference <i>CED 2009</i> <i>Revised</i> / <i>CED 2009</i> <i>Draft</i>
1990	8,358	8,358	8,358	0.00%	0.00%
2000	9,491	9,491	9,494	0.04%	0.04%
2008	11,174	10,936	10,956	-1.95%	0.18%
2010	11,506	11,114	10,656	-7.39%	-4.12%
2015	12,397	11,771	11,435	-7.76%	-2.85%
2018	12,851	12,068	11,749	-8.57%	-2.64%
Average Annual Growth Rates					
1990-2000	1.28%	1.28%	1.28%		
2000-2008	2.06%	1.79%	1.81%		
2008-2010	1.47%	0.81%	-1.38%		
2010-2018	1.39%	1.04%	1.23%		
Peak (MW)					
	<i>CED 2007</i> (Oct. 2007)	<i>CED 2009</i> <i>Draft</i> mid-rate case (June 2009)	<i>CED 2009</i> <i>Revised</i> (Sept. 2009)	Percent Difference <i>CED 2009</i> <i>Revised</i> / <i>CED 2007</i>	Percent Difference <i>CED 2009</i> <i>Revised</i> / <i>CED 2009</i> <i>Draft</i>
1990	2,198	2,167	2,167	-1.41%	0.00%
2000	2,693	2,688	2,687	-0.22%	-0.04%
2008	3,174	3,077	3,078	-3.02%	0.03%
2010	3,261	3,077	3,048	-6.53%	-0.94%
2015	3,515	3,276	3,264	-7.14%	-0.37%
2018	3,645	3,363	3,358	-7.87%	-0.15%
Average Annual Growth Rates					
1990-2000	2.05%	2.18%	2.17%		
2000-2008	2.08%	1.70%	1.71%		
2008-2010	1.36%	0.00%	-0.49%		
2010-2018	1.40%	1.12%	1.22%		
Historic values are shaded					



## SMUD Electricity Consumption Forecast

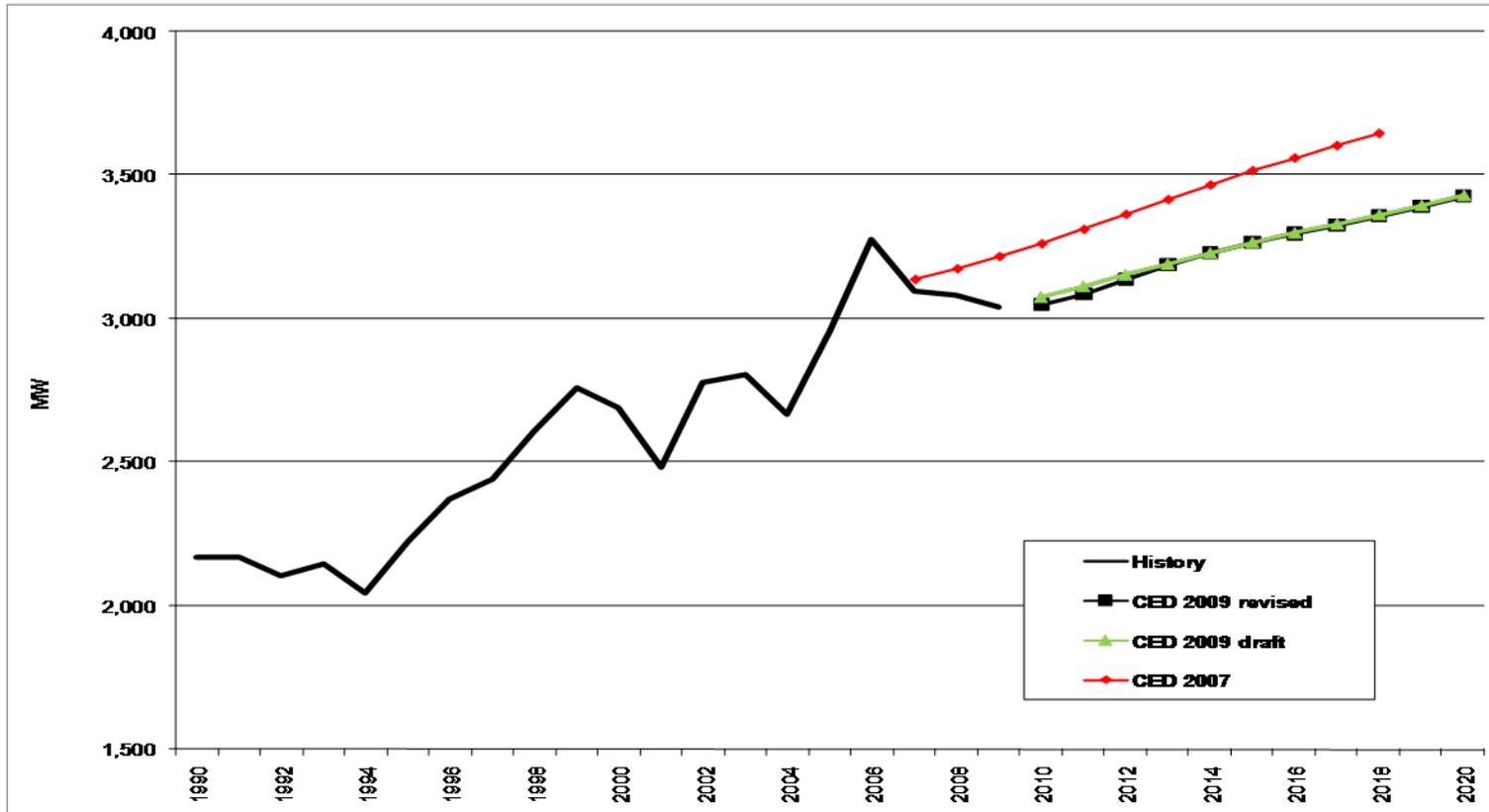
- Lower starting point, longer recovery period





