

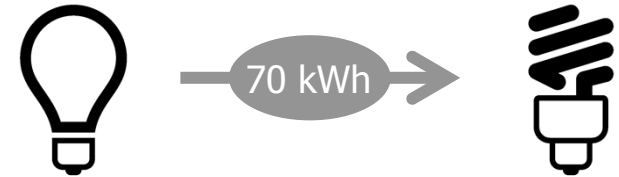
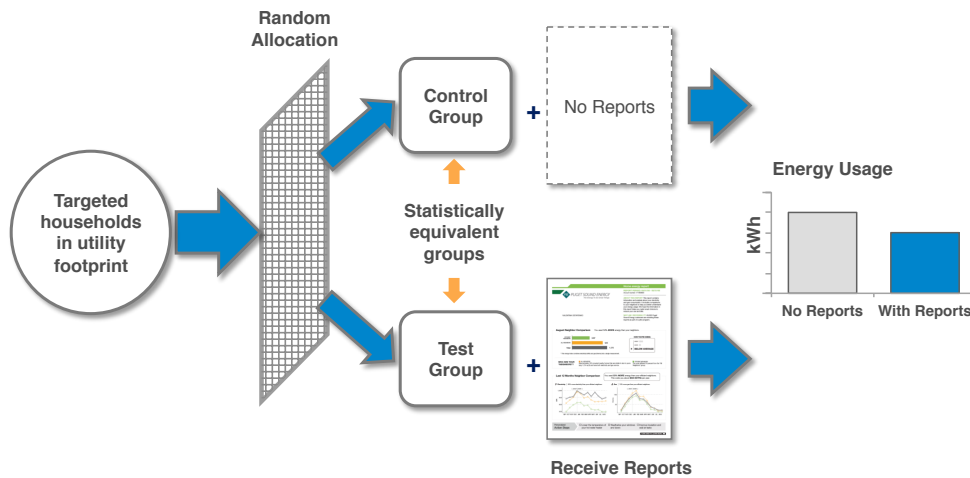
How to Count Behavioral Savings in Michigan



Behavior and hardware have different approaches to measuring savings

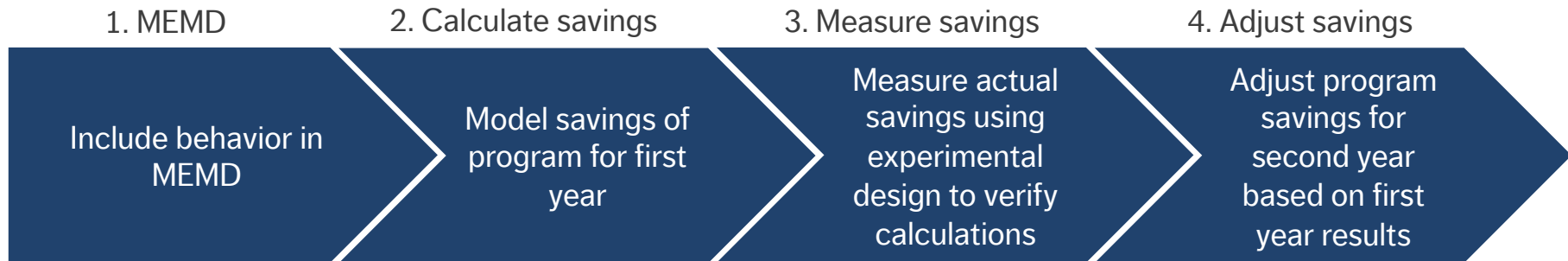
Behavior savings are measured *ex post* using experimental design

