Committee Workshop on 2010-2020 Peak Demand and Energy Forecasts

LADWP Service Area Forecast

Hearing Room A

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Tom Gorin
Demand Analysis Office
Electricity Supply Analysis Division

Tom.Gorin@energy.state.ca.us / 916-654-4759

LADWP Forecast Overview

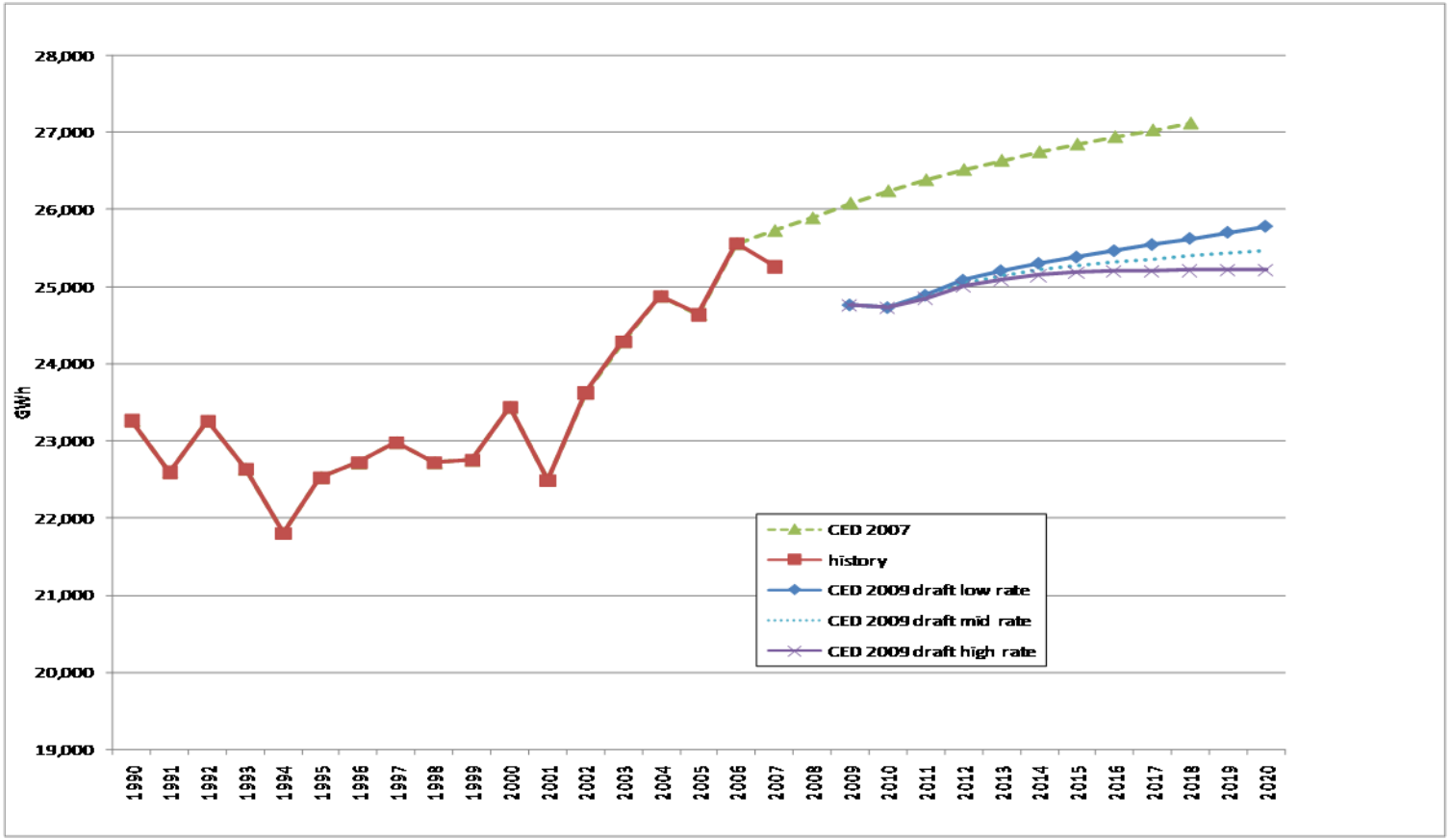
- Consumption Forecast is 5.0% lower in 2010 than previous forecast (CED 2007)
  - Residential (3.3% lower)
  - Commercial Buildings (8.7% lower)
  - Industrial Sector (7.8% lower)
  - Transportation, Communication and Utilities (TCU) Sector (4.7 lower)
- Difference grows to 5.5% in the low rate case and 6.2% in the high rate case by 2018
- Peak forecast is around 1% lower throughout the forecast period
- Per capita consumption declines slightly
- Load factor remains relatively flat at lower level

LADWP Service Area Forecast Results

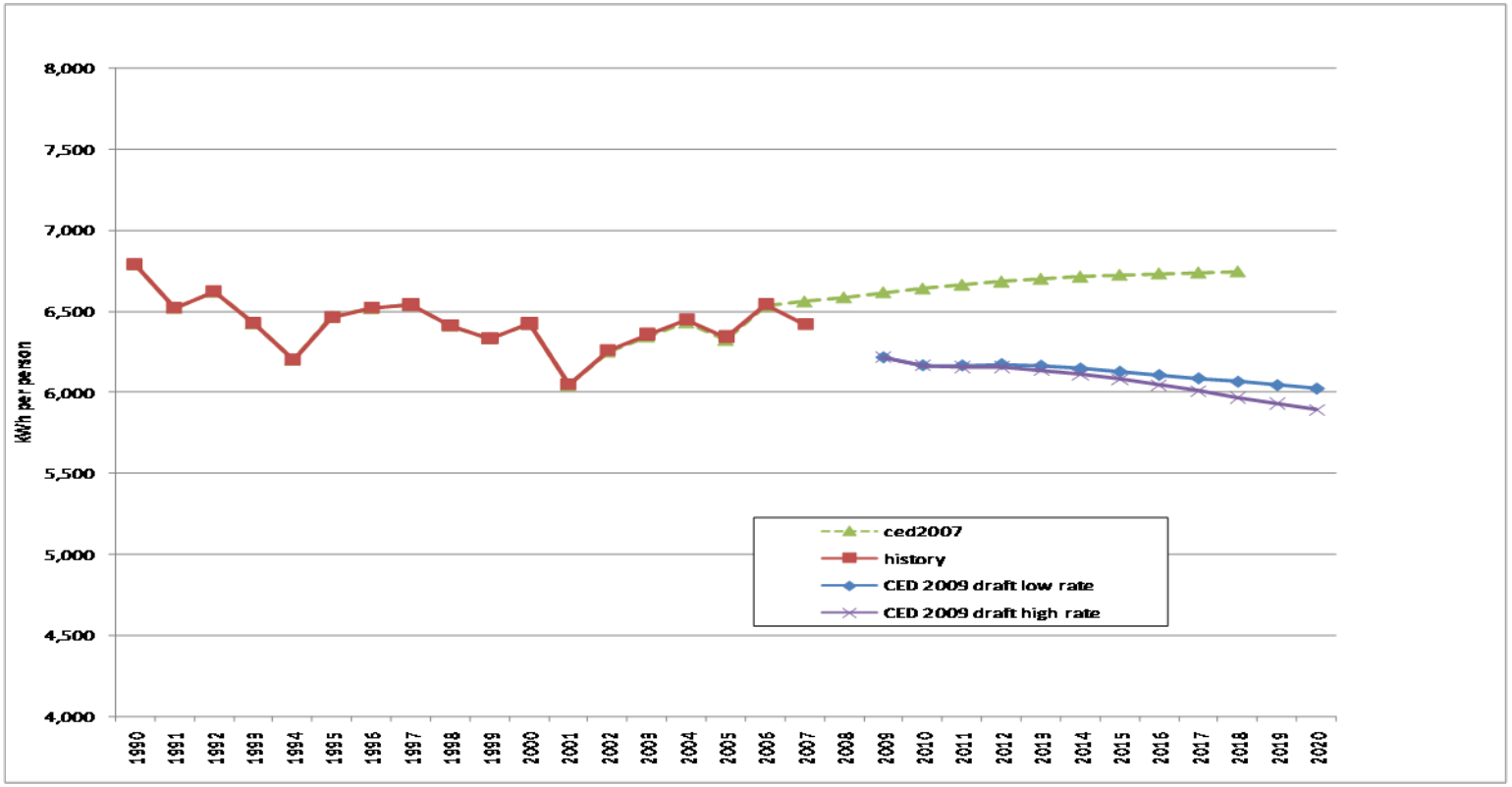
Consumption (GWH)					
	CED 2007	CED 2009 Staff Draft Low Rate	CED 2009 Staff Draft High Rate	Percent Difference Staff Low Rate/CED 2007	Percent Difference Staff High Rate/CED 2007
1990	23,263	23,263	23,263	0.00%	0.00%
2000	23,437	23,437	23,437	0.00%	0.00%
2007	25,726	25,258	25,258	-1.82%	-1.82%
2010	26,241	24,729	24,729	-5.76%	-5.76%
2015	26,846	25,379	25,189	-5.46%	-6.17%
2018	27,120	25,619	25,213	-5.53%	-7.03%
Average Annual Growth Rates					
1990-2000	0.07%	0.07%	0.07%		
2000-2007	1.34%	1.51%	1.51%		
2007-2010	0.66%	-0.70%	-0.70%		
2010-2018	0.41%	0.44%	0.24%		

Peak (MW)					
	CED 2007	CED 2009 Staff Draft Low Rate	CED 2009 Staff Draft High Rate	Percent Difference Staff Low Rate/CED 2007	Percent Difference Staff High Rate/CED 2007
1990	5,326	5,326	5,326	0.00%	0.00%
2000	5,325	5,325	5,325	0.00%	0.00%
2007	5,685	6,134	6,134	7.90%	7.90%
2010	5,786	5,838	5,838	0.90%	0.90%
2015	5,907	5,978	5,929	1.20%	0.37%
2018	5,966	6,042	5,941	1.27%	-0.42%
Average Annual Growth Rates					
1990-2000	0.00%	0.00%	0.00%		
2000-2007	1.32%	2.87%	2.87%		
2007-2010	0.59%	-1.64%	-1.64%		
2010-2018	0.38%	0.43%	0.22%		
Historic values are shaded					