# SMUD Planning Area Peak Forecast

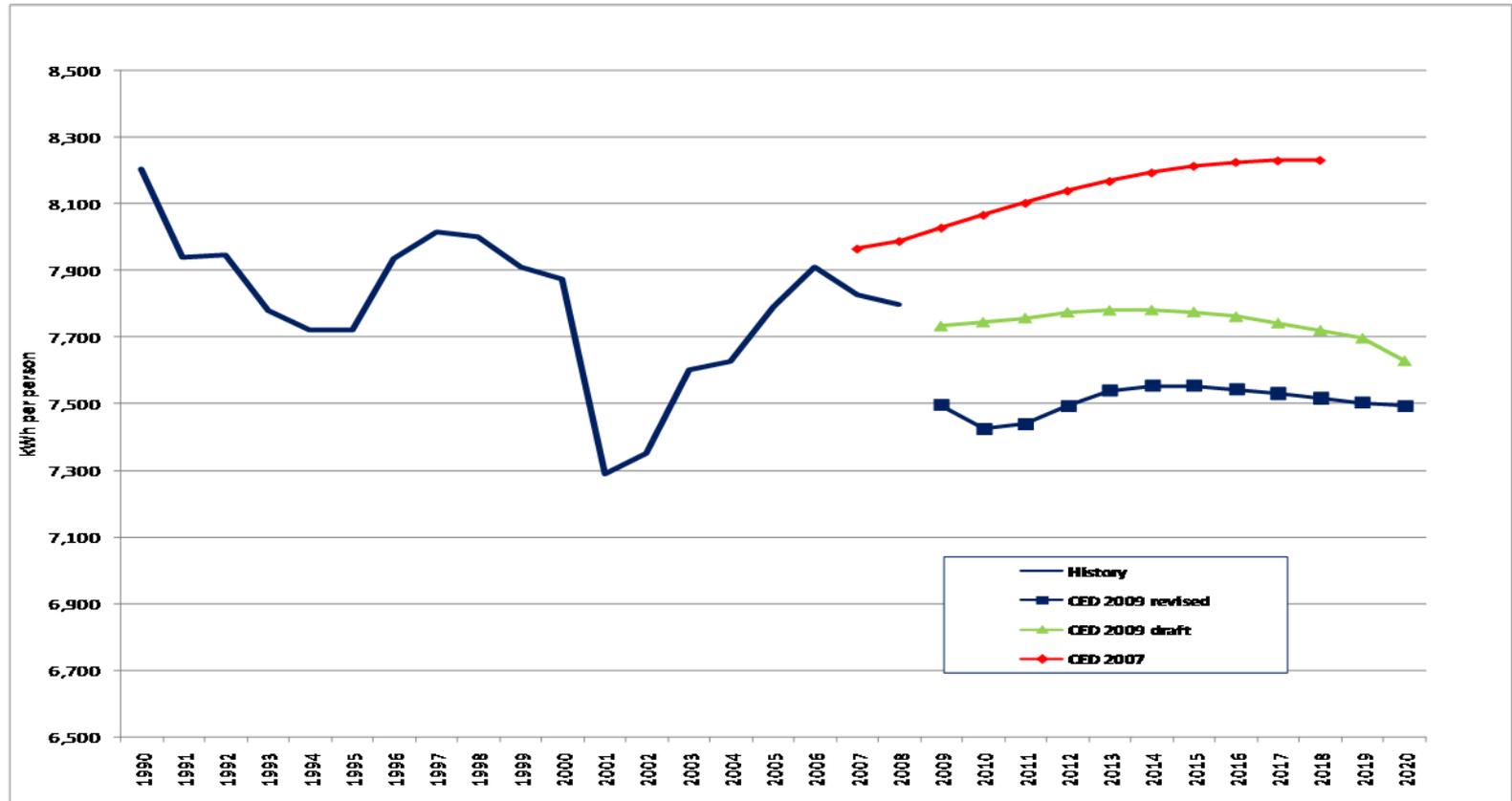
- Similar to draft





## SMUD per Capita Consumption

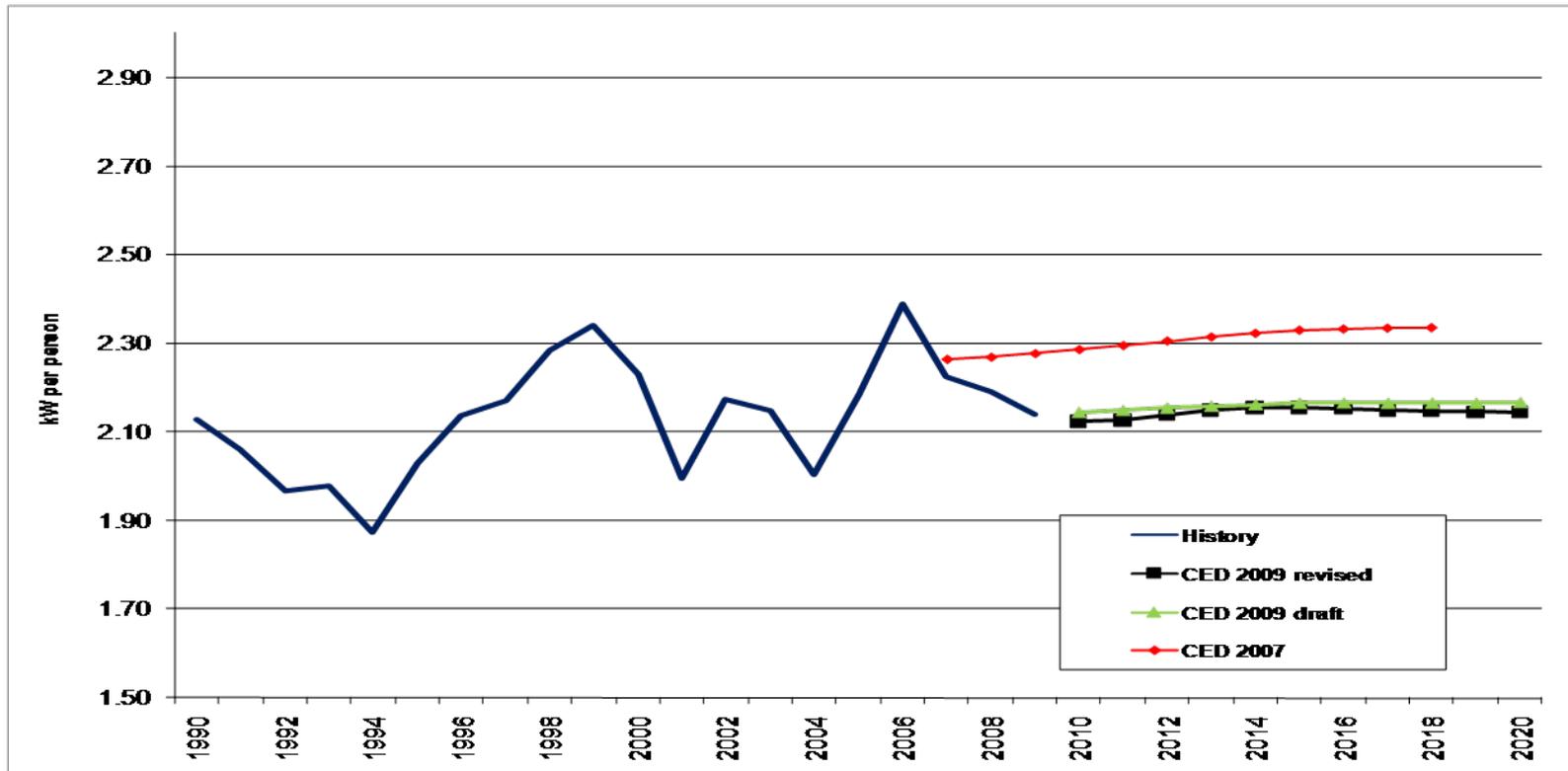
- Lower than draft, declines after recovery





