

Energy Benchmarking of Commercial Buildings

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CEPL Team Meeting at ORNL
June 21, 2013

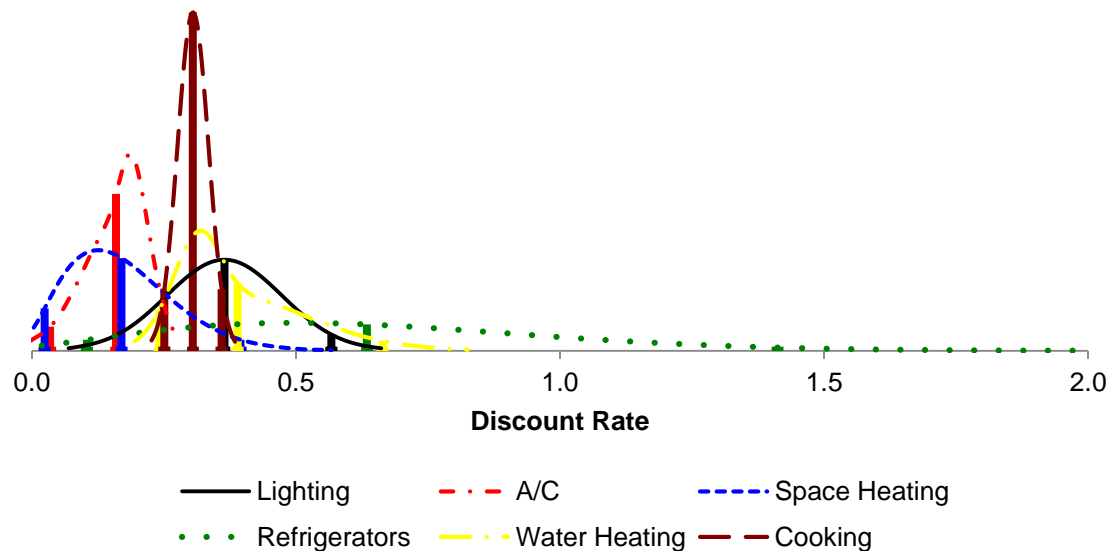


Four Main Steps for Implementation

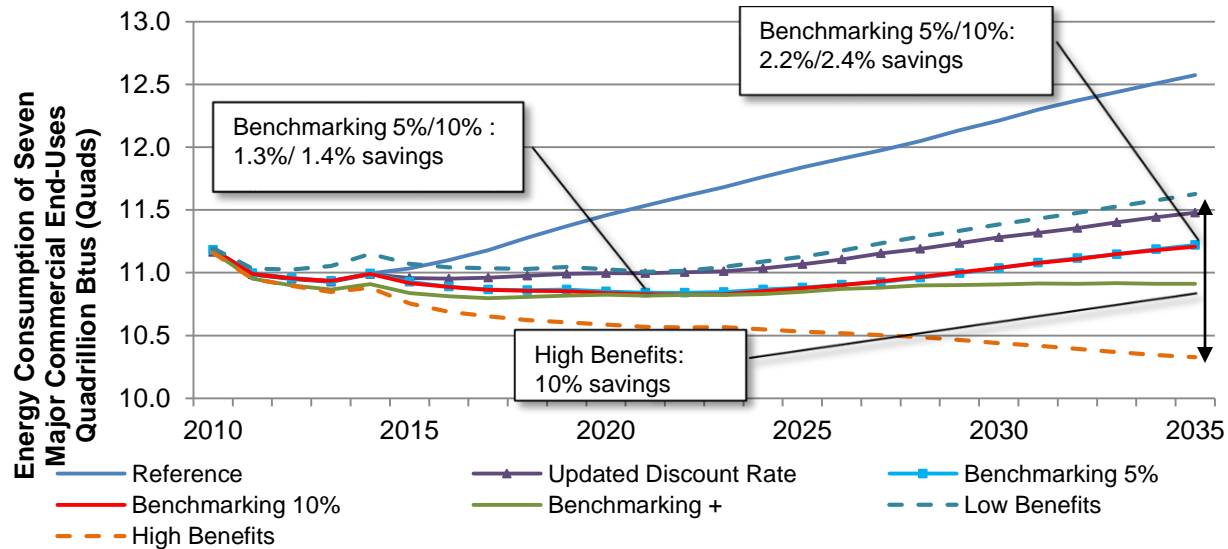
- Require utilities to submit energy data into Portfolio Manager
- Finance data collection through US government
- Allow building owners access to the data
- Develop national registry of buildings

How We Analyze Benchmarking

- Model in NEMS through discount rate modifications
- Review literature on implicit discount rates
- Interview program managers of city initiatives to make better programmatic recommendations



Energy Savings and Fuel Switching Projected



Benchmarking Delivers

Benefit-Cost Analysis of Commercial-Sector Benchmarking* (Billion 2009-\$)

Year	Cumulative Social Benefits					Cumulative Social Costs		Benefit/Cost Analysis
	Energy Expenditure Savings	Value of Avoided CO ₂	Value of Avoided Criteria Pollutants	Lower Equipment Outlays	Total Benefits	Compliance Costs	Total Costs	Net Social Benefits
2020	6.3–2.8	-0.4–0.1	1.4–3.4	6.4–5.4	13.7–11.7	0.1	0.1	
2035	28.3–22.0	0.6–1.6	3.1–7.3	18.0–21.7	50.0–52.6	0.1	0.1	
Total Impact**	39.7–31.7	0.9–2.3	3.0–8.2	18.0–21.7	61.5–63.8	0.1	0.1	61.4–63.7

*See section 4.7 and Appendix A for more details:

<http://www.spp.gatech.edu/faculty/workingpapers/wp69.pdf>

Conclusions

- EIA should update its input files to reflect these findings
- Smart combinations of benchmarking with other policies could yield positive synergistic effects
- Benchmarking could produce significant energy and emissions benefits to the nation, the vast majority of which would occur in urban areas.
- Spillovers could also be large, as the policy would enable other actions