Measure Cost Data Sources – Primary

**Add comments here (specific examples, experience, limitations, etc.)**

**Add/remove applicable measure types**

**Add other data source types**

**Add other Pros/Cons.**

| Data Source | Pros/Cons | Applicable End Uses /  Measure Groups | Comments |
| --- | --- | --- | --- |
| Retailer – Point of sale (POS) data | 🖒 Includes product features  🖒 Large samples  🖒 Includes sales volumes  🖒 Actual prices paid  🖓 Data purchase/collection costs  🖓 No installation costs  🖓 Data requirements and data processing | Appliances  Electronics  Room AC |  |
| Retailer – Online/prices lists | 🖒 Can include product features  🖒 Cost efficient  🖓 No installation costs  🖓 List prices do not reflect actual prices paid  🖓 No sales volume | Appliances  Electronics  Room AC  Lighting, Res |  |
| Retailer – Shelf surveys | 🖒 Includes product features  🖓 Data collection requires time and field teams  🖓 No sales volume | Appliances  Electronics  Room AC  Lighting, Res | Need to sample stores across retailer types and geographic locations |
| Distributor price lists | 🖒 Can include product features  🖓 Barriers to obtaining data w/out existing relationships w/ equipment distributors  🖓 No installation costs  🖓 List prices do not reflect actual prices paid  🖓 No sales volume | HVAC, Res  HVAC, Nonres  Water Heating, Res  Water Heating, Nonres  Lighting, Nonres  Food service |  |
| Mfr cut sheets | 🖒 Can include product features  🖓 No installation costs  🖓 List prices do not reflect actual prices paid  🖓 No sales volume | HVAC, Res  HVAC, Nonres  Water Heating, Res  Water Heating, Nonres  Lighting, Nonres |  |
| Contractors | 🖒 Can include installation costs  🖒 Can provide estimates of mark-ups/discounts  🖓 Small sample sizes, not random sample | HVAC Maintenance  HVAC, Res |  |
| DI Program Contractors | 🖓 Small sample sizes, not random sample | Water Heating Distribution (showerheads, flow restrictors) |  |
| Custom/Built-up Cost | 🖓 🖒 Requires industry expertise  🖓 No sales volume | Commercial Refrigeration  Motors |  |
| Market actor interviews | 🖓 Self-report bias | Various | Resource for current market conditions and emergent market trends  Resource to validate estimates, benchmarking |
| Add primary data source |  |  |  |
| Add primary data source |  |  |  |
| Add primary data source |  |  |  |
| Add primary data source |  |  |  |

Measure Cost Data Sources - Secondary

**Add comments here (specific examples, experience, limitations, etc.)**

**Add/remove applicable measure types**

**Add other Pros/Cons.**

**Add other data source types**

| Data Source | Pros/Cons | Applicable End Uses /  Measure Groups | Comments |
| --- | --- | --- | --- |
| AHRI Directory | 🖒 Can include product features  🖓 No installation costs  🖓 No equipment prices  🖓 No sales volume | HVAC, Res  HVAC, Nonres  Water Heating, Res  Water Heating, Nonres  Heat Pump Pool Heaters  Variable Frequency Drives  Ice Makers and Ice Storage, Nonres |  |
| AutoQuotes | 🖒 Can include product features  🖒 Cost efficient  🖓 List prices do not reflect actual prices paid  🖓 No sales volume | Food Service |  |
| CEC MAEDbS | 🖒 Can include product features  🖓 No installation costs  🖓 No equipment prices  🖓 No sales volume | HVAC, Res  HVAC, Nonres  Water Heating, Res  Water Heating, Nonres |  |
| EIA Buildings Sector Appliance & Equipment Costs and Efficiency | 🖒 Includes equipment cost, installed cost, ongoing O&M  🖓 Not CA specific  🖓 Lag between analysis and report so reported costs and reporting of market trends not current  🖓 Not transparent | Appliances  Cooking  HVAC, Res  HVAC, Nonres  Water Heating, Res  Water Heating, Nonres | Could serve as source to validate estimated costs |
| RSMeans | 🖒 Updated annually  🖒 Geographic region indexes  🖓 Must purchase or have subscription | Multiple | Resource to estimate installation labor costs, infrastructure costs for fuel substitution measures |
| U.S. DOE TSD | 🖓 Not updated unless federal standard updated | Select end uses covered by federal standard rulemaking |  |
| Add secondary source |  |  |  |
| Add secondary source |  |  |  |
| Add secondary source |  |  |  |

References

Ting, M., M. Rufo, and J. Loper. 2013. “Measure costs – the forgotten child of energy efficiency analysis.” ECEEE Summer Study Proceedings. Pp. 2081 – 2091.

Ting, M. (Itron, Inc.) 2014. “Energy Efficiency Measure Cost Studies.” SEE Action Webinar – EM&V Working Group. September 24.

Itron, Inc. 2014. 2010-2012 WO017 Ex Ante Measure Cost Study Final Report. Prepared for the California Public Utilities Commission.

Cal TF Staff analysis of approved statewide measures.

Regional Technical Forum (RTF). 2015. Roadmap for the Assessment of Energy Efficiency Measures. December 8.