## SMUD per Capita Peak

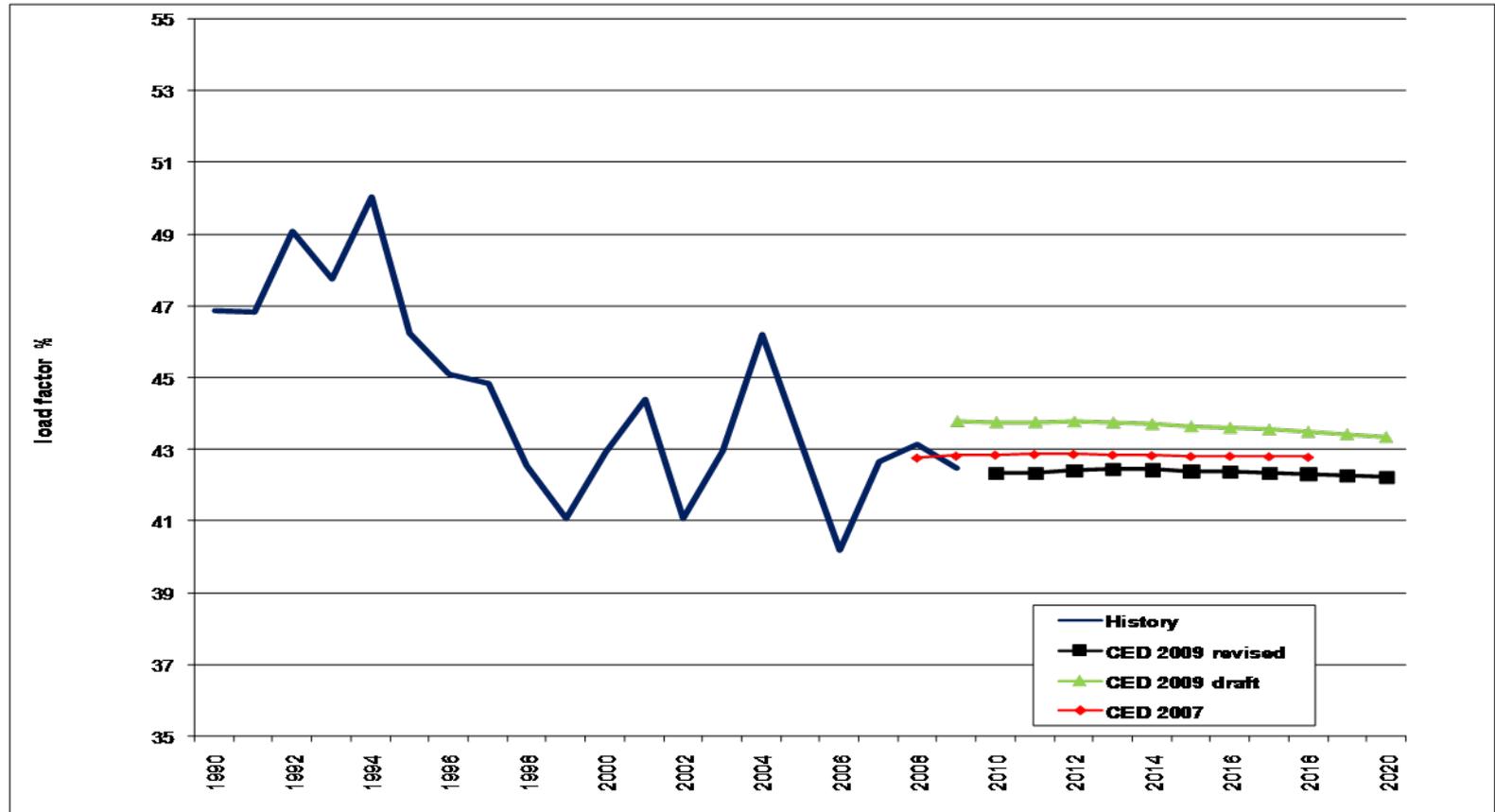
- Similar to draft





## SMUD Planning Area Load Factor

- Lower starting value, similar projection





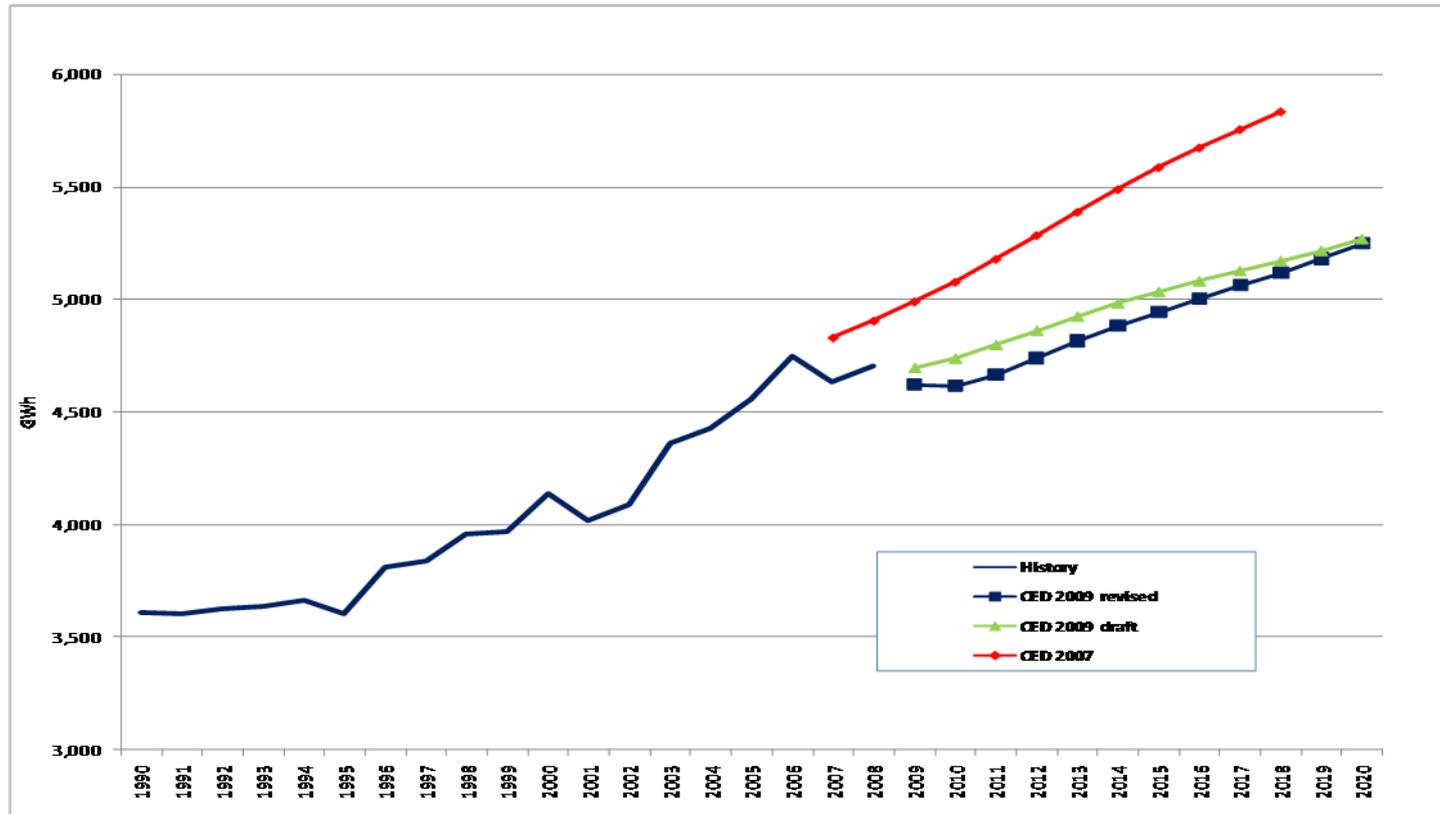
# SMUD Residential Forecast

- Lower forecast caused by lower income projections
- Grows at a slightly faster rate after recovery
- Use per household now increases slightly after recovery
- Little difference in peak



## SMUD Residential Consumption

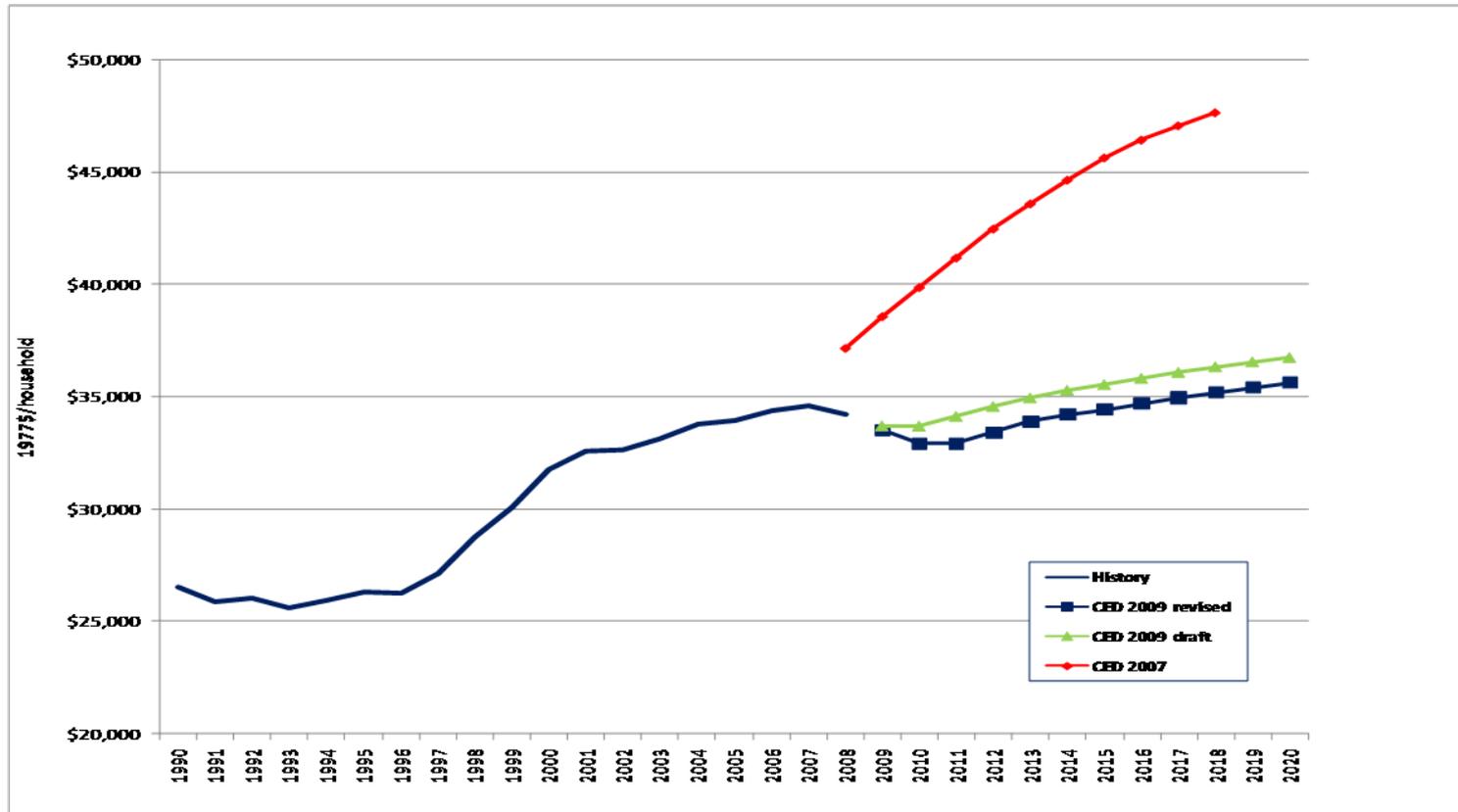
- lower forecast caused by lower income projection





