

## ENERGY STAR® Smart Home Energy Managements Systems (SHEMS) Data Reporting Template - Instructions

This Data Reporting Template is to be used for recording data/measurements in accordance with the ENERGY STAR® SHEMS Method to Determine Field Performance. Please contact [smarthomesystems@energystar.gov](mailto:smarthomesystems@energystar.gov) with any questions regarding completing and submitting the Data Reporting Template. This template includes one tab:

**Data Reporting Template:** To be completed for all ENERGY STAR® SHEMS packages. For the population for analysis, except where specified otherwise in the Method to Demonstrate Field Performance, calculate all statistics for the period of analysis and enter them into the required Program Performance section. The data elements in the Savings Metric Development section, while optional, are expected to be critical for developing a credible metric for SHEMS savings. The data elements in the SHEMS Market Evolution section are also optional, and are of keen interest to stakeholders eager to see progress towards the vision of SHEMS systems that provide comprehensive, integrated energy management. EPA encourages partners to submit data in these sections.

## ENERGY STAR® SHEMS Data Reporting Template

All data shared via this template is understood to be proprietary and will not be shared publicly except as part of aggregated statistics for the entire ENERGY STAR SHEMS program. Any data made available to the EPA will be anonymized.

Data Submission Information			
Service Provider	Samsung		
Relevant consumer-facing service brands	SmartThings	List	
ENERGY STAR Package ID Numbers		List	
Start date of Analyzed Period	Period 1:2020-10-19, Period 2: 2022-10-01	MM/DD/YYYY	
End Date of Analyzed Period	Period 1:2021-02-28, Period 2: 2022-12-07	MM/DD/YYYY	

	Q1	Q2 (Median)	Q3	Mean	Standard Error	Units	Precision	Data type
<b>Program Performance (Required)</b>								
Total installations served by the platform	30 examined for this analysis					Installations	1	Whole number
Total Installations in the Population	600					Installations	1	Whole number
Installations with insufficient data	555					Installations	1	Whole number
New installations registered during the reporting period	Period collected as 600 solutions deployed (0% new installations in analysis)					%	0.1%	Percent of total installations
Number of ENERGY STAR Certified thermostats per installation	1.0	1.0	1.0	1.0	1.0	Integer	0.1	Quartiles, Mean, Standard Error
Number of controllable lighting devices per installation	2.0	2.0	2.0	2.0	2.0	Integer	0.1	Quartiles, Mean, Standard Error
Number of controllable lighting devices that are ENERGY STAR Certified per installation	2.0	2.0	2.0	2.0	2.0	Integer	0.1	Quartiles, Mean, Standard Error
Number of smart outlets per installation	2.0	2.0	2.0	2.0	2.0	Integer	0.1	Quartiles, Mean, Standard Error
Number of smart power strips per installation	N/A	N/A	N/A	N/A	N/A	Integer	0.1	Quartiles, Mean, Standard Error
Average scheduled away time per week per installation	21.8	45.1	64.2	43.4	10.2	Hours per week	0.1	Quartiles, Mean, Standard Error
Average non-scheduled explicitly generated away time per week per installation	23.3	32.9	81.9	42.7	13.3	Hours per week	0.1	Quartiles, Mean, Standard Error
Average implicitly generated away time per week per installation	3.4	4.9	6.1	4.8	0.8	Hours per week	0.1	Quartiles, Mean, Standard Error
Average suggested away time per week per installation	0.0	0.0	0.0	0.0	0.0	Hours per week	0.1	Quartiles, Mean, Standard Error
Average on time per light fixture	195	253	339	267	57	Minutes	1	Quartiles, Mean, Standard Error
Average lighting load in vacation or night time safety mode per installation	0	0	0	0	0	kWh/day	0.1	Quartiles, Mean, Standard Error
Installations in each of 5 climate zones								
Cold and Very Cold Climate Zone installations	0.0	0.0	0.0	0.0	0.0	%	0.1%	Percent of total installations
Hot Dry and Mixed Dry Climate Zone installations	45.0	45.0	45.0	45.0	45.0	%	0.1%	Percent of total installations
Hot Humid Climate Zone installations	0.0	0.0	0.0	0.0	0.0	%	0.1%	Percent of total installations
Mixed Humid Climate Zone installations	45.0	45.0	45.0	45.0	45.0	%	0.1%	Percent of total installations
Marine Climate Zone installations	0.0	0.0	0.0	0.0	0.0	%	0.1%	Percent of total installations
Average weekly away hours per installation for each month in the reporting period								
Month 1 of Period of Analysis	151	173	194	178	8.8	Hours	0.1	Quartiles, Mean, Standard Error