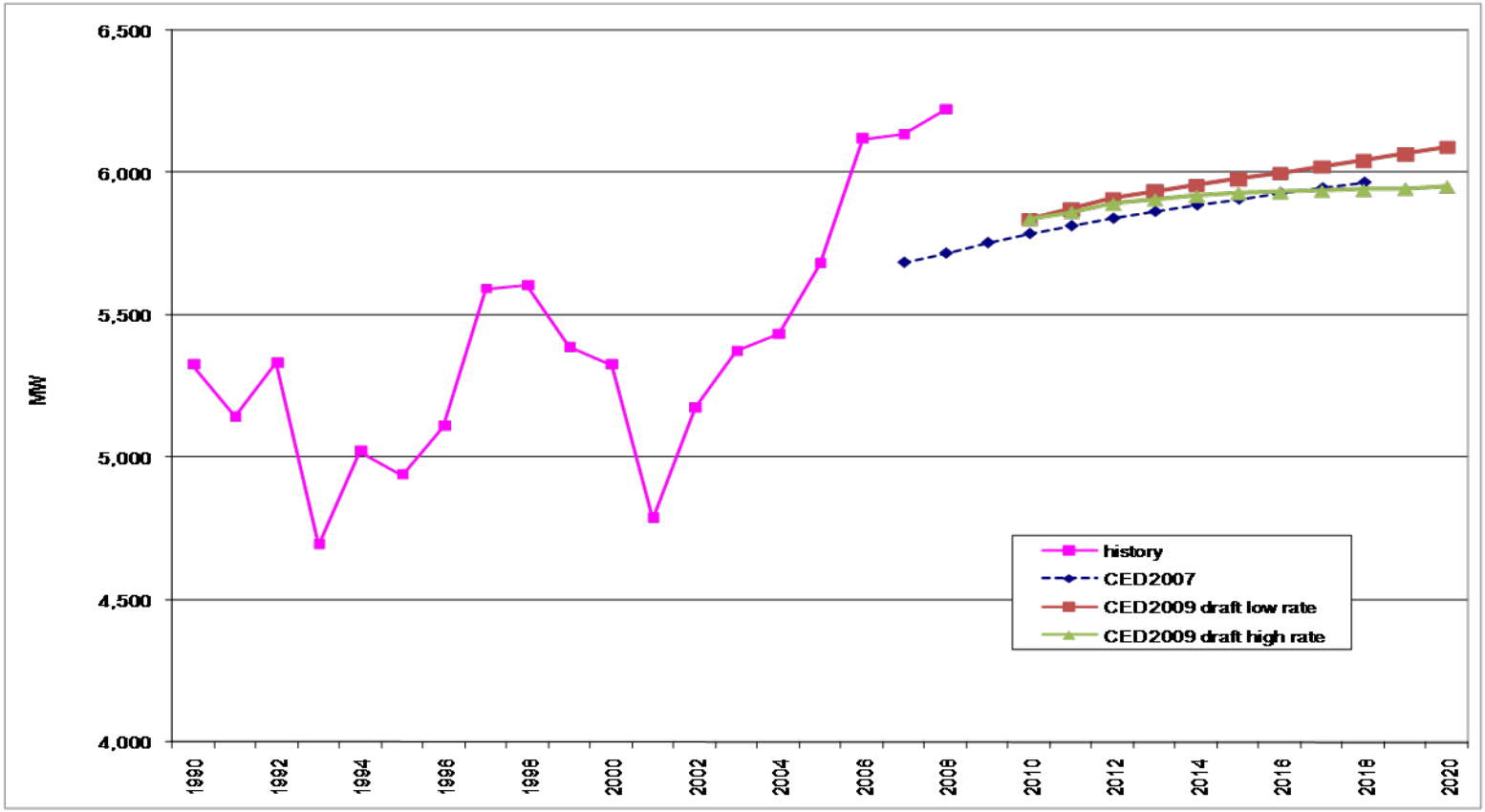
LADWP Electricity Consumption Forecast



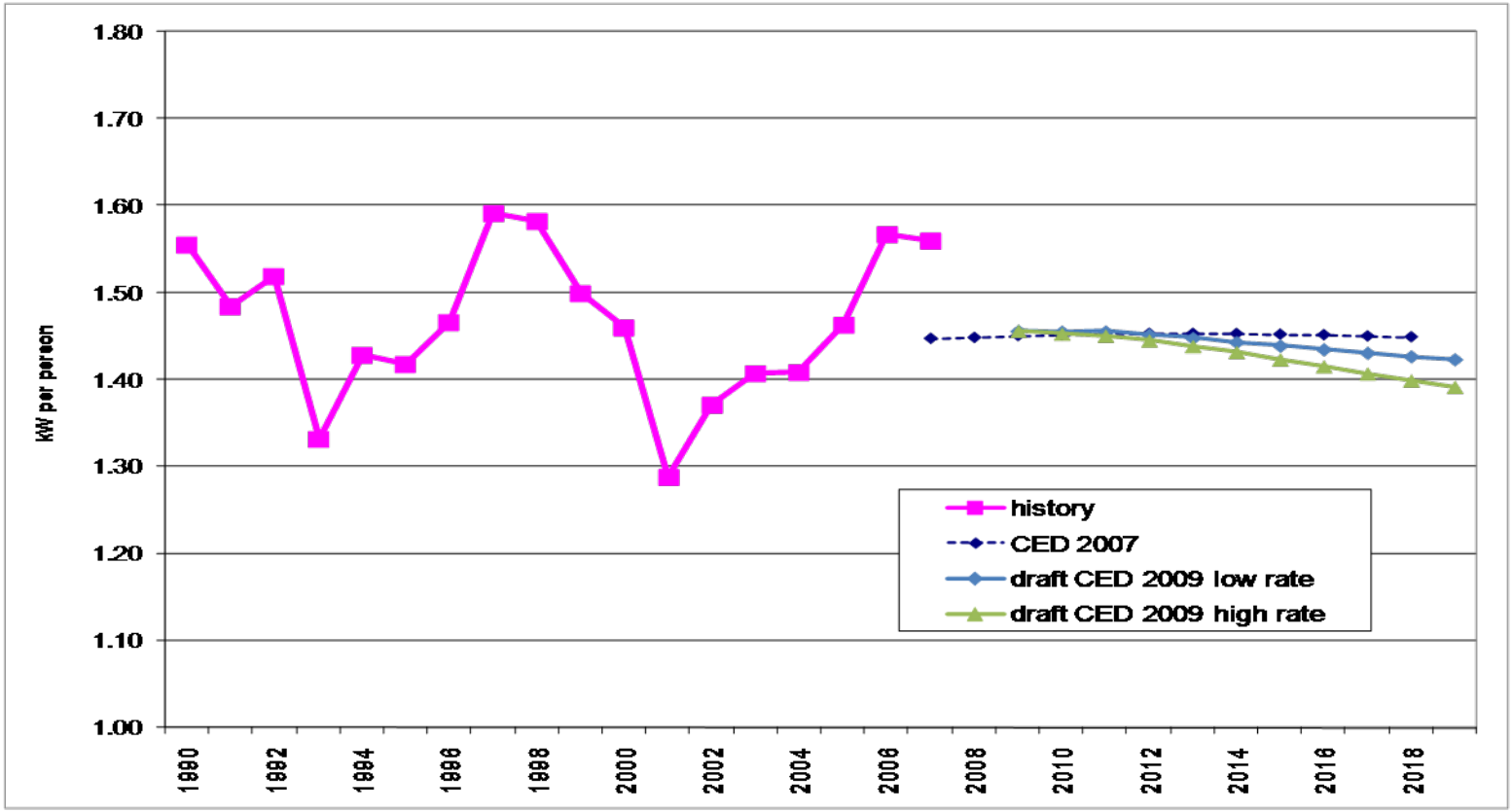
LADWP per Capita Consumption



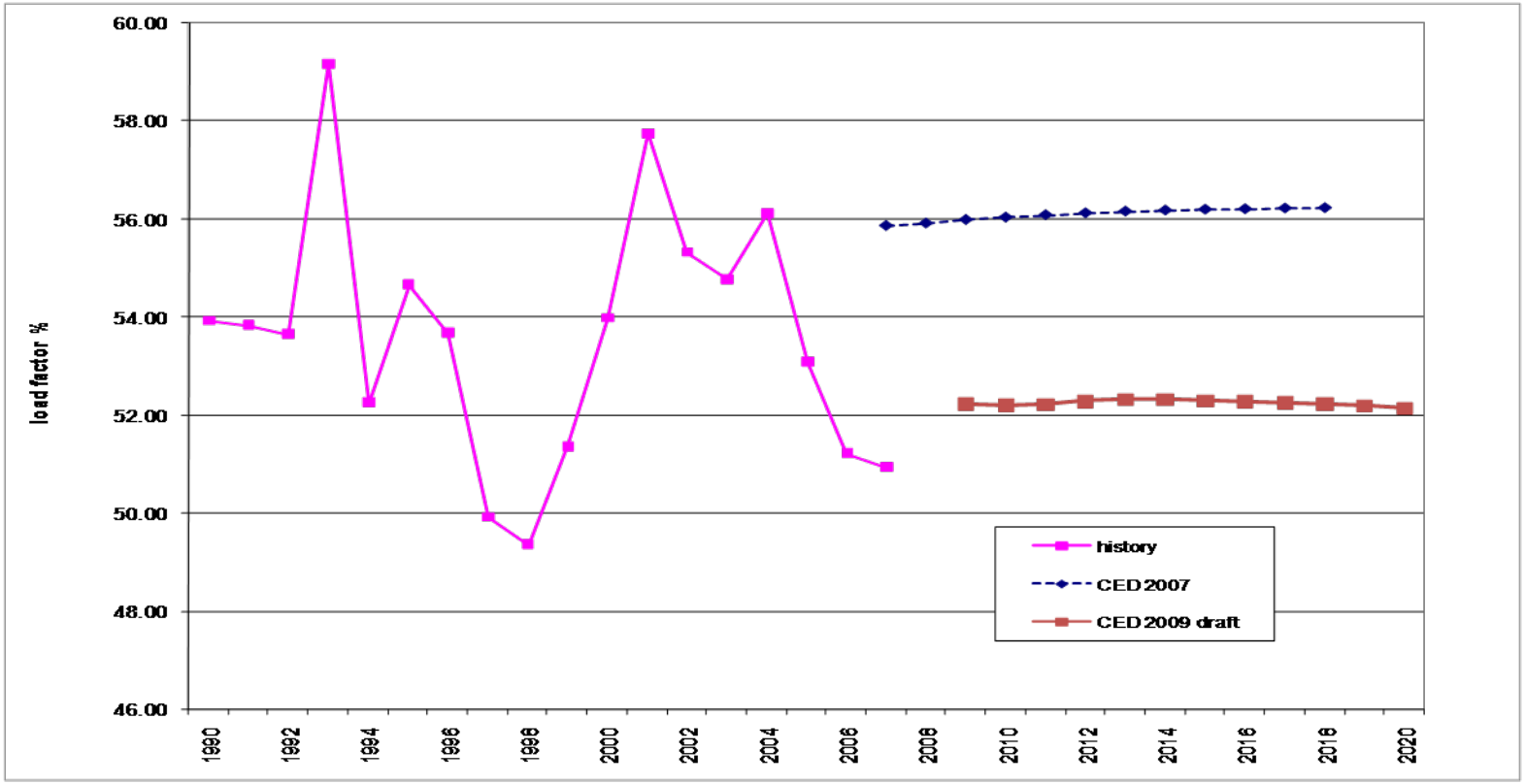
LADWP Service Area Peak Forecast



LADWP per Capita Peak



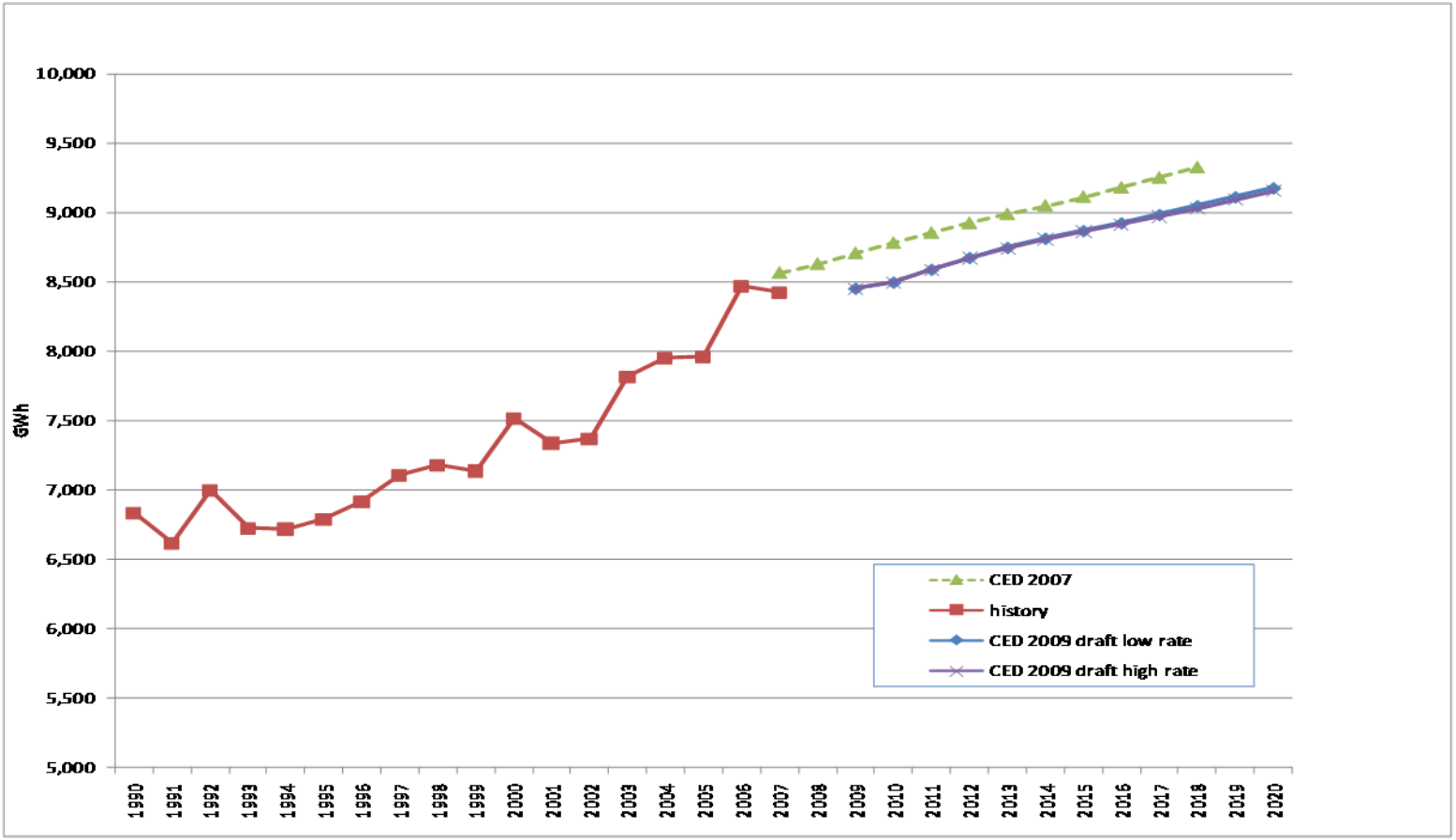
LADWP Service Area Load Factor



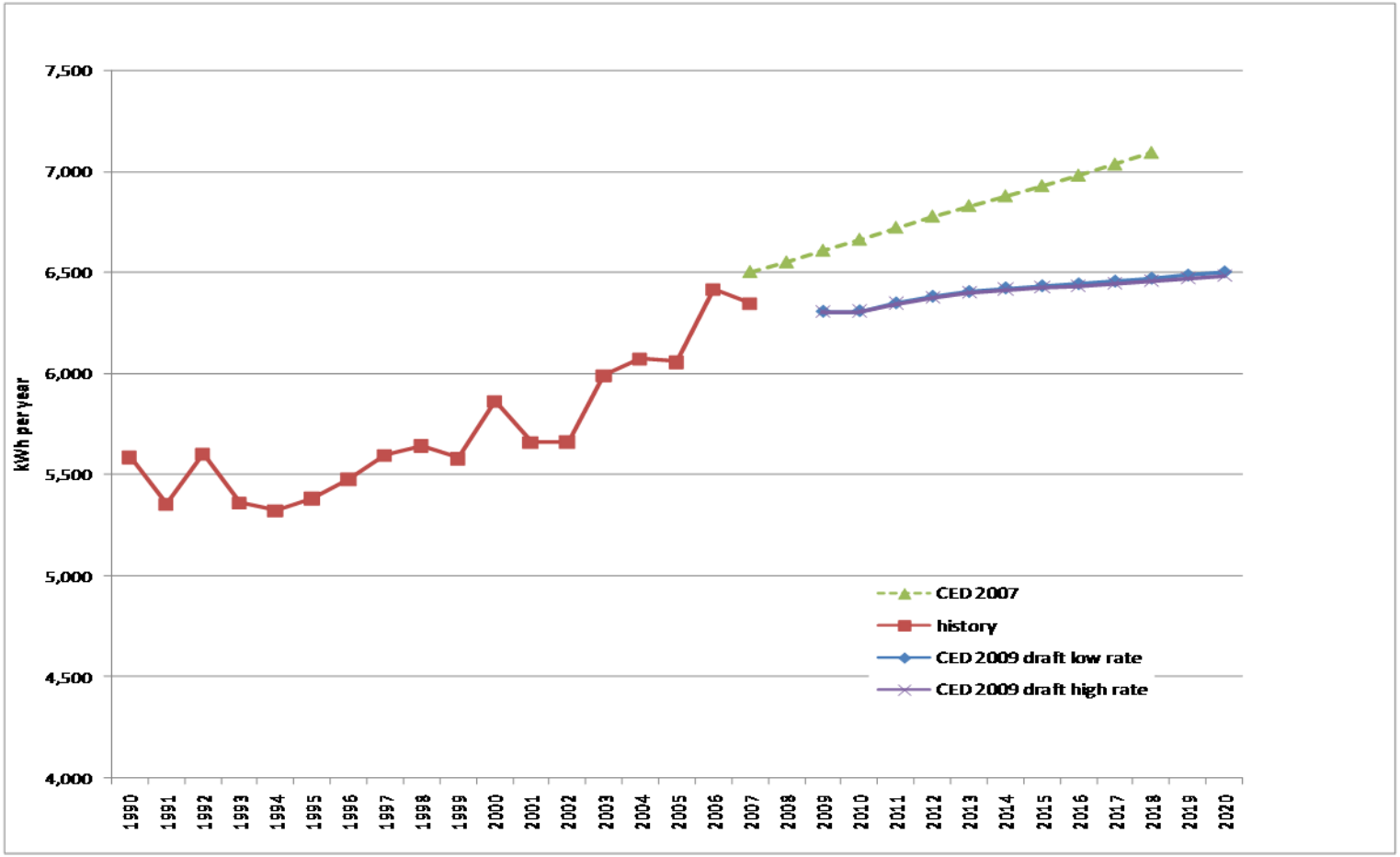
LADWP Residential Consumption

- CED 2009 draft forecast is about 3% lower throughout the forecast period
- Household income projections are 8% to 9% lower
- Per household use projected to be relatively constant