## SMUD Household Income

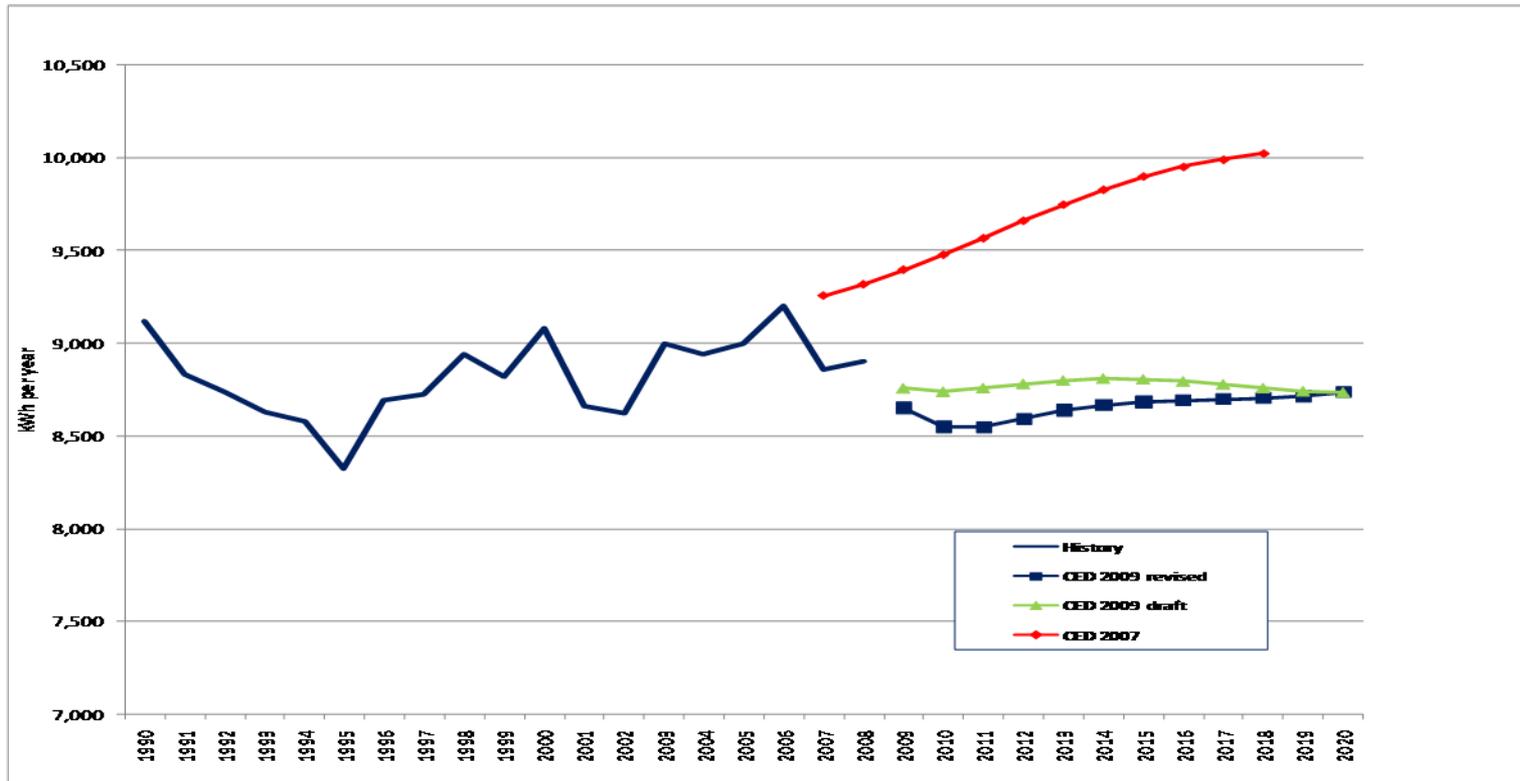
- now deeper short-term drop





## SMUD Residential Use per Household

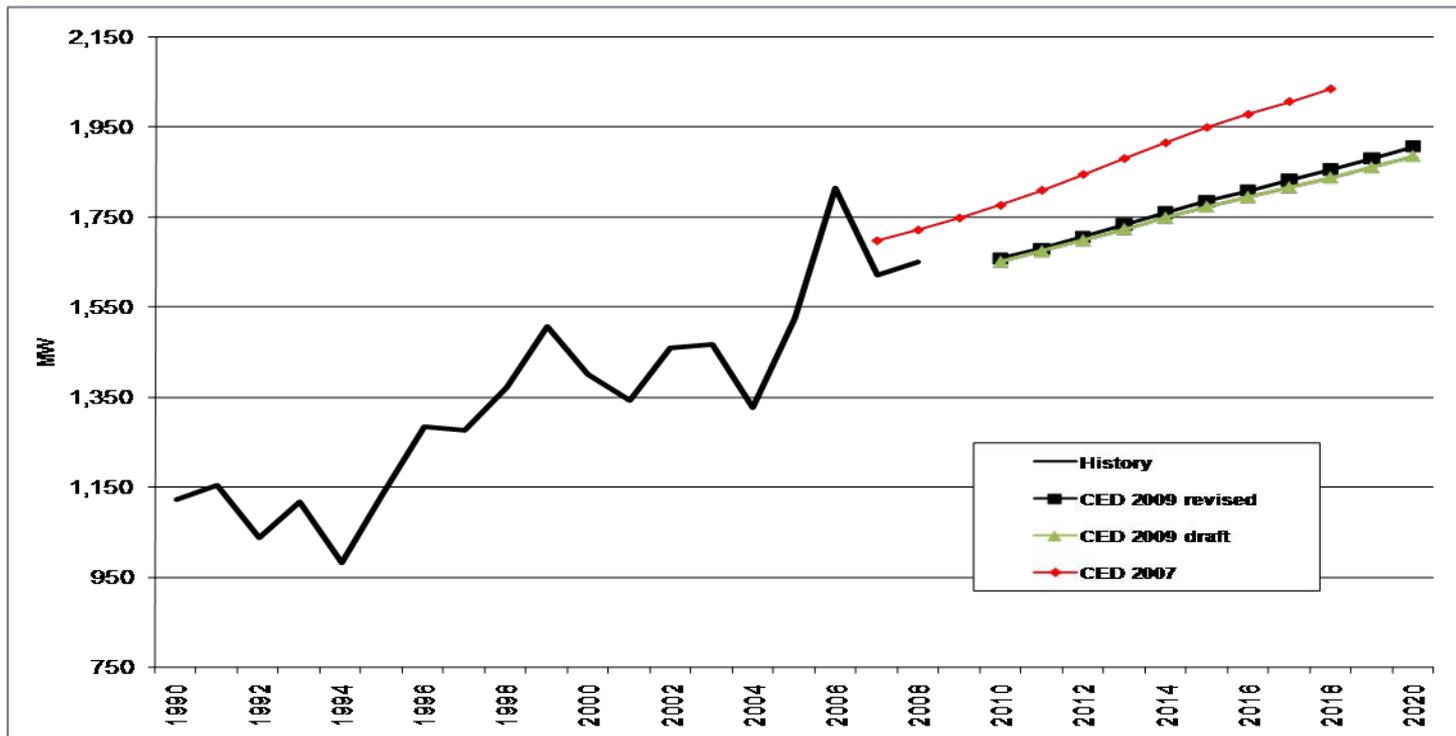
- short-term dip reflects revised income estimates





