



Measurement of Energy Efficiency Program Impacts for the 2009 Preliminary Forecast

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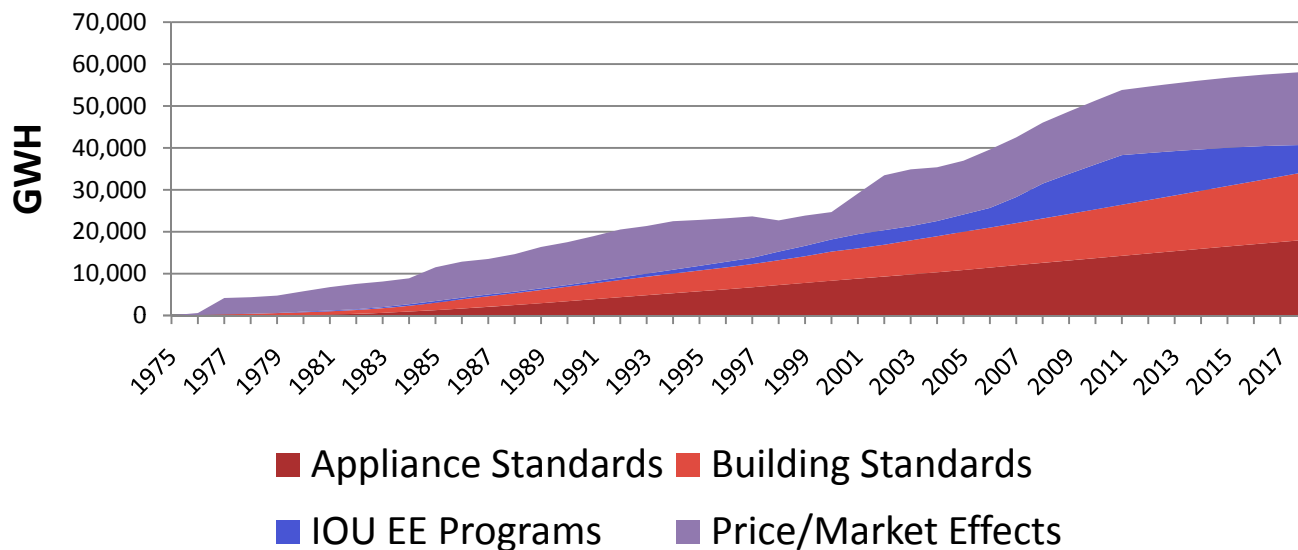
OVERVIEW

- Slides 3 and 4 show the results of the treatment of Energy Efficiency IOU Programs in terms of their impact on the 2009 IEPR Preliminary Demand forecast, on a Statewide (all IOU) basis.
- Slide 5 shows the results of the treatment of Energy Efficiency IOU Programs in terms of their impact on the 2009 IEPR Preliminary Demand forecast, for each of the three major IOUs.
- Slides 6-12 document the process by which CEC Staff developed the estimates for the reductions in demand forecast from IOU EE Programs.
- The final slide enumerates “Next Steps” for Final Forecast and Uncommitted Forecast attributable to the IOU EE Programs.



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IOU EE Program Impacts Relative to Other Effects