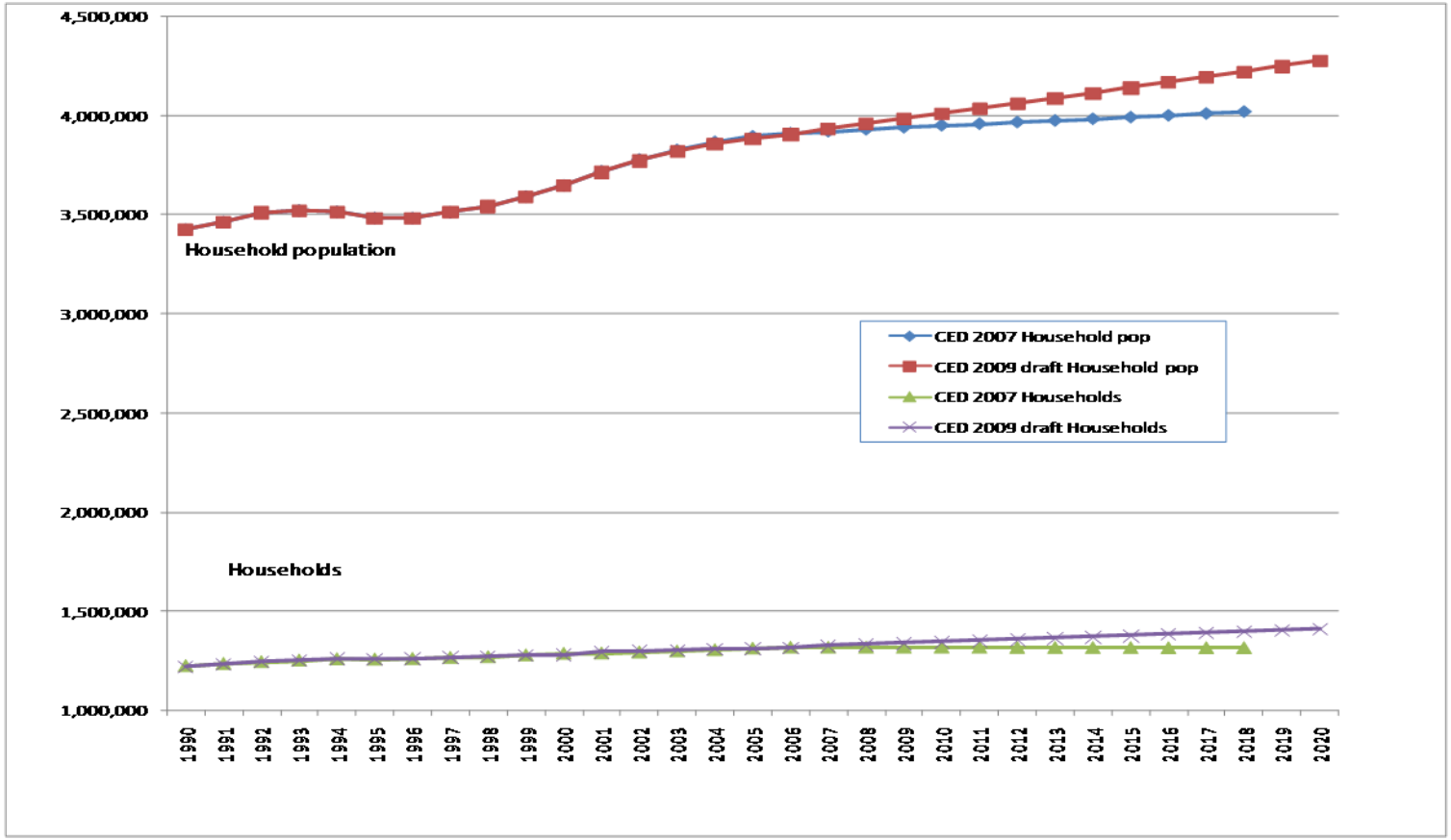
LADWP Residential Consumption



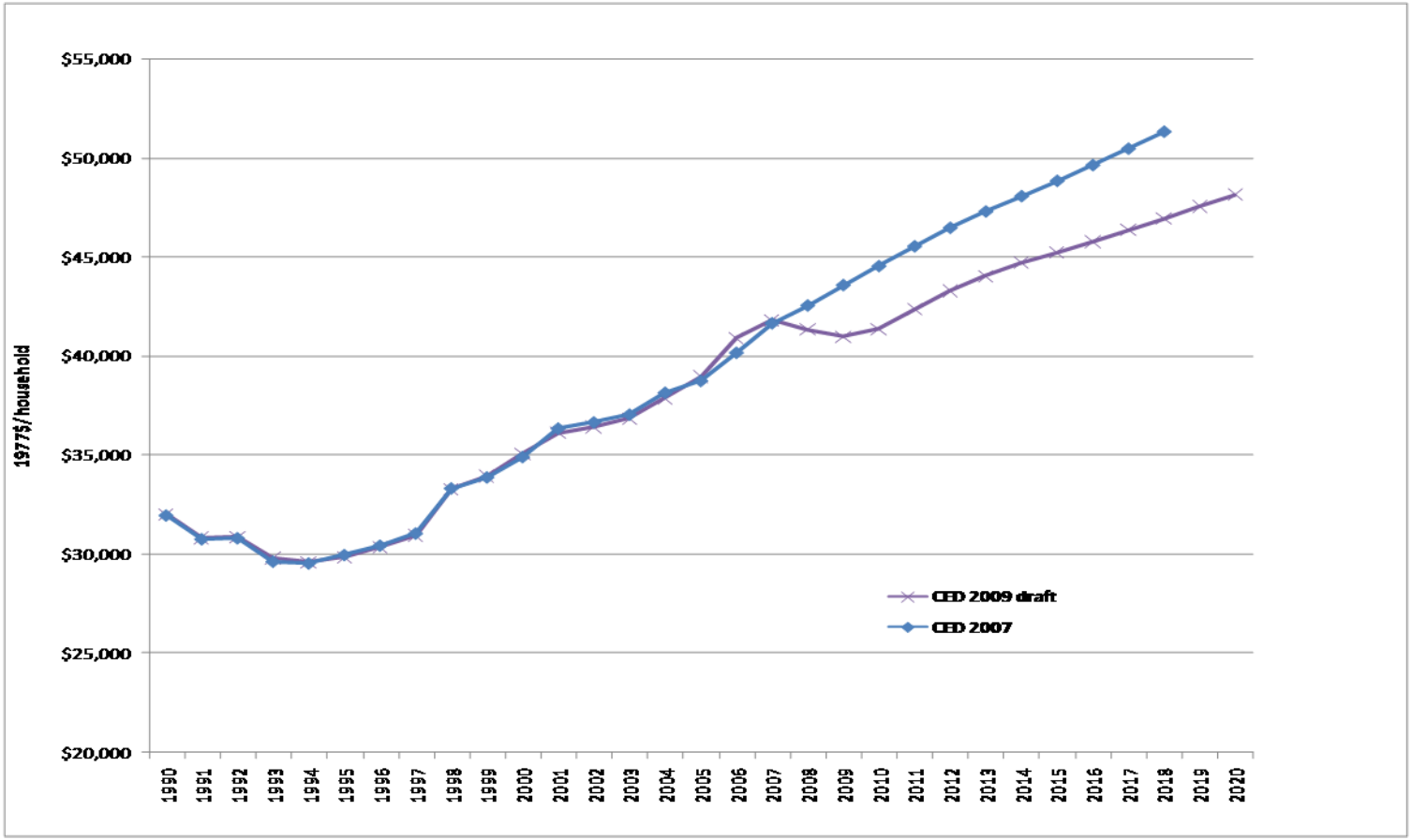
LADWP Residential Use per Household



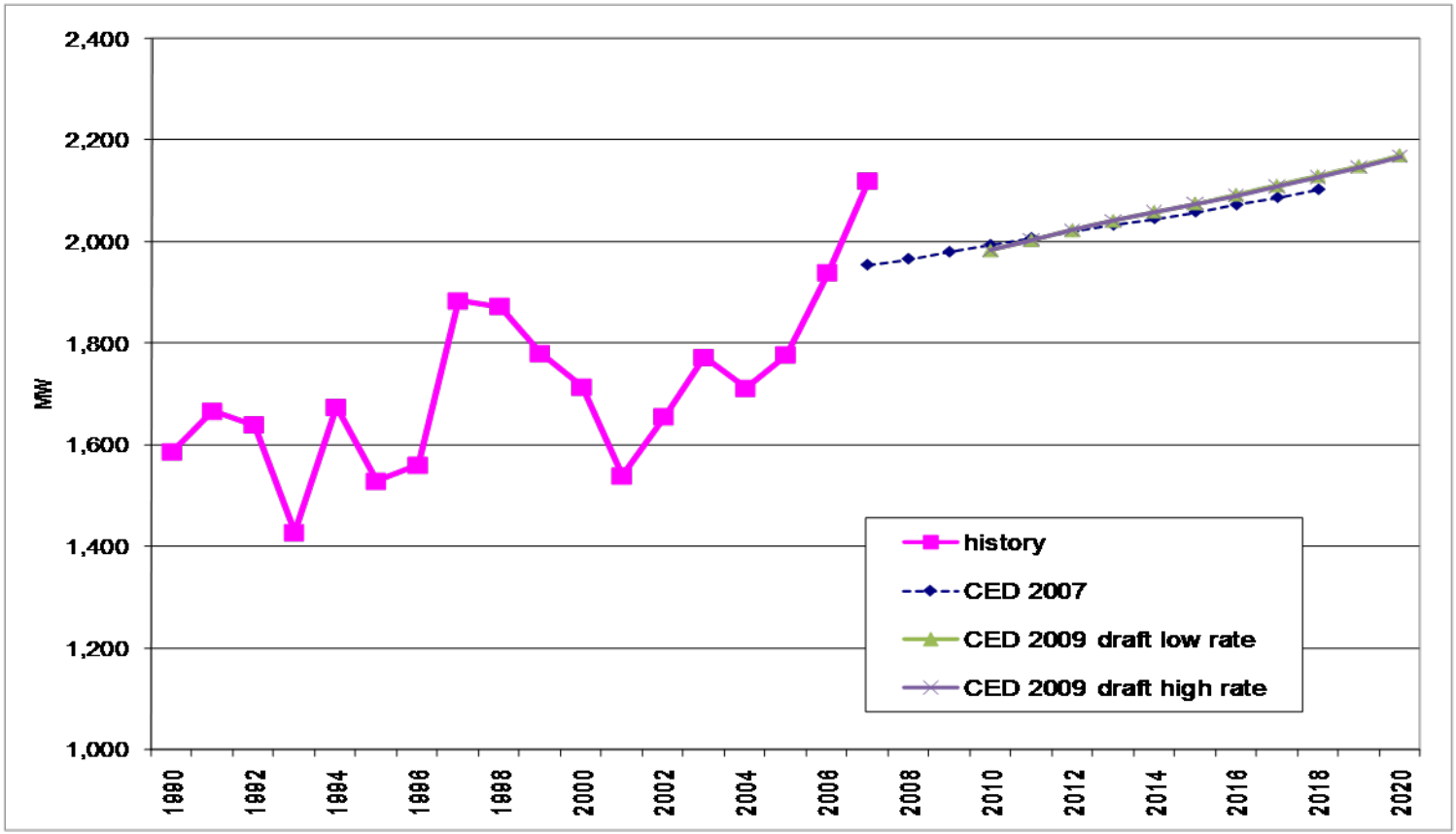
LADWP Households and Population



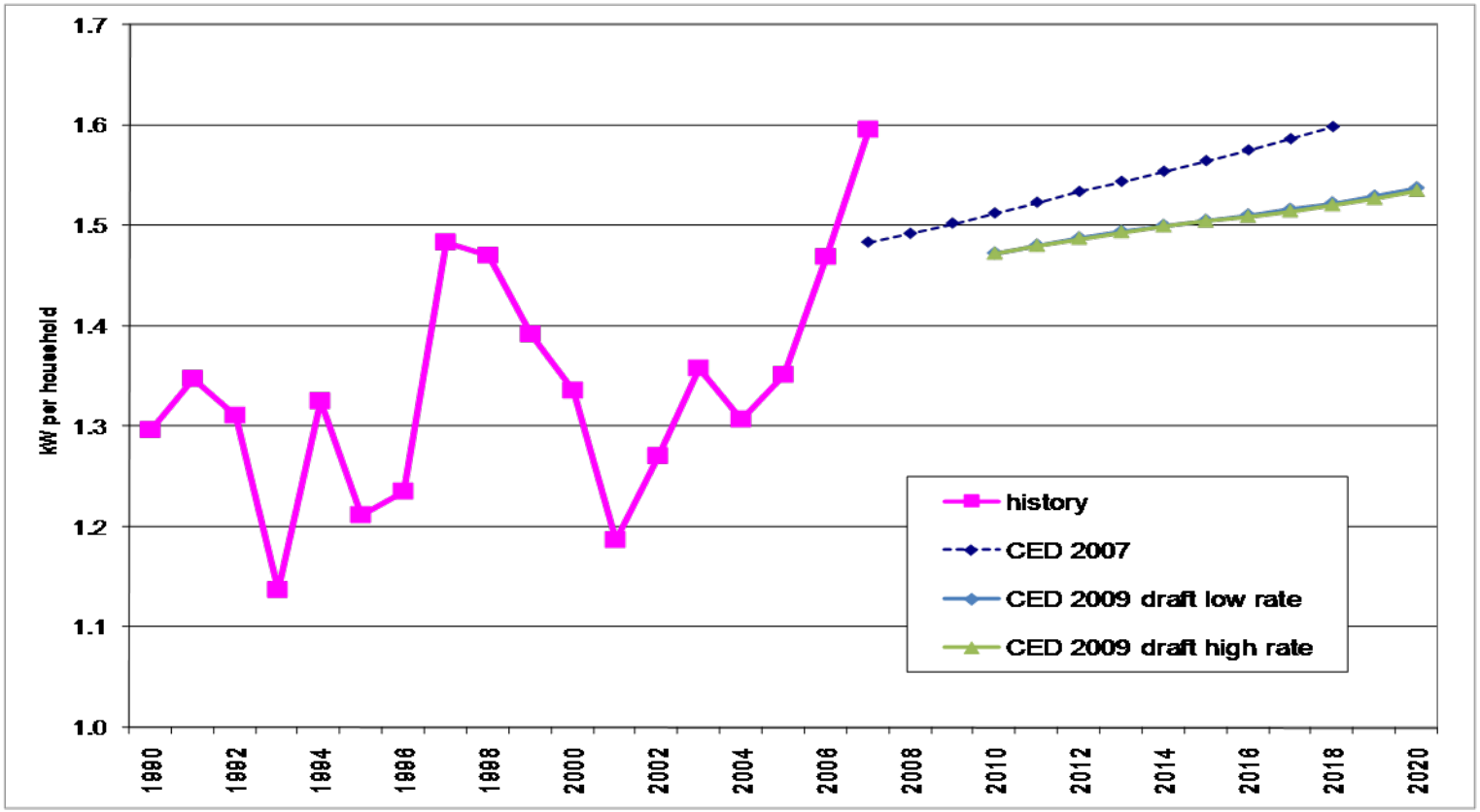
LADWP Household Income



LADWP Residential Peak



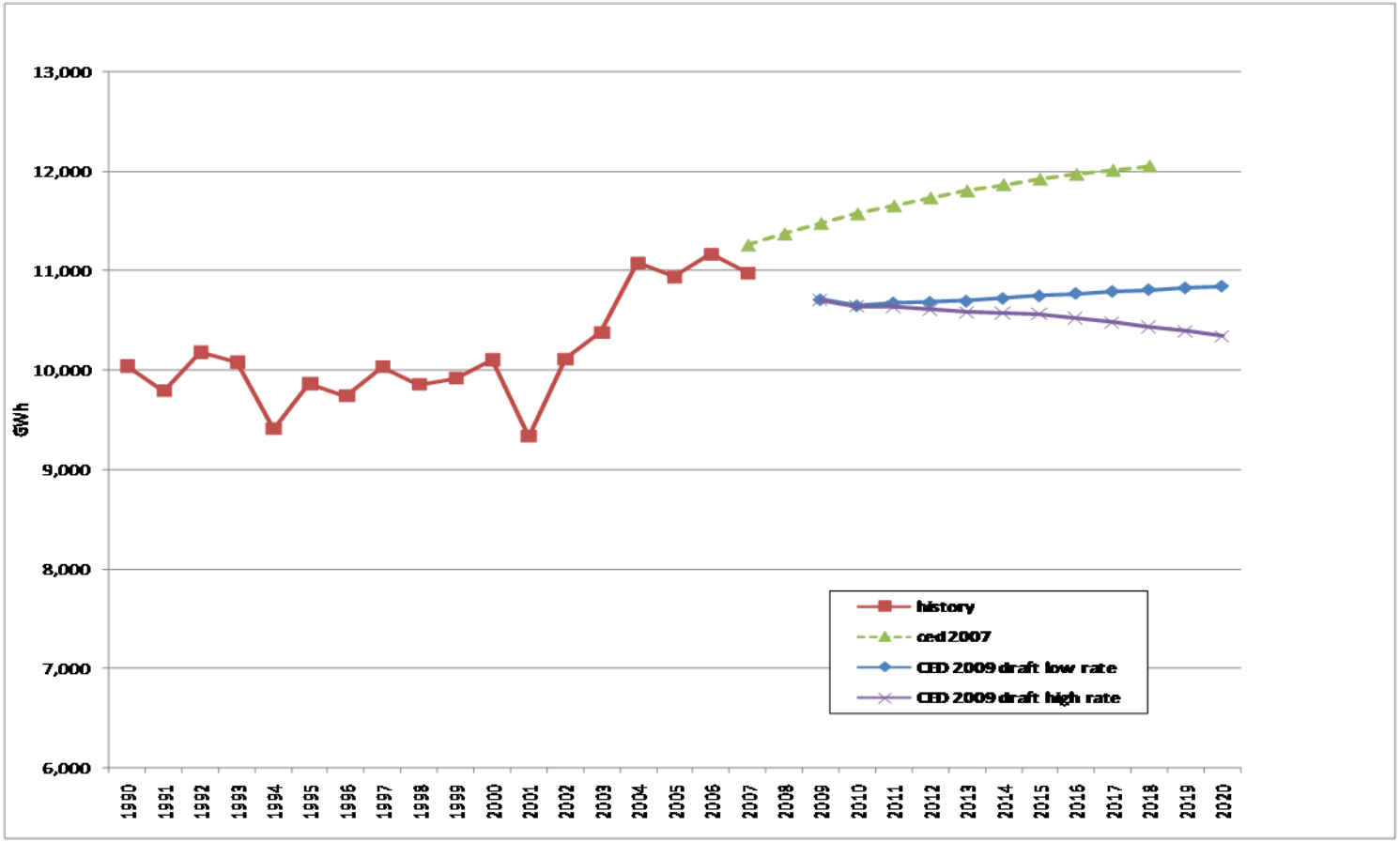
LADWP Residential Peak Use per Household