## SMUD Residential Peak

- similar to previous forecasts





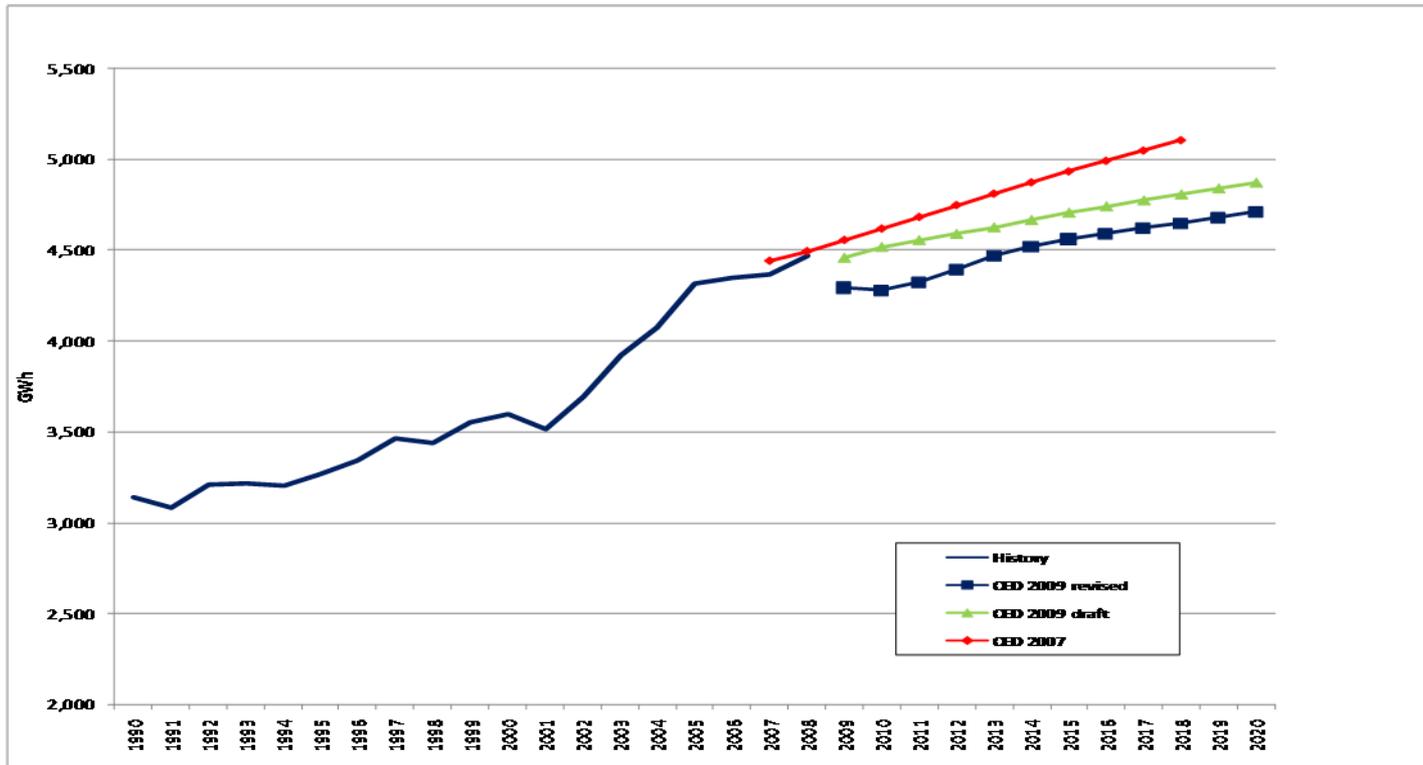
# SMUD Commercial Building Sector

- Revised consumption forecast lower than draft
- Projected floor space similar but higher short term vacancy lowers short term forecast
- Peak results mirror consumption forecast



## SMUD Commercial Building Consumption

- Lower starting value, higher short-term vacancy reduces consumption

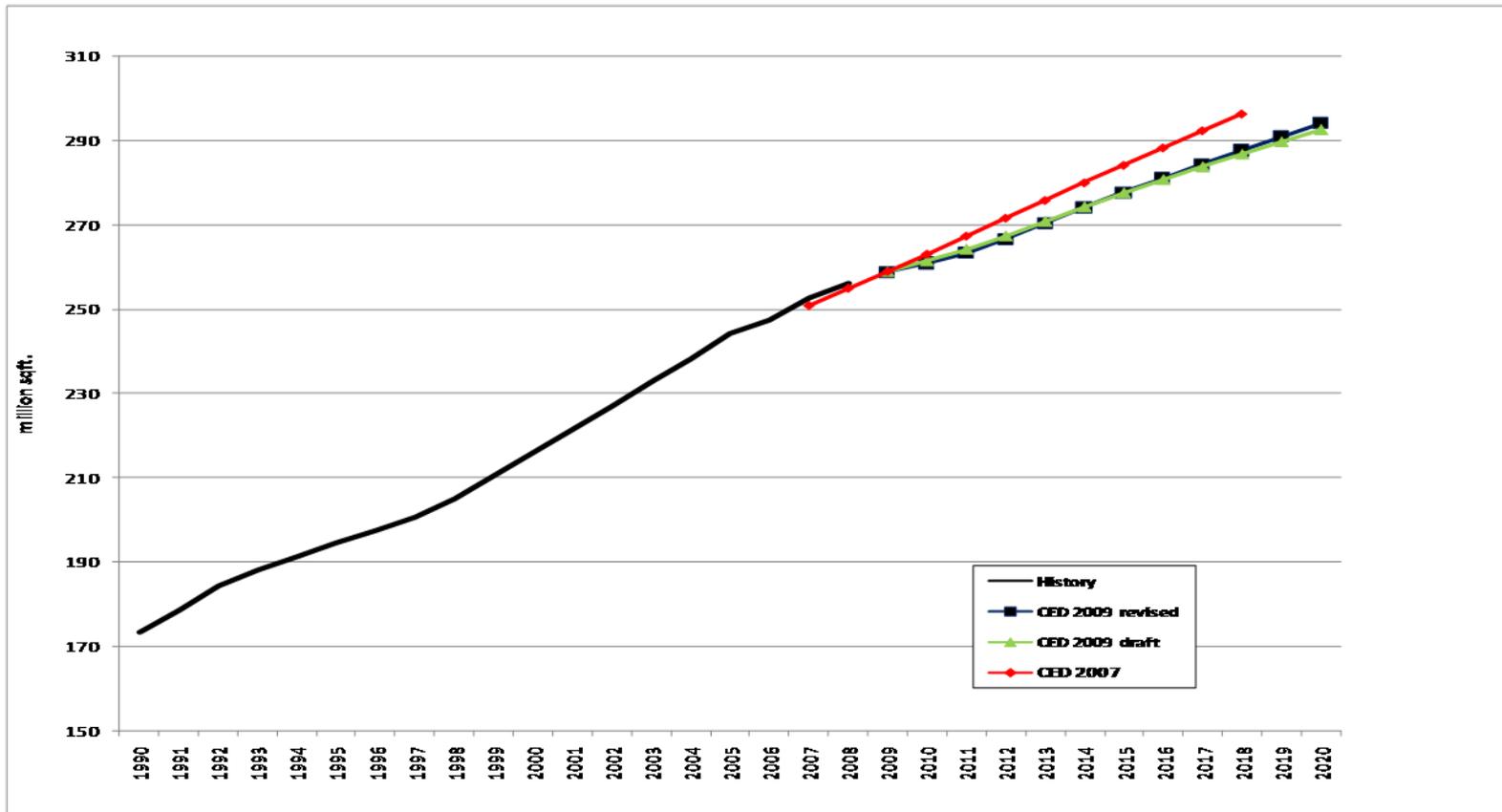




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## SMUD Commercial Floor Space