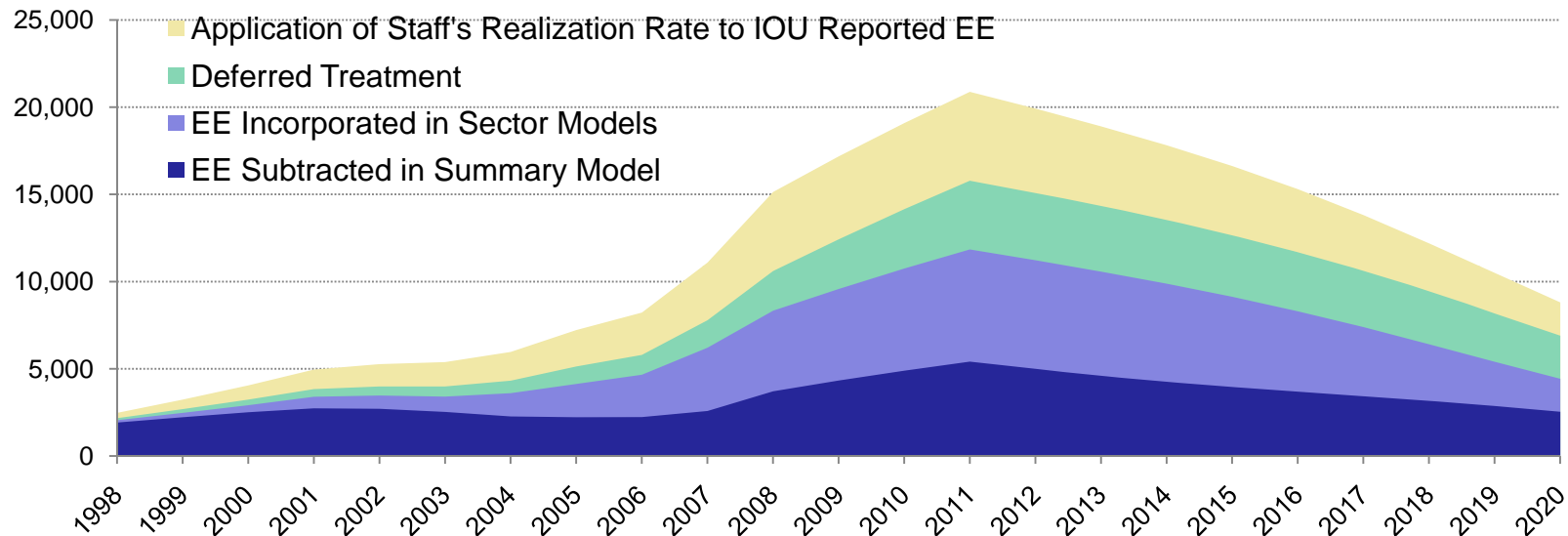


- Standards and Price/Market effect estimates are from 2007 IEPR (excluding impacts for POU planning areas);
- IOU EE Programs show estimates of demand reductions incorporated into 2009 IEPR Preliminary Forecast.



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Staff Treatment of IOU EE Program Impacts - Committed

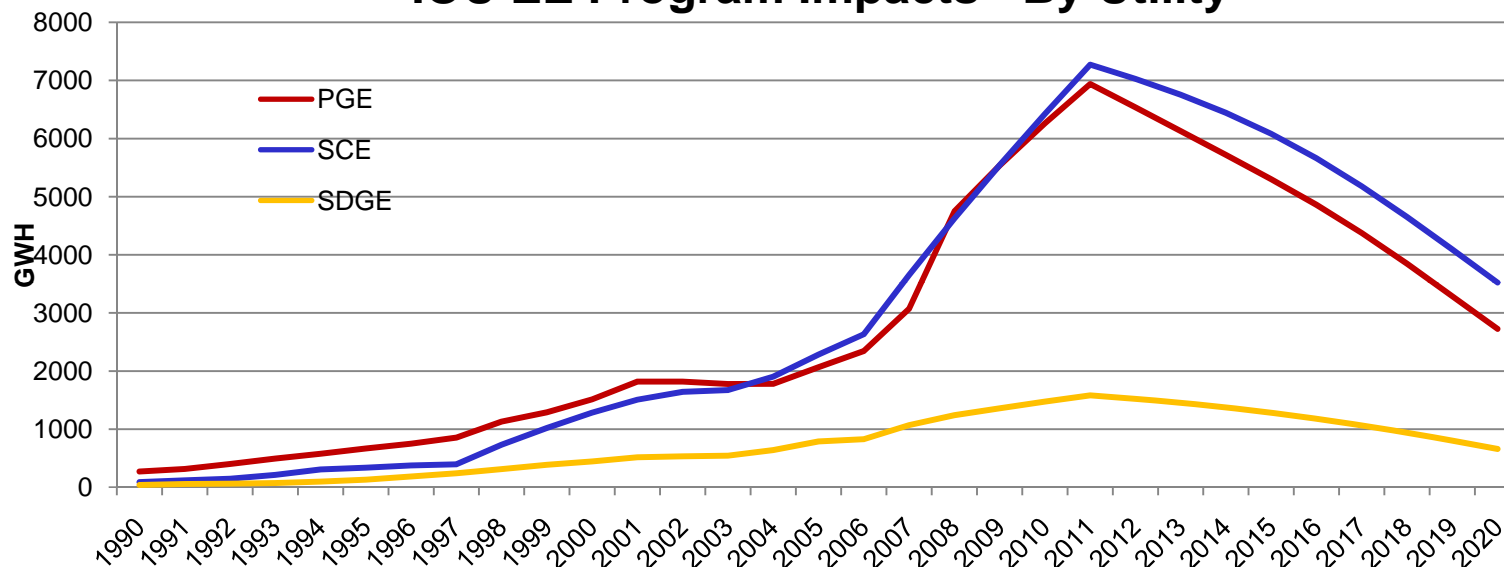


- The Sum of the two blue shaded areas is equal to the blue area in the previous chart.
- Subsequent slides describe the process by which all four elements of demand reduction in this chart were developed and used in Preliminary Demand Forecast.