Month 2 of Period of Analysis	160	180	201	180	8.4	Hours	0.1	Quartiles, Mean, Standard Error
Month 3 of Period of Analysis	142	154	183	157	8.6	Hours	0.1	Quartiles, Mean, Standard Error
Month 4 of Period of Analysis	171	175	213	193	9.2	Hours	0.1	Quartiles, Mean, Standard Error
Month 5 of Period of Analysis	170	173	212	191	9.6	Hours	0.1	Quartiles, Mean, Standard Error
Month 6 of Period of Analysis	168	171	200	182	7.2	Hours	0.1	Quartiles, Mean, Standard Error

	Q1	Q2 (Median)	Q3	Mean	Standard Error	Units	Precision	Data type
<b>Savings Metric Development (Optional)</b>								
Length of time subscribed						Days	1	Quartiles, Mean, Standard Error
Change in number of devices connected to the system in the past 6 months						Real	0.1	Quartiles, Mean, Standard Error
Percent of controllable lighting devices which are scheduled or automated per installation						%	0.1%	Quartiles, Mean, Standard Error
Installations with insight into whole home energy use						%	0.1%	Percent of total installations
Average power during non-away time						W	0.1	Quartiles, Mean, Standard Error
Average relative reduction in power during away time						%	0.1%	Quartiles, Mean, Standard Error
Number of thermostats per installation						Integer	0.1	Quartiles, Mean, Standard Error
Whole installation standby power						W	0.1	Quartiles, Mean, Standard Error

	Q1	Q2 (Median)	Q3	Mean	Standard Error	Units	Precision	Data type
<b>SHEMS Market Evolution (Optional)</b>								
Percent of controllable lighting devices reporting energy or power per installation						%	0.1%	Quartiles, Mean, Standard Error
Percent of smart outlets or power strips reporting energy or power per installation						% of total outlets	0.1%	Quartiles, Mean, Standard Error
Percent of installations enrolled in DR programs using SHEMS service						%	0.1%	Percent of total installations
Installations leveraging time of use pricing						%	0.1%	Percent of total installations
Percent of DR events opted-out or overridden per installation						%	0.1%	Quartiles, Mean, Standard Error
Installations including a connected water heater or water heater controller						%	0.1%	Percent of total installations
Installations including connected PV						%	0.1%	Percent of total installations
Installations including connected battery storage						%	0.1%	Percent of total installations
Installations including a connected EV charger						%	0.1%	Percent of total installations
Installations including at least one connected Room Air Conditioner						%	0.1%	Percent of total installations
Installations with leak detection for water heater						%	0.1%	Percent of total installations
<b>Number of installations in each of 50 States</b>								
Alabama						Installations	1	Whole Number
Alaska						Installations	1	Whole Number
Arizona						Installations	1	Whole Number
Arkansas						Installations	1	Whole Number
California						Installations	1	Whole Number
Colorado						Installations	1	Whole Number
Connecticut						Installations	1	Whole Number
Delaware						Installations	1	Whole Number

Florida		Installations	1	Whole Number
Georgia		Installations	1	Whole Number
Hawaii		Installations	1	Whole Number
Idaho		Installations	1	Whole Number
Illinois		Installations	1	Whole Number
Indiana		Installations	1	Whole Number
Iowa		Installations	1	Whole Number
Kansas		Installations	1	Whole Number
Kentucky		Installations	1	Whole Number
Louisiana		Installations	1	Whole Number
Maine		Installations	1	Whole Number
Maryland	15	Installations	1	Whole Number
Massachusetts		Installations	1	Whole Number
Michigan		Installations	1	Whole Number
Minnesota		Installations	1	Whole Number
Mississippi		Installations	1	Whole Number
Missouri		Installations	1	Whole Number
Montana		Installations	1	Whole Number
Nebraska		Installations	1	Whole Number
Nevada		Installations	1	Whole Number
New Hampshire		Installations	1	Whole Number
New Jersey		Installations	1	Whole Number
New Mexico		Installations	1	Whole Number
New York		Installations	1	Whole Number
North Carolina		Installations	1	Whole Number
North Dakota		Installations	1	Whole Number
Ohio		Installations	1	Whole Number
Oklahoma		Installations	1	Whole Number
Oregon		Installations	1	Whole Number
Pennsylvania		Installations	1	Whole Number
Rhode Island		Installations	1	Whole Number
South Carolina		Installations	1	Whole Number
South Dakota		Installations	1	Whole Number
Tennessee		Installations	1	Whole Number
Texas		Installations	1	Whole Number
Utah		Installations	1	Whole Number
Vermont		Installations	1	Whole Number
Virginia		Installations	1	Whole Number
Washington		Installations	1	Whole Number
West Virginia		Installations	1	Whole Number
Wisconsin		Installations	1	Whole Number
Wyoming		Installations	1	Whole Number