Hardware savings are deemed *ex ante* using a database of approved values



Deem and verify, a hybrid approach

Process



Example calculations



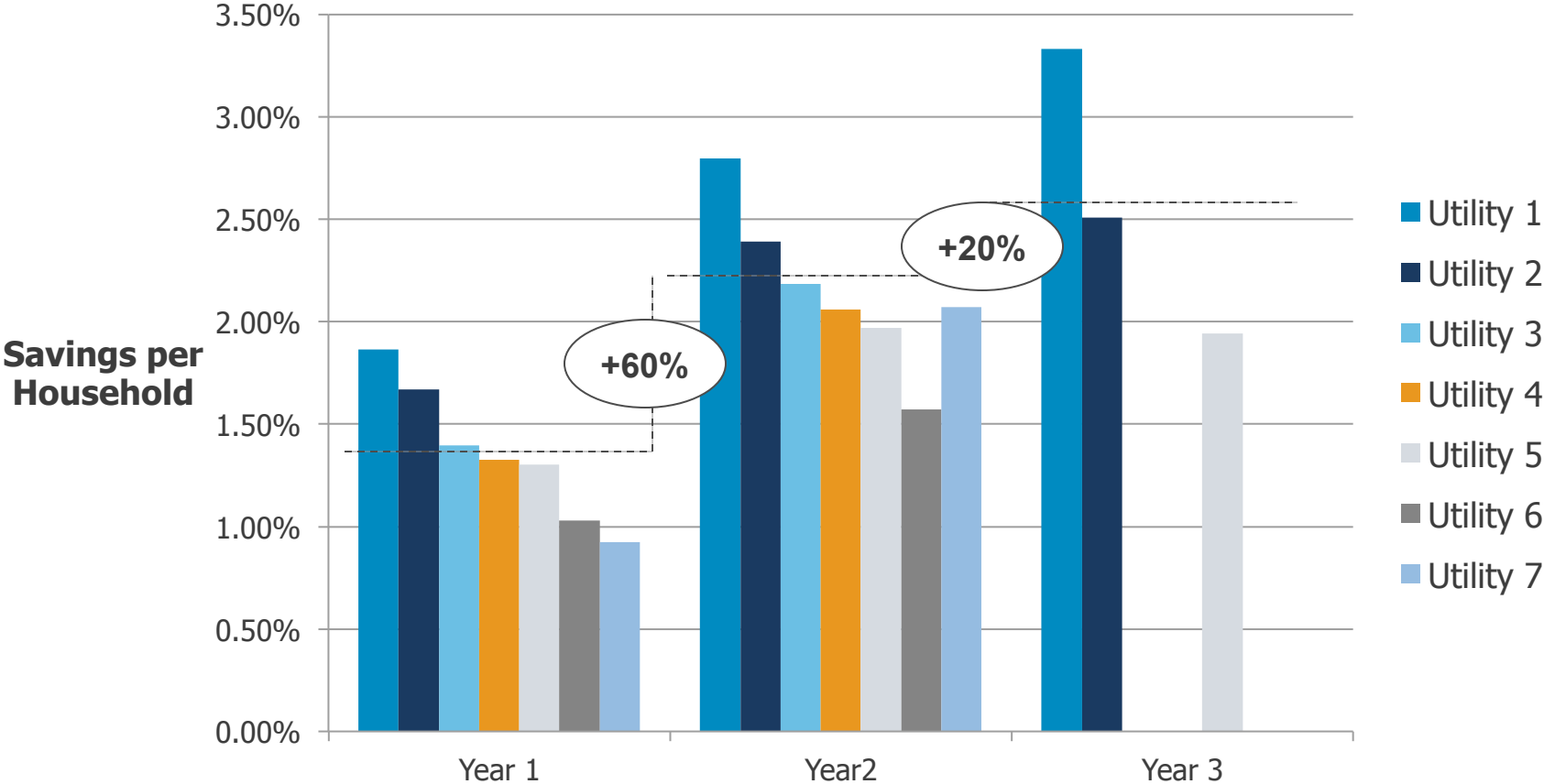
Notes:

** All savings figures and calculations are demonstrative abstractions, rather than real numbers

Results Improve Over Time

Results from 7 Midwest deployments show consistent improvement from Year 1 to Year 2, and continued improvement in Year 3

Savings Rates Over Time, Midwest Deployments



Proposal: Electric High Usage Band

DTE and Consumers Y1 program results (electric)

	Consumers	DTE	Michigan
Savings Rate	1.1%	1.3%*	1.2%**
Average Usage	10,555 kWh	9,190 kWh	9k – 11k kWh (Usage Band)
MEMD Savings (% or kWh)	127 kWh	110 kWh	1.2% x Usage (w/in band)

Notes:

* DTE annual results are extrapolated from 10-months of data; savings rate for 10-months is 1.2%

** Michigan-wide savings figure based on average of results from Consumers and DTE results

Proposal: Electric Average Usage Band

DTE and Consumers Y1 program results adjusted for average usage in territory (electric)

	Consumers	DTE	Michigan
Savings Rate	0.95%	1.15%*	1.05%**
Average Usage	8,264 kWh	8,179 kWh	7k – 9k kWh (Usage Band)
MEMD Savings (% or kWh)	87 kWh	86 kWh	1.05% x Average Usage

Notes:

* DTE annual results are extrapolated from 10-months of data; savings rate for 10-months is 1.2%

** Michigan-wide savings figure based on average of results from Consumers and DTE results

Proposal: Gas Usage Band

DTE and Consumers Y1 program results (gas)

	Consumers	DTE	Michigan
Savings Rate	0.72%	0.55%*	0.64%**
Average Usage	933 therm	1,096 therm	900 – 1,100 therm (Usage Band)
MEMD Savings (% or therm)	5.9 therm	7.1 therm	0.64% x Usage (w/in band)

Notes:

* DTE annual results are extrapolated from 10-months of data; savings rate for 10-months is 1.2%

** Michigan-wide savings figure based on average of results from Consumers and DTE results

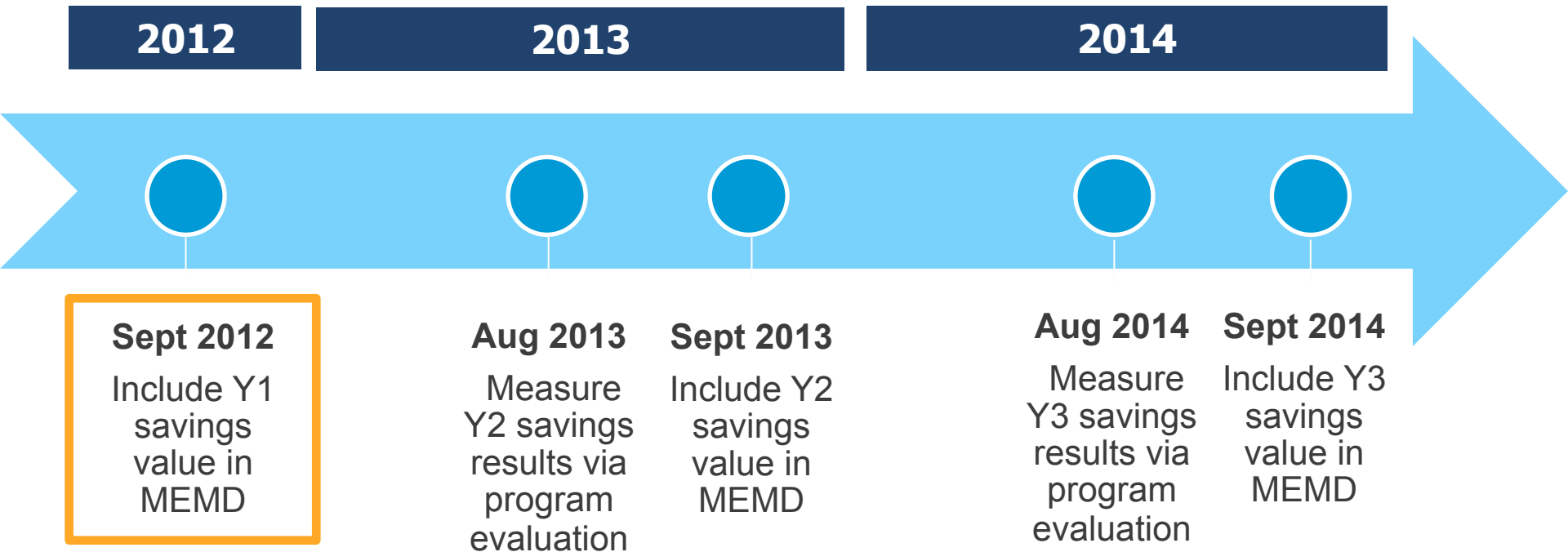
MEMD Roadmap

Required Values for MEMD

	Y1	Y2	Y3
Opower Electric (9k – 11k kWh Usage)	1.2%	TBD	TBD
Opower Electric (7k – 9k kWh Usage)	1.05%	TBD	TBD
Opower Gas (900 – 1,100 therm Usage)	0.64%	TBD	TBD

» In the event values have not yet been established and entered into the MEMD, utilities to use modeled savings in their regulatory filings until true-up occurs.

MEMD Update Process



Benefits of Deem and Verify Approach

Summary

The deem and verify hybrid approach:

- » Provides **consistency** with both the existing approach in Michigan and the accepted best practice for behavioral programs
- » Creates **certainty** for regulatory treatment of behavioral programs similar to the certainty that applies to hardware
- » Uses experimental design to **verify** savings values on an ongoing basis
- » Provides a mechanism for **adjusting** savings as needed going forward