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IOU EE Program Impacts - By Utility



Quantities shown are the sum of the “lower” types of treatment shown on statewide basis in previous chart (Deferred; Sector Models; Summary Model)



Explanatory Notes for Chart on Slides #4 and 5

IOU's typically report impacts (load reductions/energy savings) in terms of:

- Gross or net (gross minus “free riders”);
- First year (estimated load impacts for the first year following installation of EE measures for the reported Program Year);
- Lifecycle (estimated impacts over the useful life of the measures);
- “ex ante” or “ex post” (prior to or after verification of the impacts).



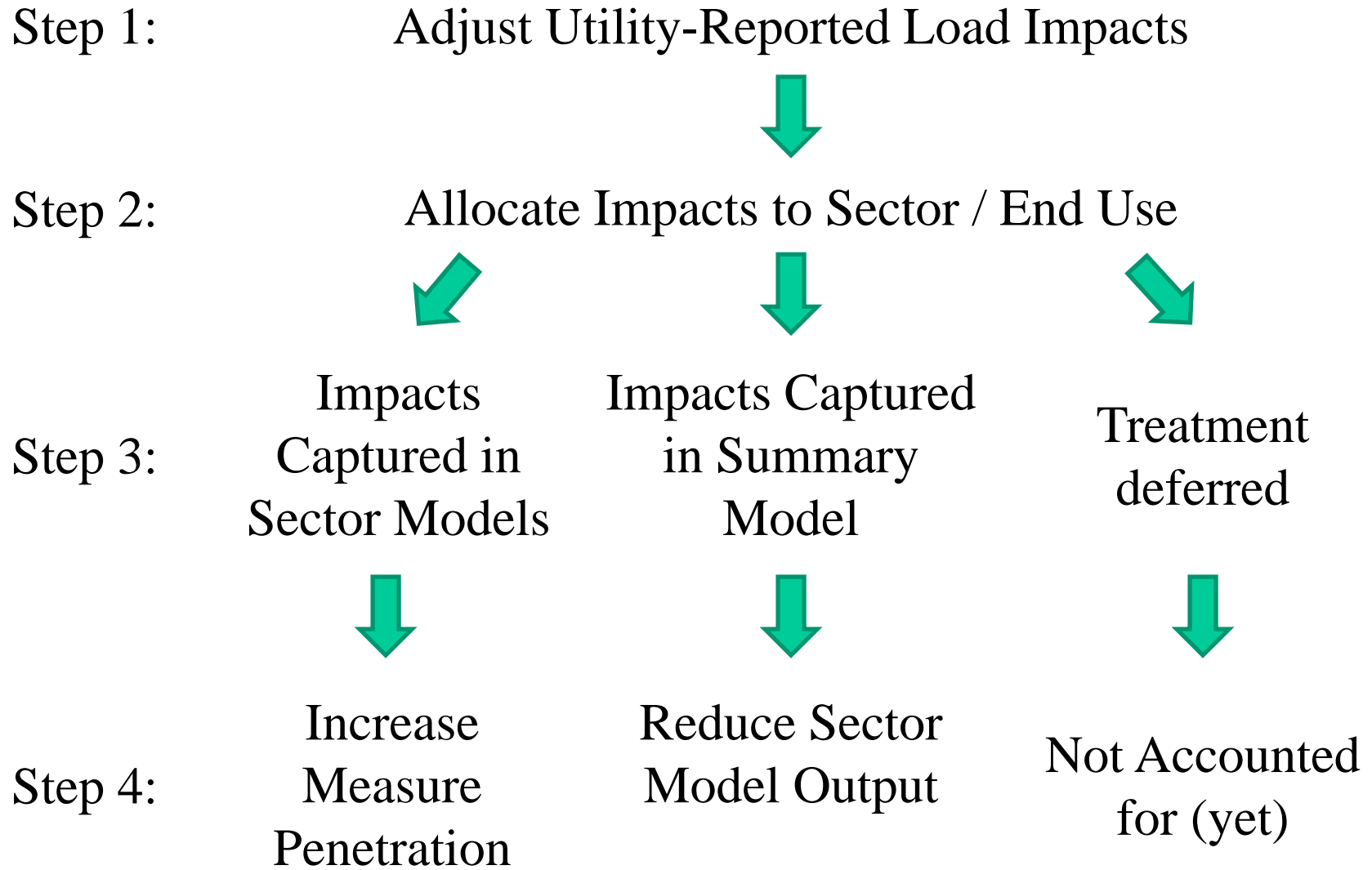
Explanatory Notes for Chart on Slides #4 and 5 (continued)