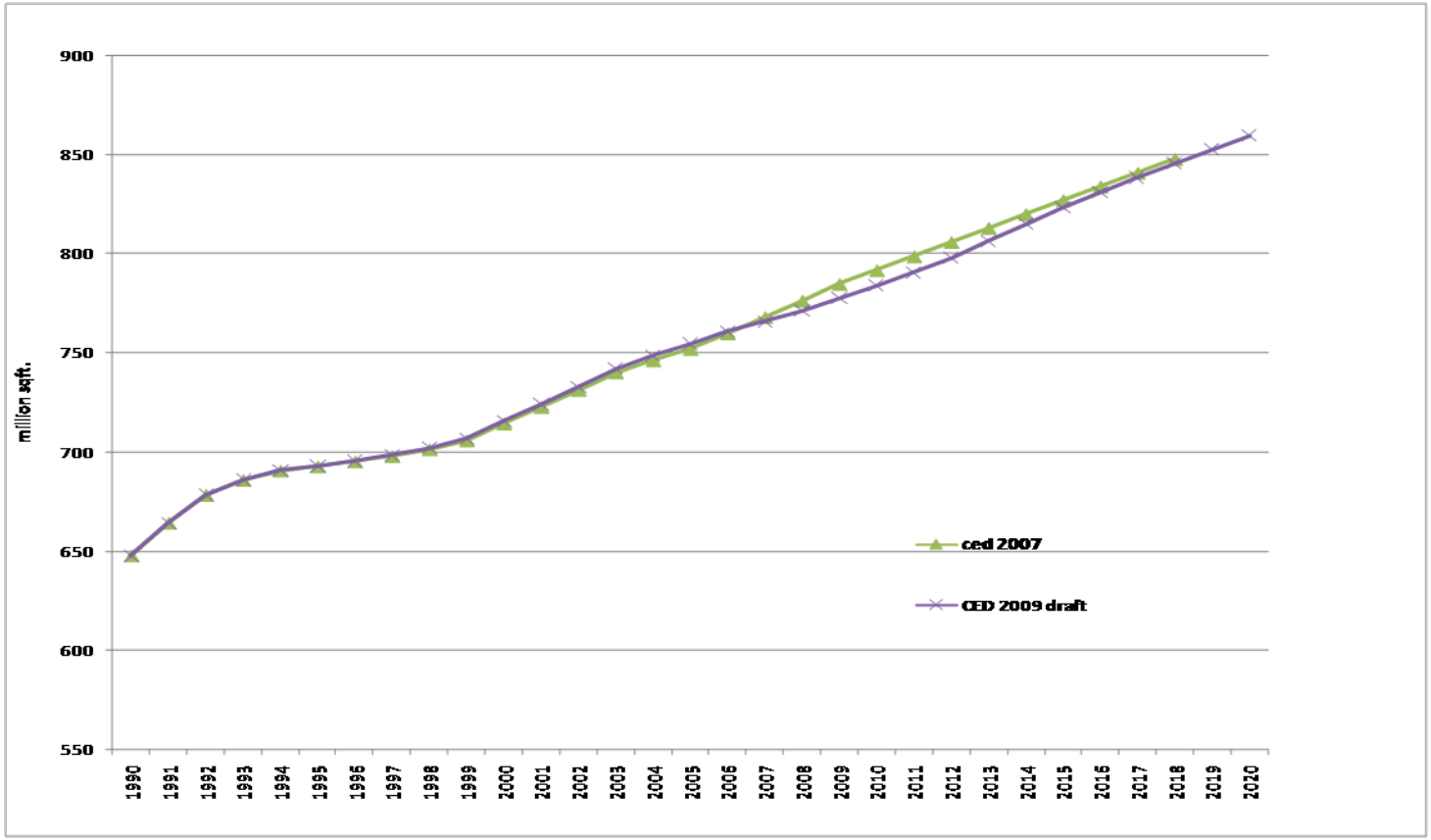
LADWP Commercial Building Sector

- 8% lower forecast in 2010, difference increases to between 10% (low rate) and 15% (high rate) by 2018
- Lower starting point than CED 2007
- Less overall projected floor space
- Increased compliance (75%) with 2005 lighting standards reduces consumption 4% by end of forecast