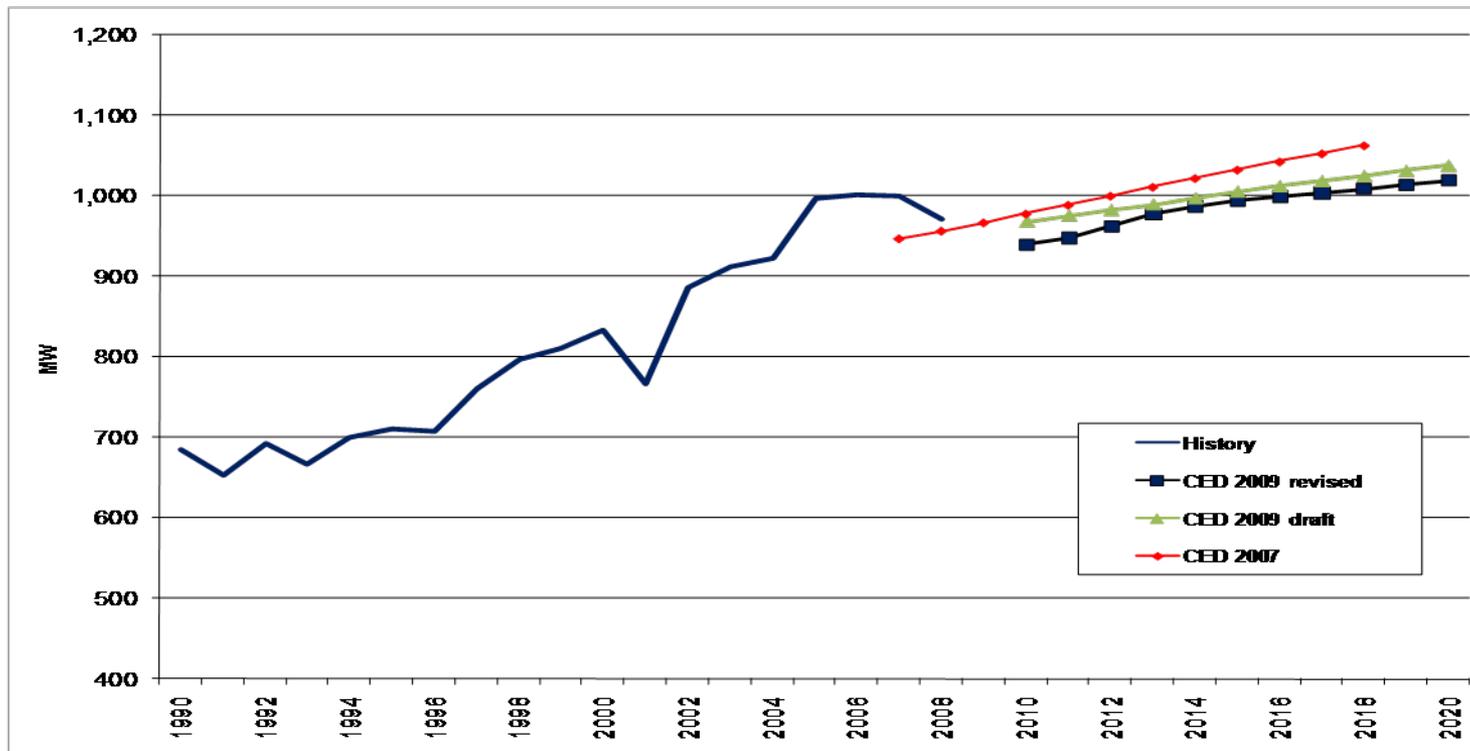
- similar to draft





## SMUD Commercial Building Sector Peak

- lower short-term forecast





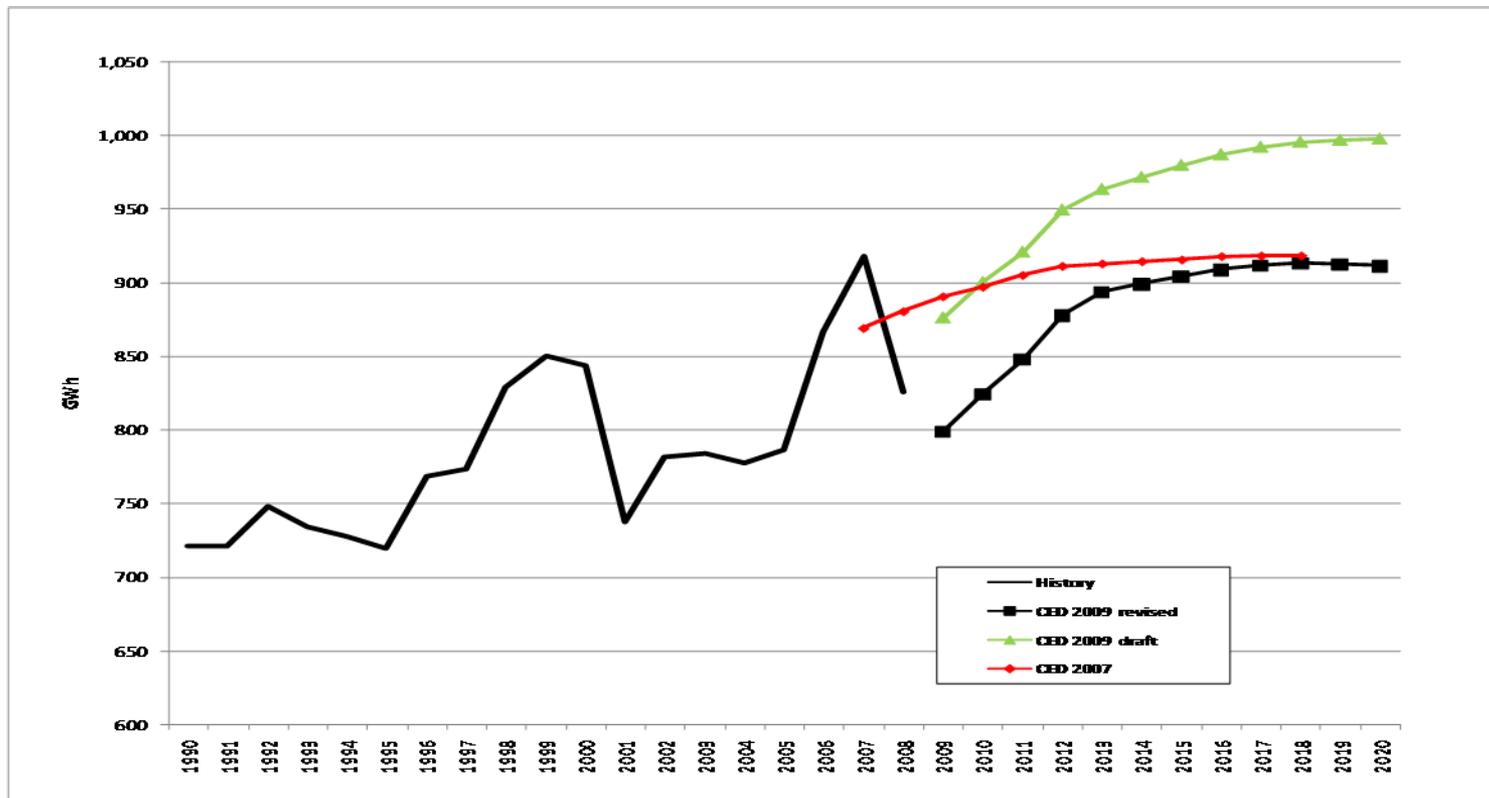
# SMUD Industrial Sector

- Now lower forecast caused by economic drivers and inclusion of 2008 consumption
- More rapid recovery than other sectors
- Peak forecast now higher than CED 2007