The basis for CEC staff adjustments to Utility-reported impacts lie in the assessment of how these reported impacts fit—or do not fit—into the staff demand forecasting models and methods:

- Example: “Treatment Deferred;”
 - Non-CFL Lighting in Commercial Buildings—reported impacts judged to be largely redundant with 2005 Lighting Standards;
 - Industrial Sector— reported impacts judged to be smaller than “naturally occurring” reductions computed in Industrial Sector models.



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Increase Measure Penetration



- Residential
 - CFL
 - Refrigeration
 - Pool Pumps

Reduce Sector Model Output



- Residential
 - Non-CFL Lighting*
 - HVAC
 - Water Heating
 - Other
- Commercial
 - CFL
 - All Other Non-Lighting Measures
- Agricultural*

Not Accounted for (yet)



- Commercial
 - Non-CFL Lighting
- Industrial

**Impacts for PY 2008-2011*



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Data Sources and Assumptions

Program Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Program Accomplishments	IOU Annual Reports					Quarterly / Monthly Reports - Processed by Itron					Quarterly Reports	March 09 Filings		
Level of Disaggregation	Sector					End Use/Measure					End Use/Measure	End Use		
End Use Attributions	Applied 2003 Ratios					Provided by Itron					Determined by Measure Description	IOU Projections		
NTG Ratios	Assumed 80%					Provided by Itron					From workbooks	Assumed 80%		
Realization Rates	Assumed 70%										Assumed 85%			
EULs	Average EULs determined for each end use category based on 2006 - 2008 program workbook data													
Decay Methods	Logistic decay of 'realized' savings - 100% first year, 50% at end of Expected Useful Life (EUL)													



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Type of Treatment, by Sector and End Use/Measure Category

Sector	Treatment	EndUse / Measure Category
Residential	Increase Measure Penetration	CFL Lighting (non-CFL) Pool Pump Refrigerator Recycling
	Directly Reduce Sector Model Output	Building Shell HVAC Misc New Construction Non Descriptive Refrigerator Water Heating
Non-Residential	Directly Reduce Sector Model Output	Building Shell CFL HVAC Misc New Construction Non Descriptive Refrigeration Water Heating Agricultural
	No Accounting	Industrial Lighting (non-CFL)



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Type of Treatment, by Sector and End Use/Measure Category: Data Used from Itron, all IOUs (Gwh, First Yr Impacts)

Sector	EndUse / Measure Category	2003	2004	2005	2006	2007
Residential	CFL	53	394	458	445	990
	Lighting (non-CFL)	10	43	80	57	158
	Pool Pump	8	6	6	3	5
	Refrigerator Recycling	43	34	31	49	85
	Building Shell	5	6	3	1	4
	HVAC	8	13	10	6	36
	Misc	0	1	0	0	0
	New Construction	8	2	3	0	1
	Non Descriptive	0	1	5	0	0
	Refrigerator	0	3	2	1	3
	Water Heating	3	3	3	3	12
Non-Residential	Building Shell	2	3	3	4	6
	CFL	116	59	93	187	302
	HVAC	13	27	77	28	78
	Misc	0	6	20	9	41
	New Construction	77	27	45	16	13
	Non Descriptive	33	11	22	28	41
	Refrigeration	11	25	67	41	61
	Water Heating	0	0	0	1	0
	Agricultural	0	1	4	2	46
	Industrial	0	12	65	9	166
Lighting (non-CFL)	68	117	227	129	287	



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- Additional considerations for the Final Demand Forecast:
 - End Use-specific adjustment factors
 - POU Programs
 - Low-Income Energy Efficiency (for IOU and POU)
 - California Solar Initiative (CSI) and Self-Generation Incentive Program (SGIP)
- Improvements to the committed portion of the Demand Forecast (August, 2009) will produce a better Incremental Forecast (September, 2009)