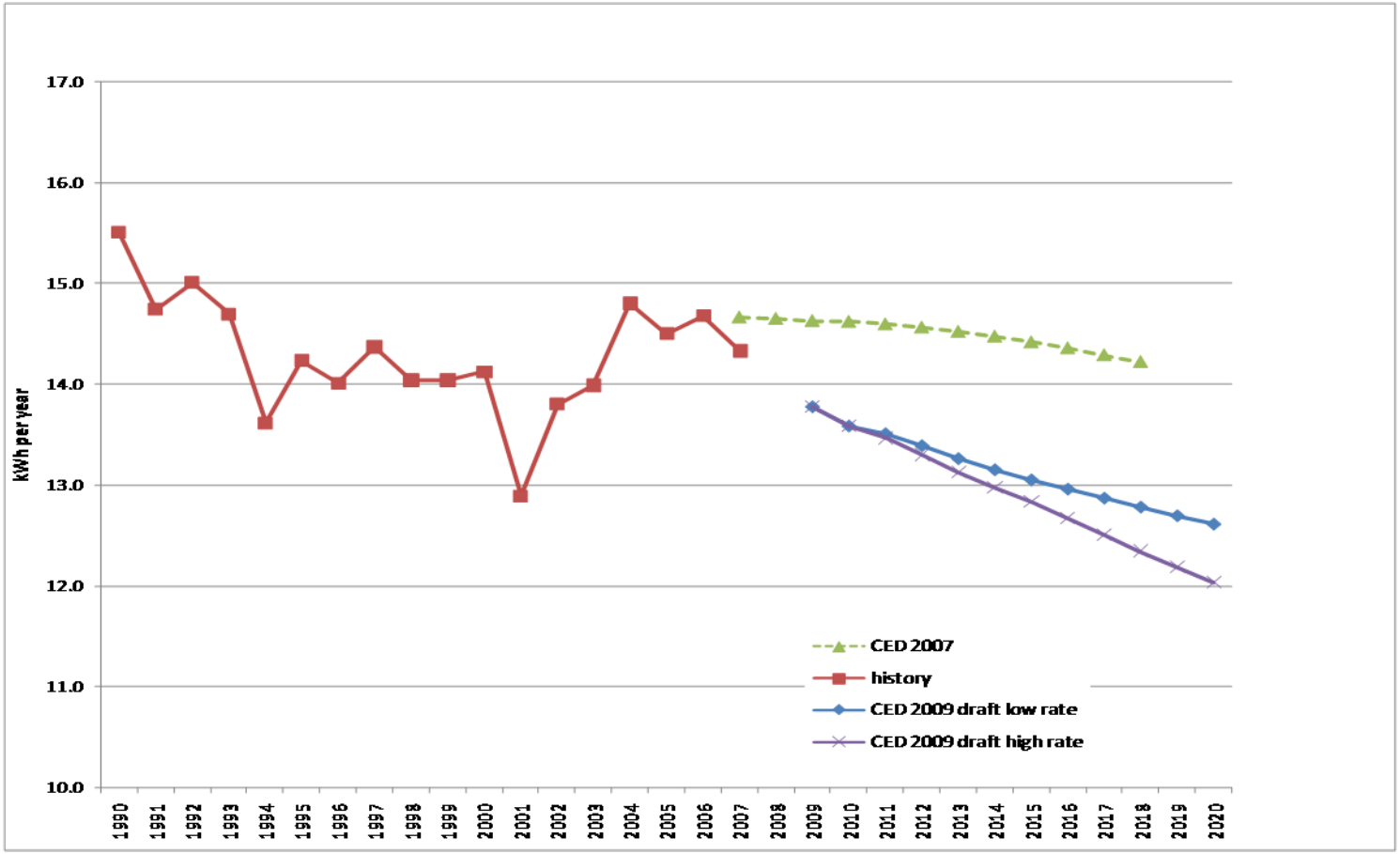
LADWP Commercial Building Consumption



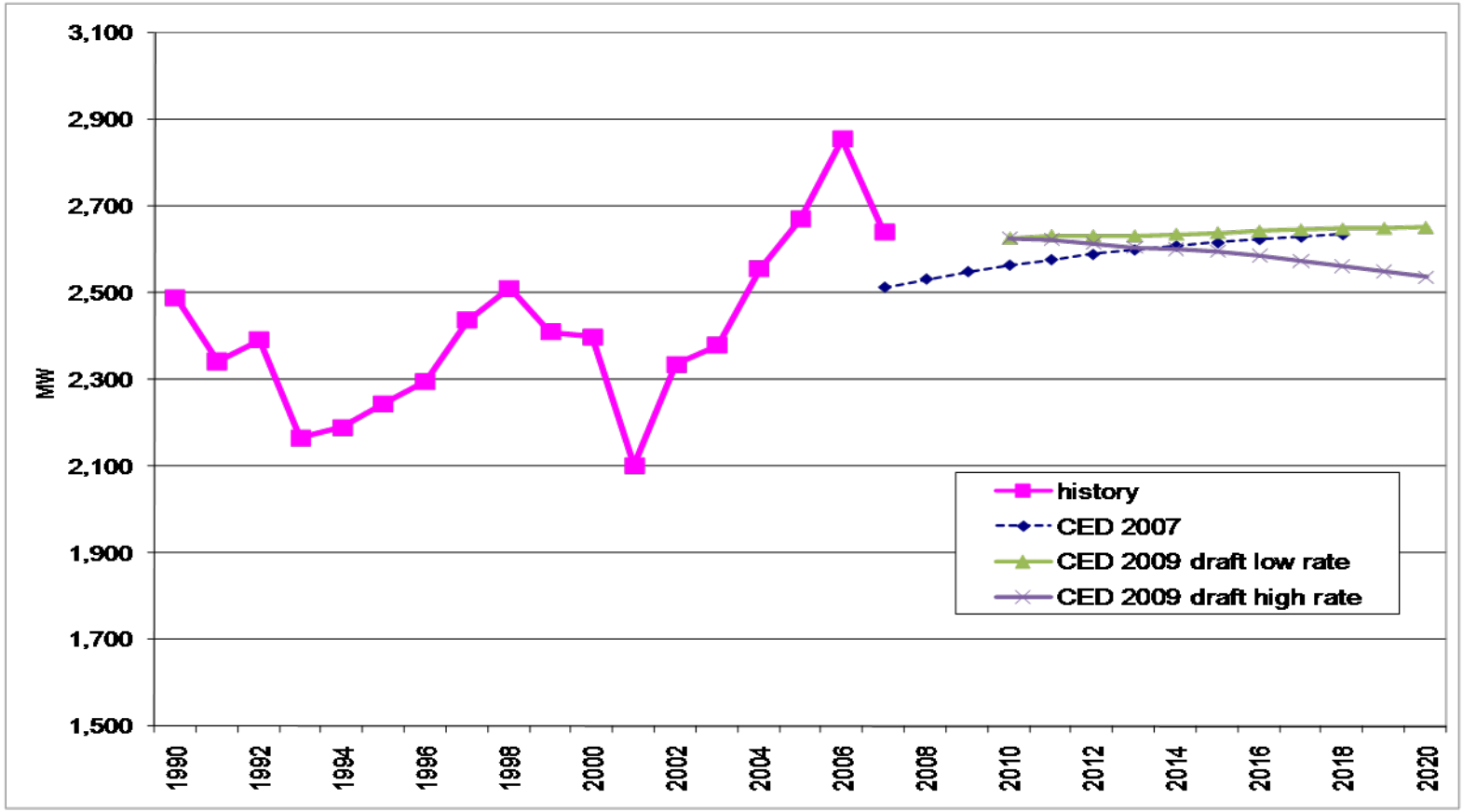
LADWP Commercial Floor Space



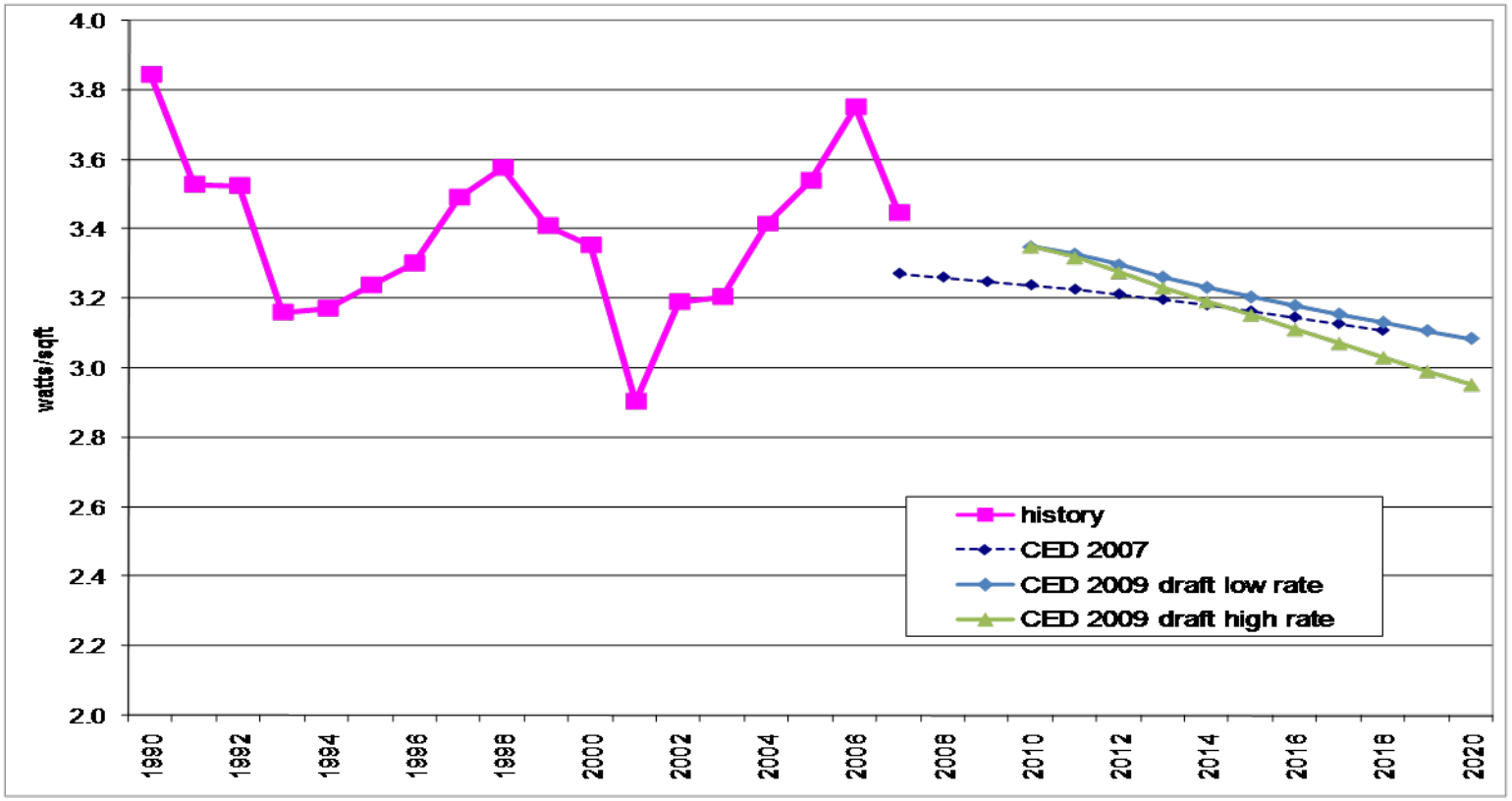
LADWP Commercial kWh per Square Foot



LADWP Commercial Building Sector Peak



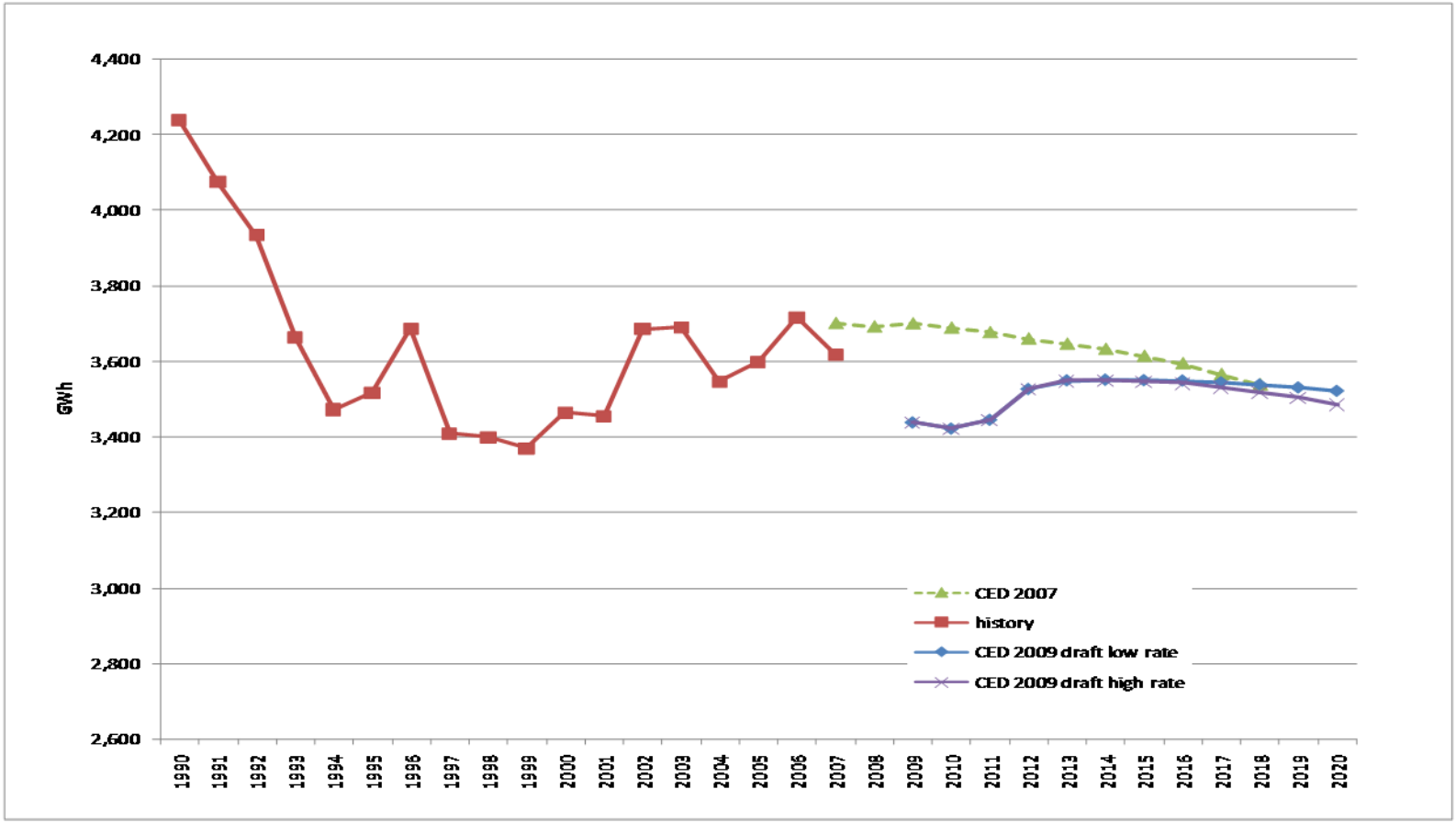
LADWP Commercial Peak per Square Foot



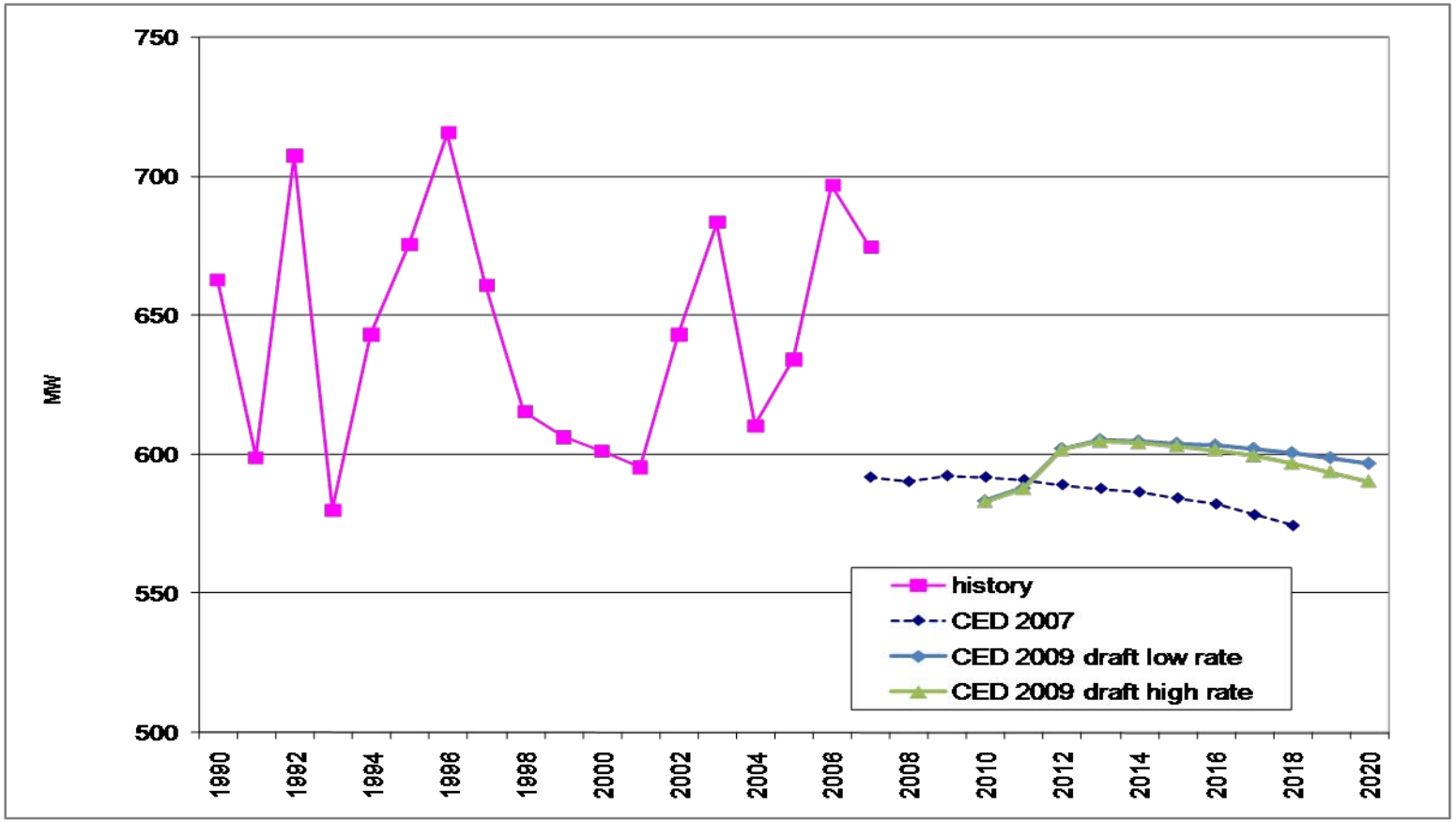
LADWP Other Sectors

- Remaining sectors comprise 22% of total consumption:
  - 6% Transportation, communications and utilities (lower starting point)
  - 13% Industrial (lower starting point and short term economic drivers)
  - 1% Agriculture and Water Pumping
  - 1% Mining, Oil Extraction and Construction
  - 1% Streetlighting
- Other sectors comprise only 8% of peak.