## SMUD Industrial Sector Consumption

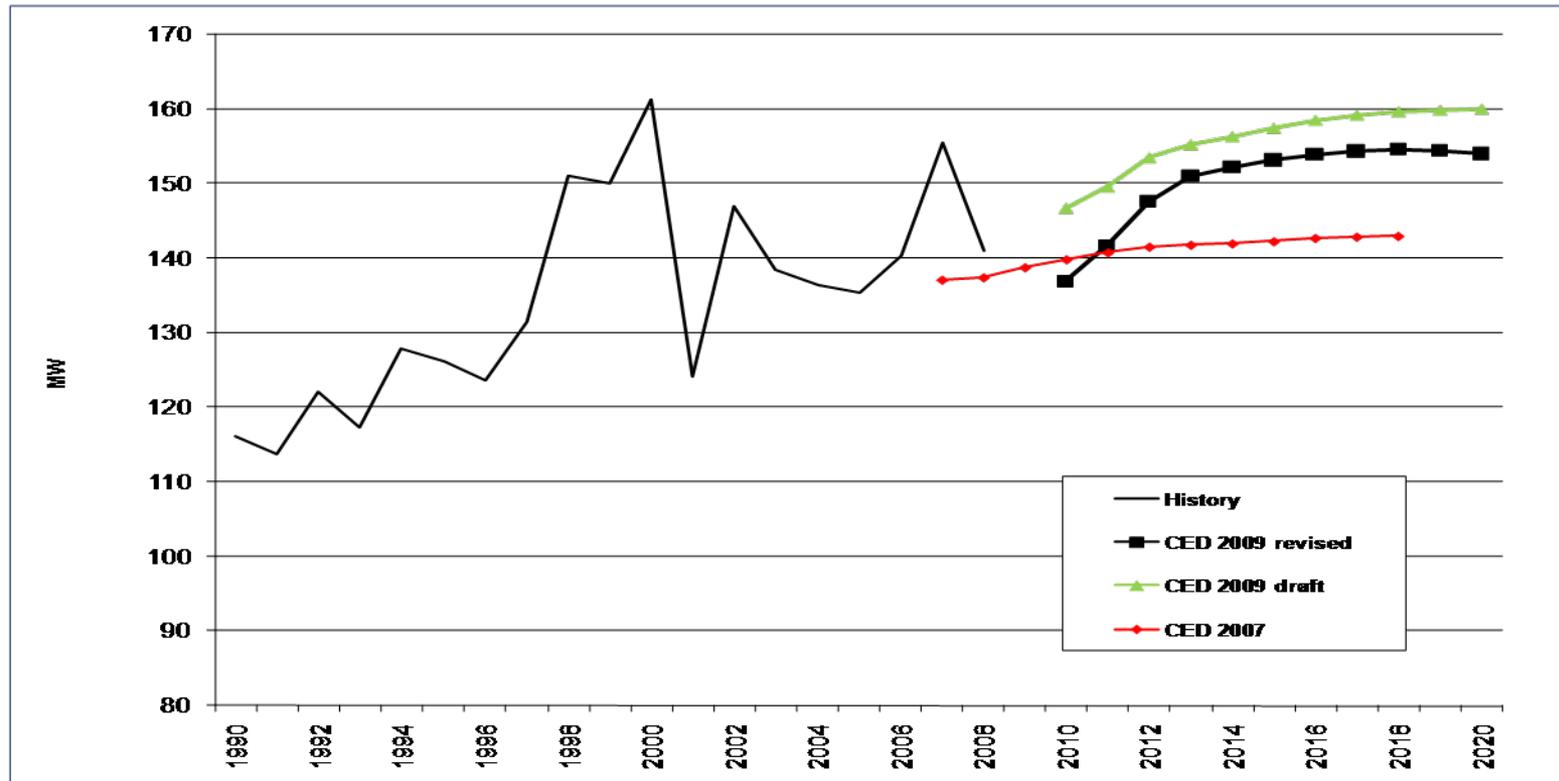
- lower starting point , similar growth to draft forecast





## SMUD Industrial Sector Peak

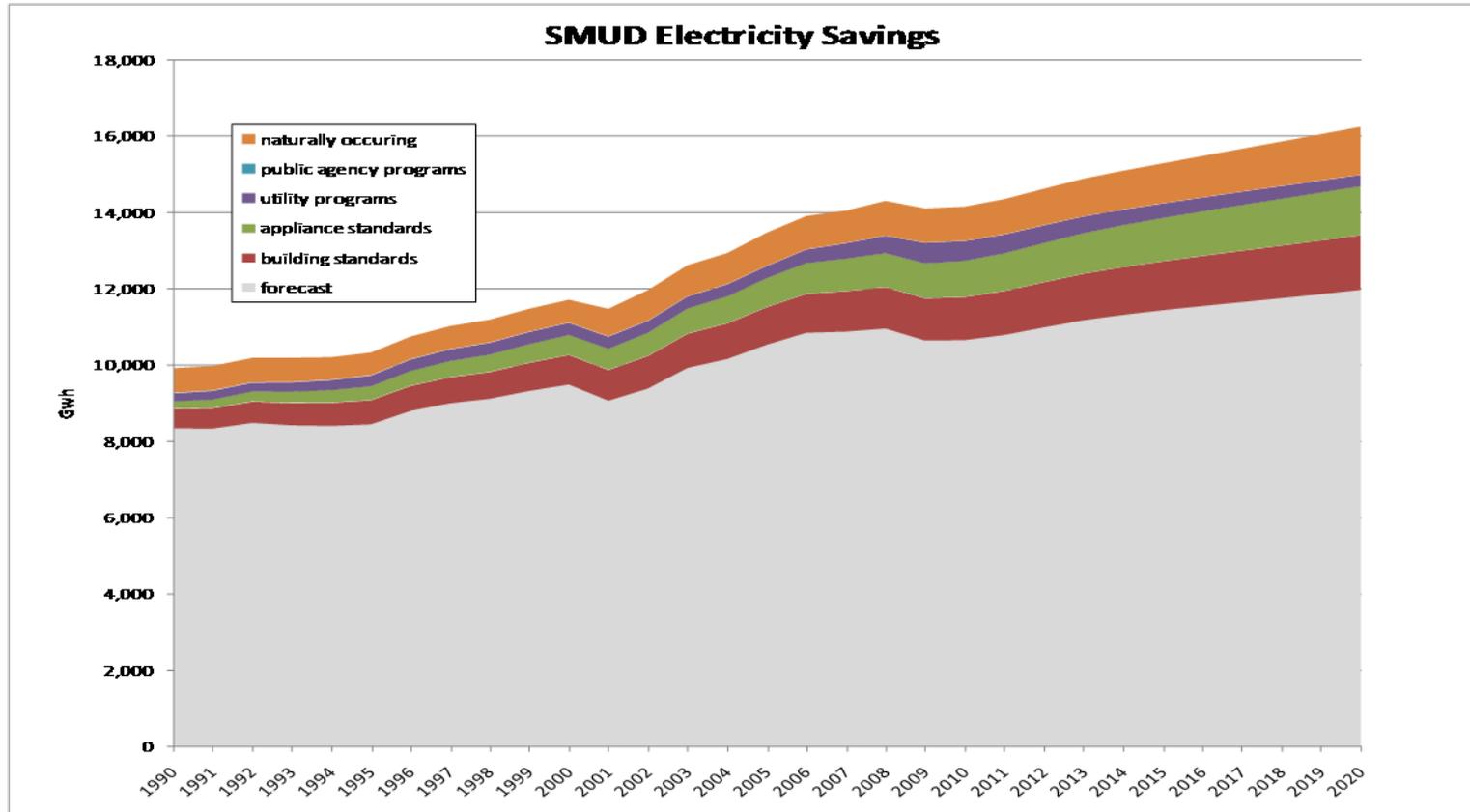
- difference is driven by consumption difference