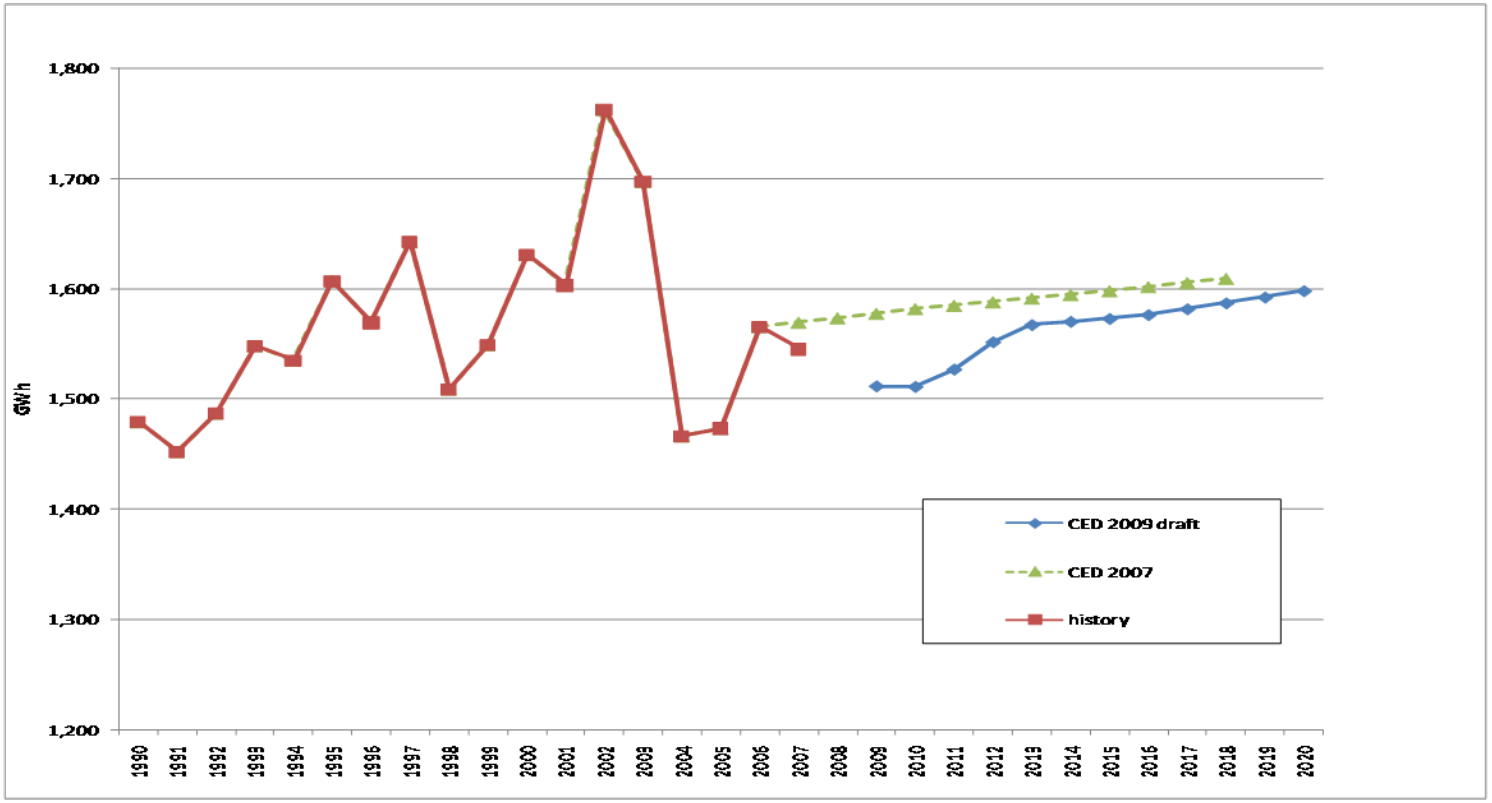
LADWP Industrial Sector Consumption



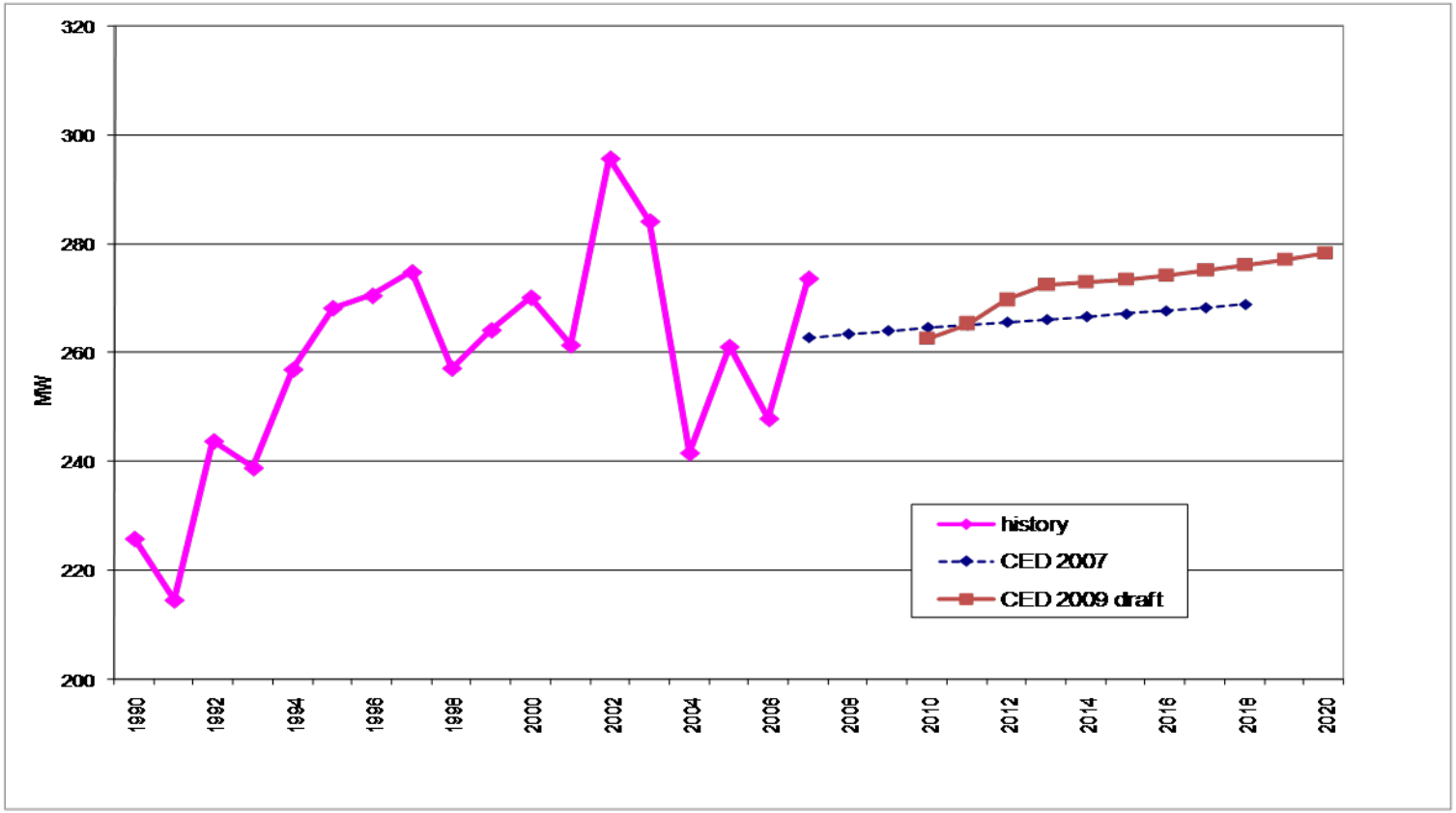
LADWP Industrial Sector Peak



LADWP Transportation, Communications and Utilities Sector Consumption



LADWP Other Sectors Peak



LADWP Savings Estimates by Program Category

	1990	1998	2003	2008	2011	2015	2020
Residential Energy Savings (GWH)							
Building Standards	257	269	287	282	303	329	363
Appliance Standards	209	559	842	1037	1120	1207	1286
Utility and Public Agency Programs	31	77	30	25	28	34	33
Naturally Occurring Savings	4	6	6	42	151	303	505
Total Residential Savings	500	911	1166	1386	1602	1873	2187
Commercial Energy Savings (GWH)							
Building Standards	134	253	372	484	555	693	864
Appliance Standards	91	174	239	302	334	393	465
Utility and Public Agency Programs*	36	14	2	0	0	0	0
Naturally Occurring Savings	888	1036	766	481	883	979	1199
Total Commercial Savings	1149	1477	1379	1267	1773	2066	2529
Total Energy Savings	1649	2387	2545	2653	3374	3938	4716

Source: California Energy Commission, 2009

*Commercial programs also include agricultural program savings.

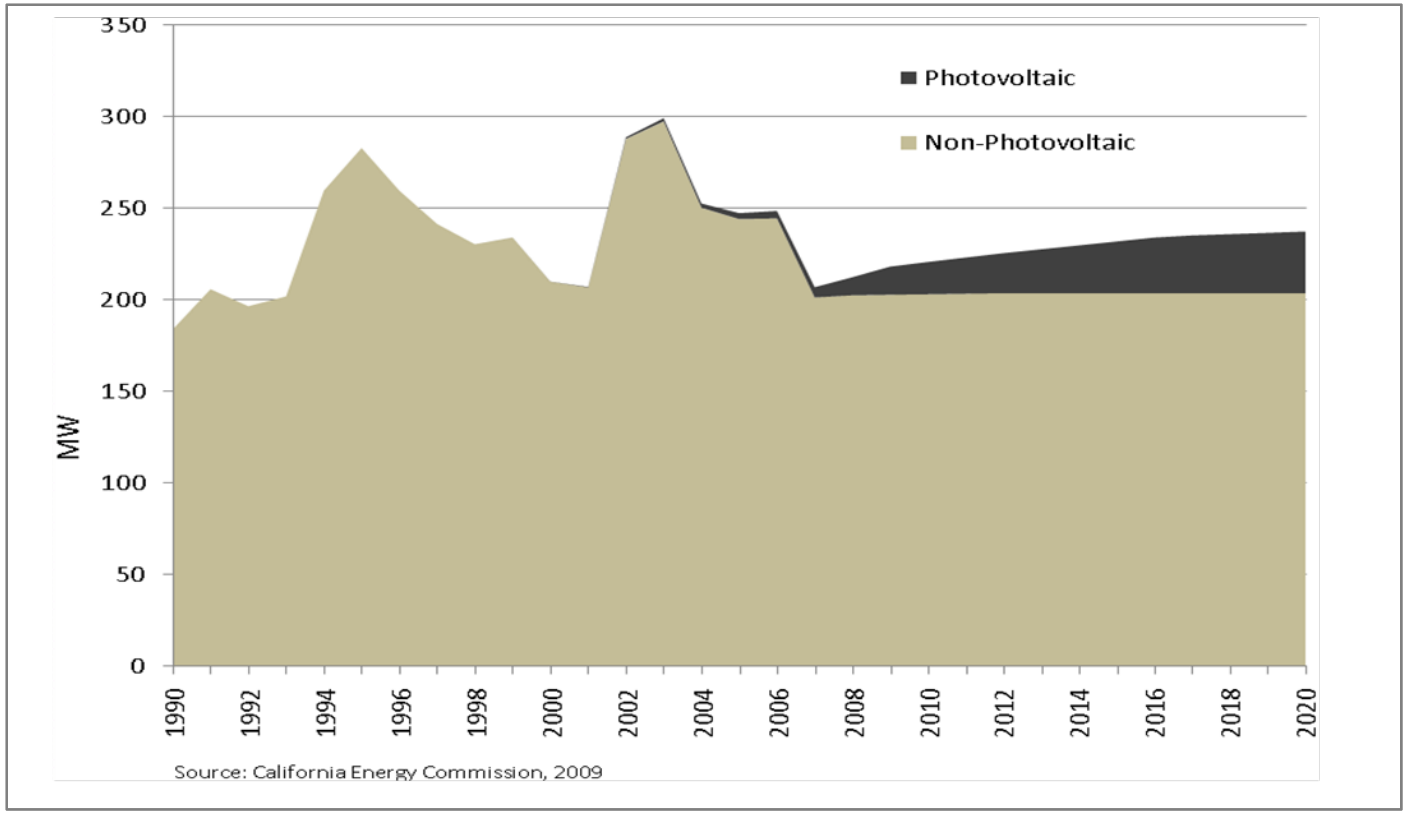
LADWP Peak Savings Estimates by Program Category

	1990	1998	2003	2008	2011	2015	2020
Residential Energy Savings (MW)							
Building Standards	60	70	65	69	70	76	84
Appliance Standards	49	146	191	253	258	279	296
Utility and Public Agency Programs	7	20	7	6	6	8	8
Naturally Occurring Savings	1	1	1	10	35	70	116
Total Residential Savings	116	237	264	338	369	433	504
Commercial Energy Savings (MW)							
Building Standards	33	65	85	125	134	167	207
Appliance Standards	22	44	55	78	81	95	112
Utility and Public Agency Programs*	9	4	0	0	0	0	0
Naturally Occurring Savings	220	264	176	124	213	236	288
Total Commercial Savings	285	376	316	327	428	497	606
Total Energy Savings	401	614	580	665	798	931	1110

Source: California Energy Commission, 2009

*Commercial programs also include agricultural program savings.