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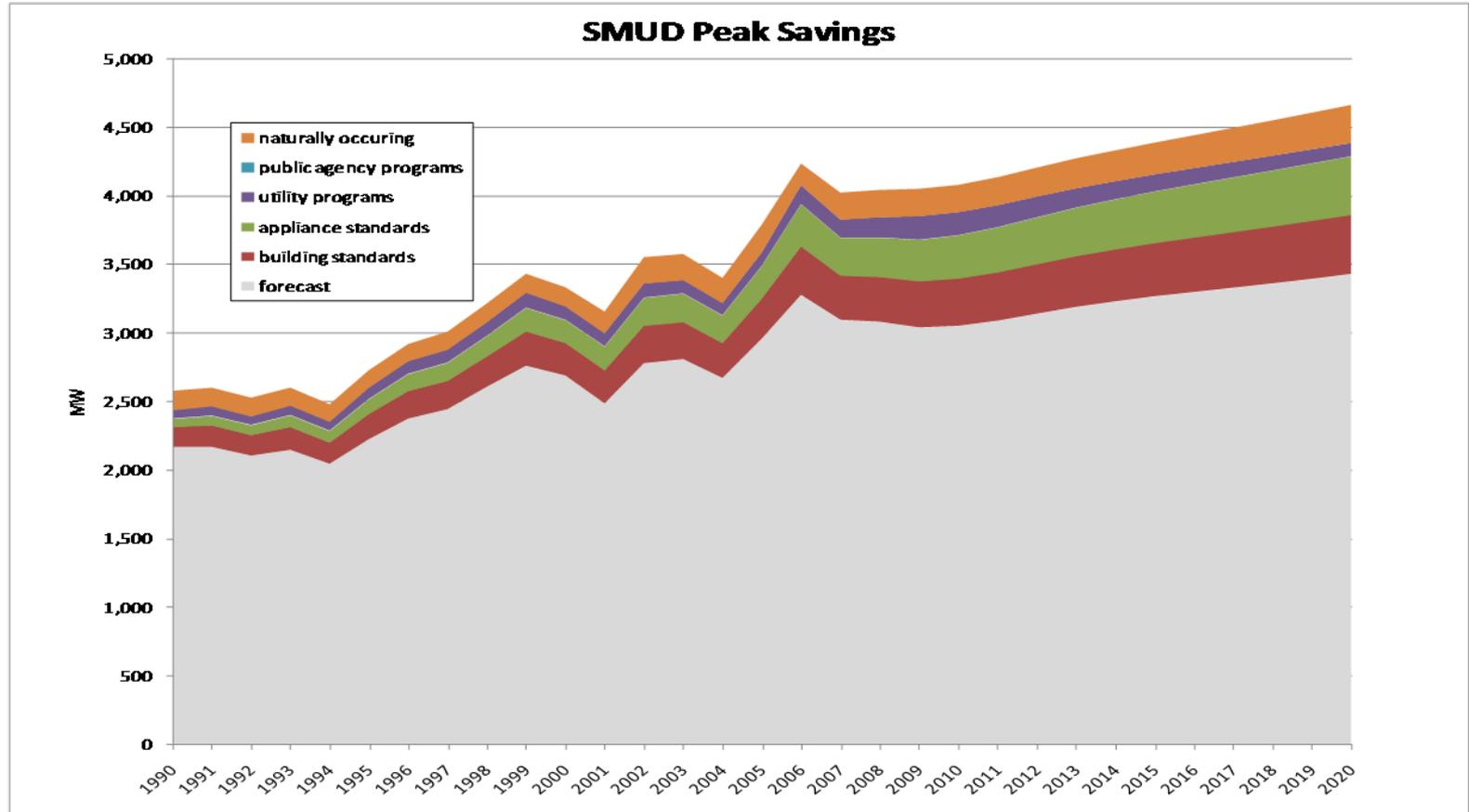
Total savings 35% of forecast by 2020





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Total savings 36% of forecast by 2020





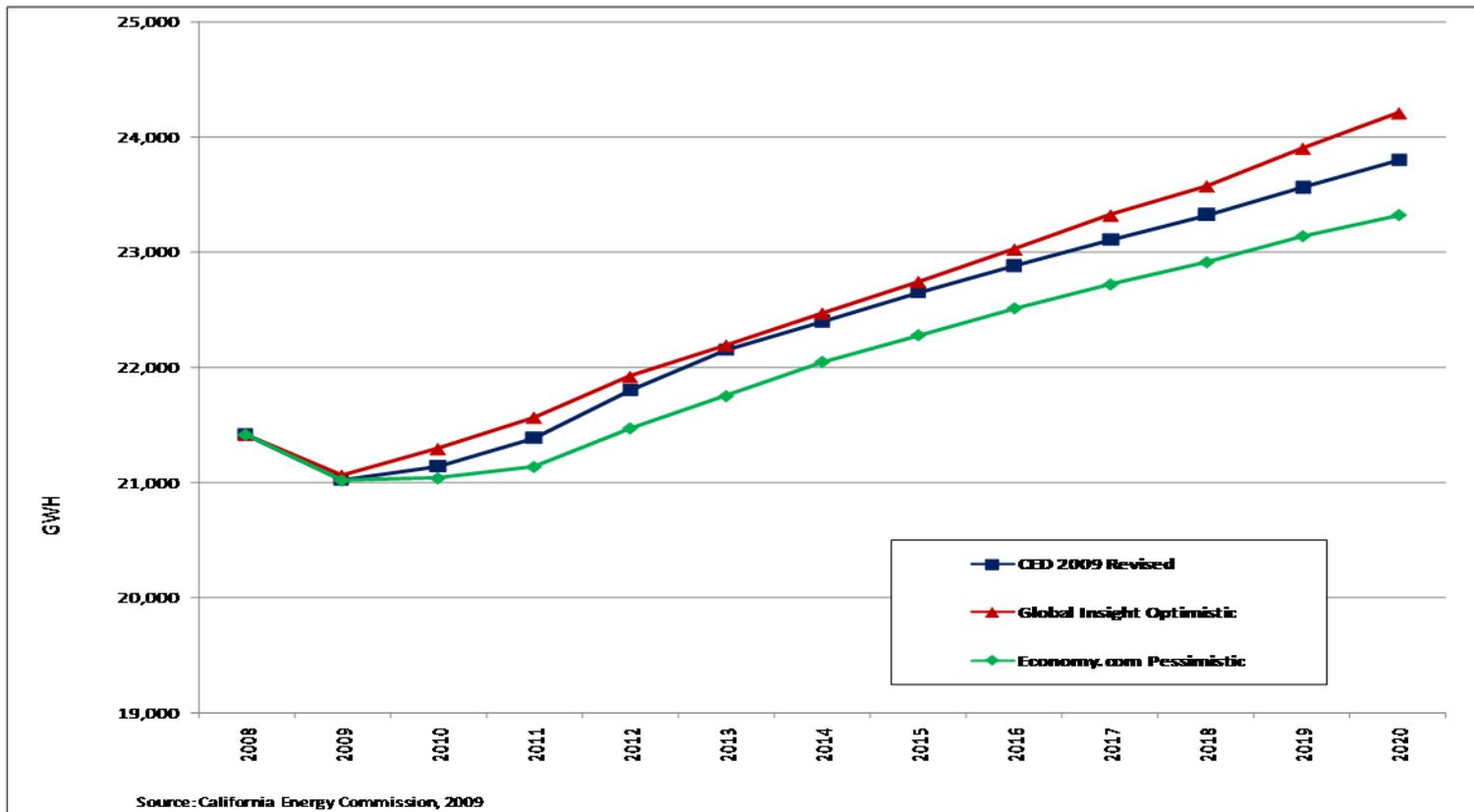
### Economic Scenarios

- Consumption and peak increase about 2.1% in high case
- Consumption and peak decrease about 2.0% in low case



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## SMUD Economic Scenarios (consumption)





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## SMUD Economic Scenarios (peak)