LADWP Self Generation Peak Estimates

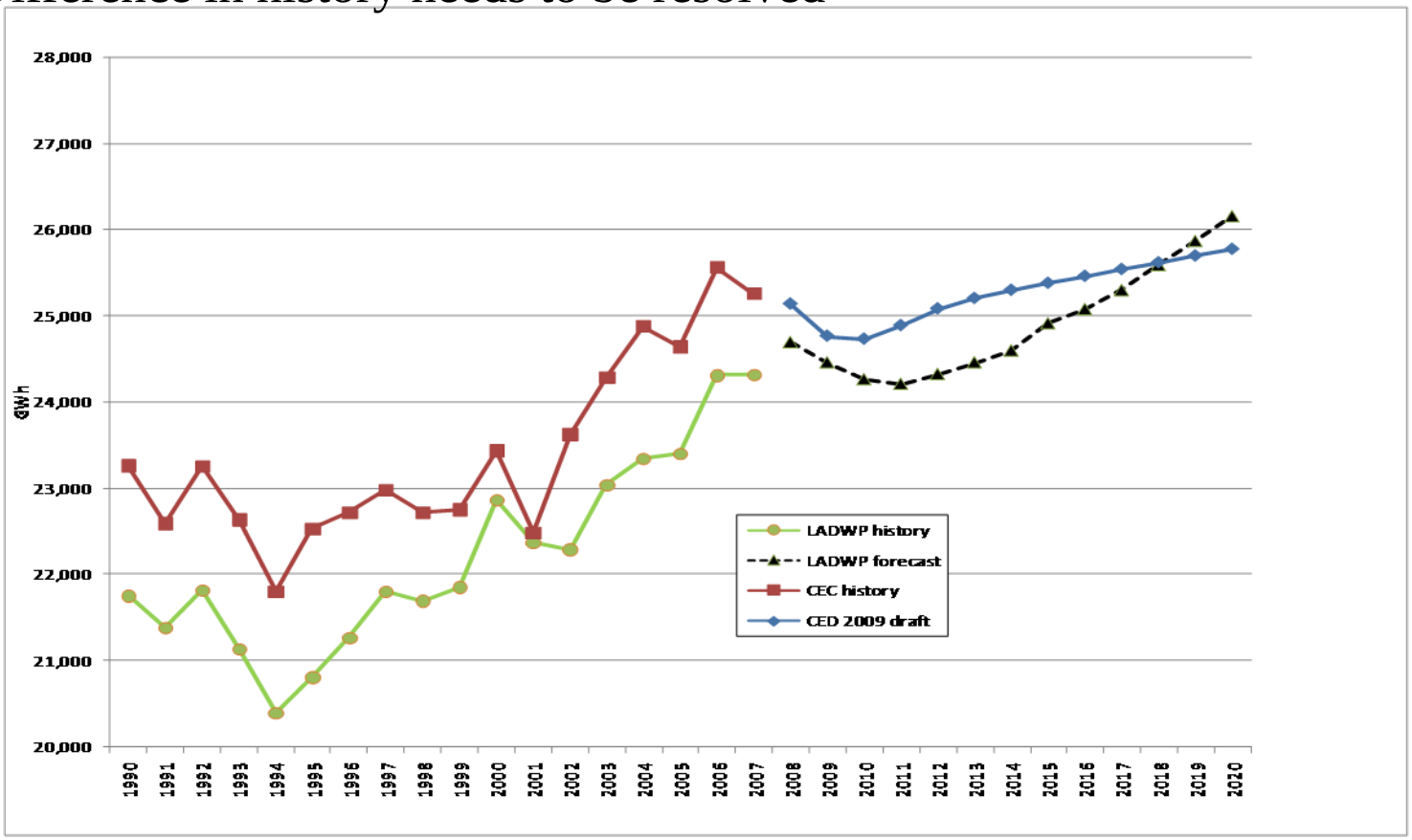


Comparison to LADWP Forecast

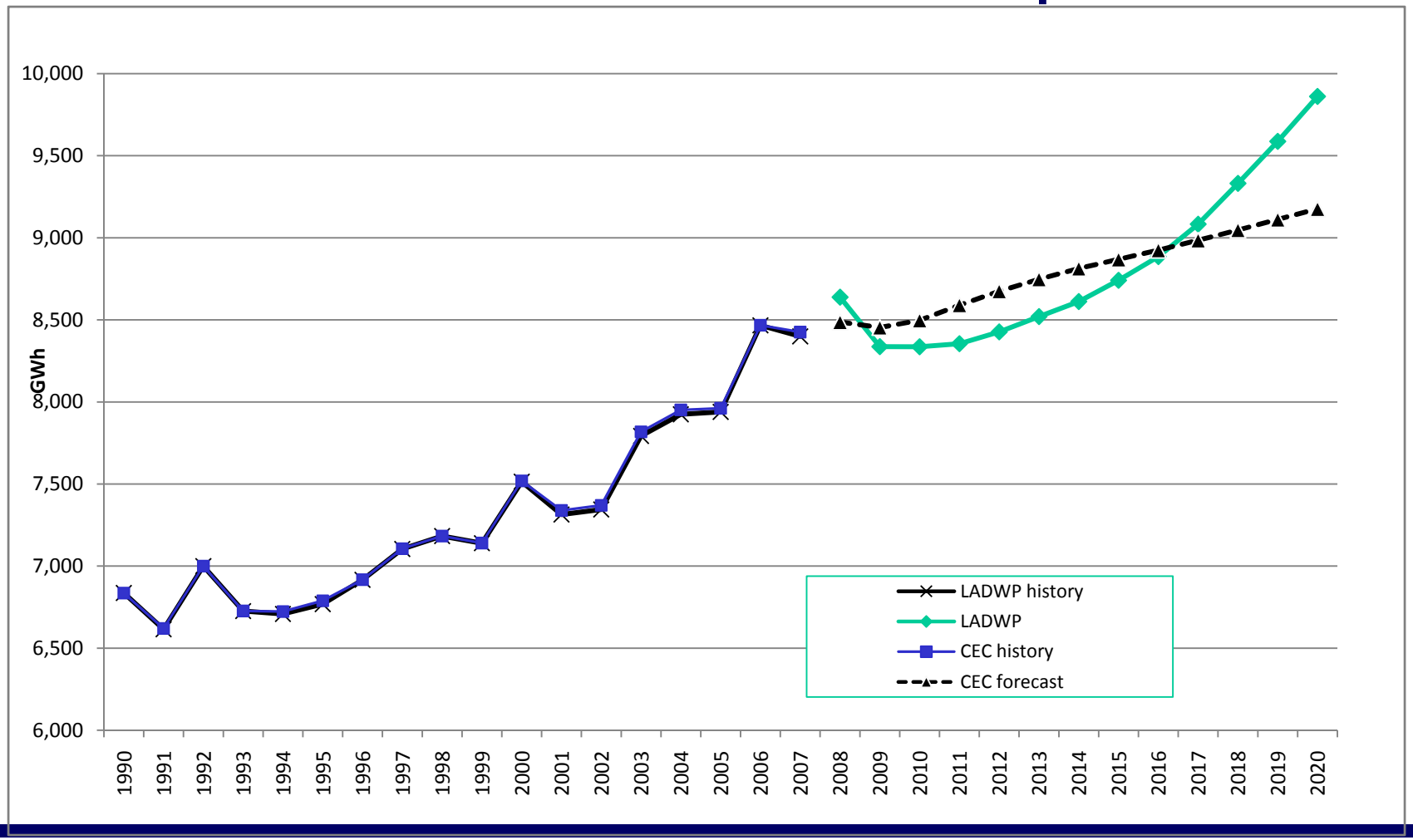
- LADWP sales are 2.8% higher in 2008 than CEC forecast. (2008 QFER sales are not included in Staff draft forecast)
- Difficulty in resolving historic sales
  - Particularly in non-residential sector (QFER and self generation)
- CEC forecast is higher through 2016.
- LADWP residential forecast higher after 2016
- Peak forecasts similar through 2017

LADWP Forecast Comparison

- Difference in history needs to be resolved

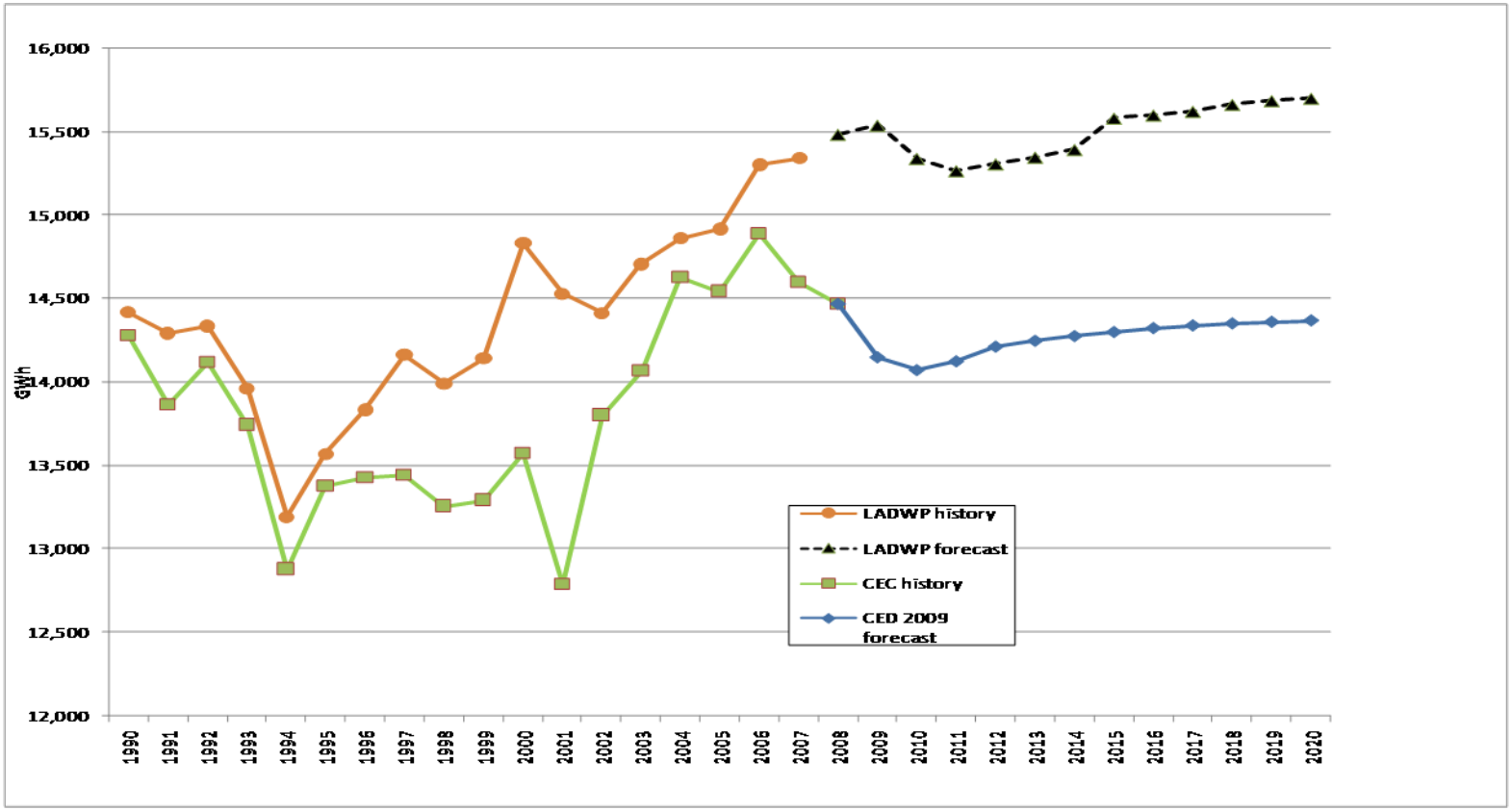
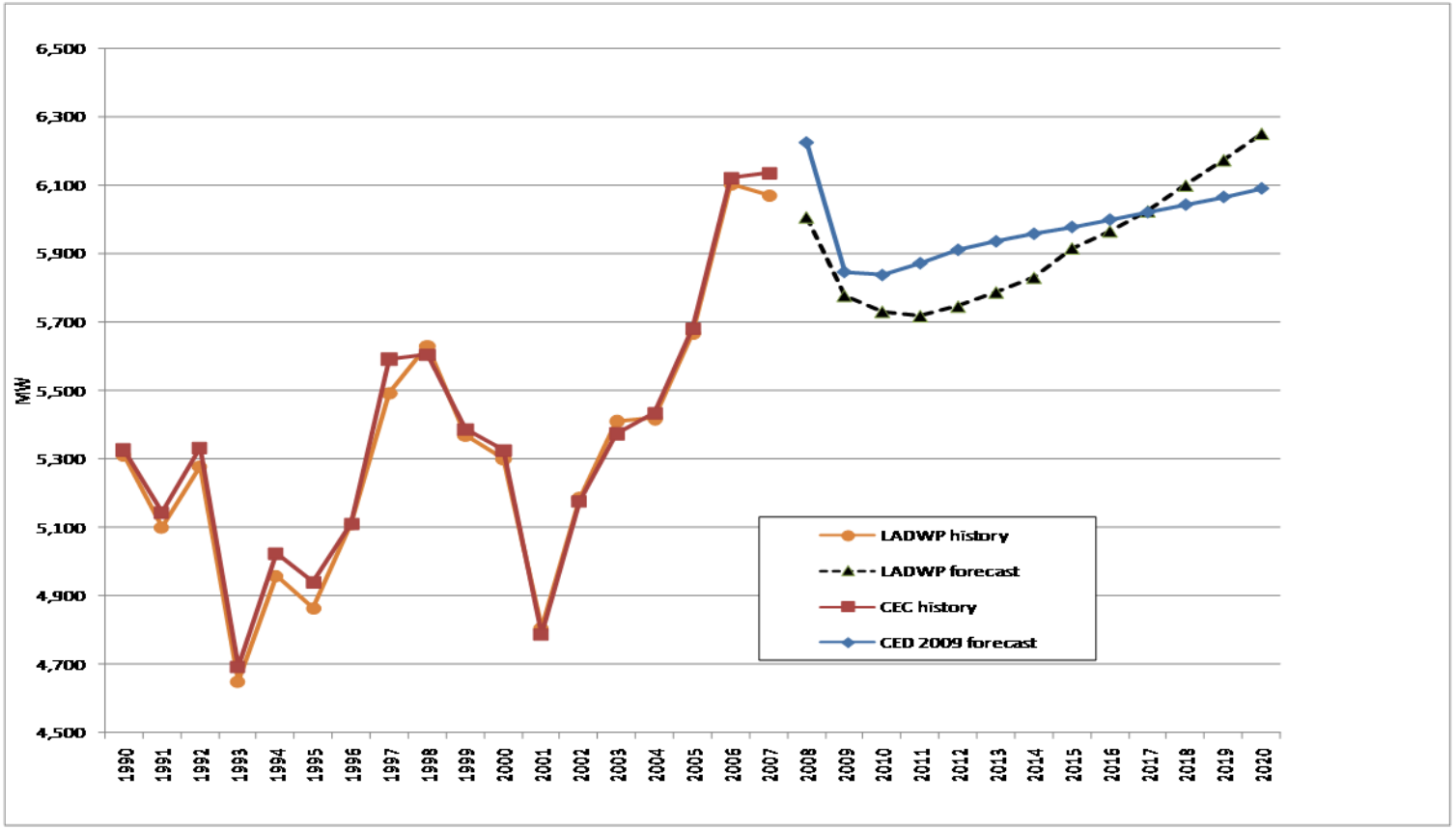


LADWP Residential Forecast Comparison



LADWP Commercial/Industrial Forecast Comparison

- Difference in history needs to be resolved



LADWP Peak Forecast Comparison