

Energy-Management Activities

For questions 192 through 202:

Indicate with a “yes” or a “no” under the “Participate?” column whether your establishment participated in or used the specified type of energy-management assistance between January 1, 2014 and December 31, 2014.

For any assistance for which you marked “yes”, please mark the source(s) of assistance.

“In-house” means your establishment or company provided the energy-management assistance.

“Utility/Energy Supplier” refers to either your electricity, natural gas, or other energy supplier/provider.

“Product or Service Provider” includes any other third party product or service provider/supplier such as an equipment vendor, energy service company, or maintenance service company.

“Federal Program” includes assistance provided by federal government programs or agencies such as the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP).

“State or Local Program” includes all assistance provided by a state, city, or county government program or agency.

Type of Energy-Management Assistance	Participate? (13)	Source of Assistance (check all that apply)				
		In-house (15)	Utility/ Energy Supplier (16)	Product or Service Provider (17)	Federal Program (18)	State or Local Program (19)
192. Energy audit or assessment	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No (060)	3 <input type="checkbox"/>	4 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>
193. Technical assistance (e.g., consultation, demonstrations, engineering design or analysis)	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No (070)	3 <input type="checkbox"/>	4 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>
194. Technical information (e.g., software, reference material)	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No (072)	3 <input type="checkbox"/>	4 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>
195. Training (e.g., workshops, seminars, presentations)	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No (074)	3 <input type="checkbox"/>	4 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>
196. Financial assistance (e.g., loans, tax credits, rebates, subsidies)	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No (076)	3 <input type="checkbox"/>	4 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>



Energy-Management Activities

For Questions 203 through 209:

Indicate with a “yes” or a “no” under the “Installed Equipment or Retrofit?” column whether your establishment installed equipment or any retrofits for the primary purpose of improving energy efficiency for the indicated system between January 1, 2014 and December 31, 2014. For any activity for which you marked “yes” please mark the source(s) of financial support for the activity. Please use sources defined above question 192.

System	Installed Equipment or Retrofit? (13)	Source of Assistance (check all that apply)				
		In-house (15)	Utility/ Energy Supplier (16)	Product or Service Provider (17)	Federal Program (18)	State or Local Program (19)
197. Steam systems (e.g., boilers, burners, insulation, piping, steam traps)	1 Yes →					
	2 No (120)	3	4	7	8	9
198. Compressed air systems (e.g., compressor controls, drain traps, leak management, compressor or treatment equipment replacement)?	1 Yes →					
	2 No (450)	3	4	7	8	9
199. Process heating systems (e.g., insulation repair, burner controls, furnace repair, refractory replacement)	1 Yes →					
	2 No (140)	3	4	7	8	9
200. Process cooling and refrigeration systems (e.g., insulation repair, use of free cooling, implementation of VSDs, refrigerant pressure balancing)	1 Yes →					
	2 No (160)	3	4	7	8	9
201. Pumping systems (e.g., adjustable speed drives, impeller trimming, leak repair, repair/replace seals, pump load staging)?	1 Yes →					
	2 No (180)	3	4	7	8	9
202. Fan systems (e.g., replace belts, adjustable speed drives, bearing replacement and lubrication, upgrade to higher efficiency motor, fan load staging)?	1 Yes →					
	2 No (180)	3	4	7	8	9
203. Other process motor driven systems (e.g., belts replaced, replacement with higher efficiency motor, shaft re-alignment, motor downsizing)?	1 Yes →					
	2 No (180)	3	4	7	8	9
204. Computing systems (e.g., increasing server operating temperatures, consolidating applications and server closets, power management, use of free cooling)	1 Yes →					
	2 No (180)	3	4	7	8	9

<p>205. Facility HVAC system (e.g., check filters, belts, duct maintenance, setback controls, equipment replacement and upgrade)</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No (200)</p>	<p>3 <input type="checkbox"/></p>	<p>4 <input type="checkbox"/></p>	<p>7 <input type="checkbox"/></p>	<p>8 <input type="checkbox"/></p>	<p>9 <input type="checkbox"/></p>
<p>206. Facility lighting (e.g., occupancy controls, daylight harvesting, efficient lamp upgrade)</p>	<p>1 Yes → 2 No (220)</p>	<p>3</p>	<p>4</p>	<p>7</p>	<p>8</p>	<p>9</p>

Energy-Management Activities

For Questions 207 through 224:

These questions are intended to assess the awareness and implementation of energy management activities at your establishment. Please answer the following questions with respect to any activities implemented between January 1, 2014 and December 31, 2014.

<p>207. Which statement best describes this establishment's management decision making</p> <ul style="list-style-type: none"> a. Energy use and consumption evaluated over its total life cycle b. Energy use and consumption is increasingly becoming a higher priority for the company c. Management from time to time has supported projects to improve energy use and consumption d. Energy use and consumption are rarely a part of management decision making 	(xxxxx)
<p>208. Is establishment management aware of programs (i.e., public or utility) dedicated to improving energy use and consumption? (Check all that apply)</p> <ul style="list-style-type: none"> a. Superior Energy Performance b. Better Buildings, Better Plants c. ENERGY STAR d. State/regional industrial energy program(s) e. Utility strategic energy management program(s) 	(xxxxx)
<p>209. Is the establishment aware of ISO 50001?</p>	<p>1 Yes</p> <p>2 No (xxxxx)</p>
<p>210. (If yes to 209) Is the establishment implementing ISO 50001?</p>	<p>1 Yes</p> <p>2 No (xxxxx)</p>
<p>211. (If yes to 209 and no to 210) Is the establishment planning to implement ISO 50001?</p>	<p>1 Yes</p> <p>2 No (xxxxx)</p> <p>3 Don't Know</p>
<p>212. Does the establishment consider energy efficiency in procurement specification?</p>	<p>1 Yes</p> <p>2 No (xxxxx)</p> <p>3 Don't Know</p>

<p>213. Does the establishment have an energy consumption baseline for comparing energy consumption in future years?</p> <p><input type="checkbox"/></p> <hr/> <p><input type="checkbox"/></p> <hr/> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p>1 Yes</p> <p><input type="checkbox"/></p> <p>2 No (13470)</p> <p><input type="checkbox"/></p> <p>3 Don't Know</p>
<p>214. Does the establishment set goals for improving energy use and consumption?</p> <p><input type="checkbox"/></p> <hr/> <p><input type="checkbox"/></p> <hr/> <p><input type="checkbox"/></p>	<p>1 Yes</p> <p>2 No (13470)</p> <p>3 Don't Know</p>
<p>215. If yes to question 214, are these goals quantitative (e.g., 10% improvement)?</p>	<p>1 Yes</p> <p>2 No (13470)</p> <p>3 Don't Know</p>
<p>216. If yes to question 214, which of the following policies influenced energy use/consumption goals set for this establishment (check all that apply):</p> <p>a. Legal requirements</p> <p>b. Voluntary programs</p> <p>c. Corporate policy</p> <p>d. Customer requirements</p>	<p>(xxxxx)</p>
<p>217. Does the establishment develop key performance indicators and metrics relative to energy (metrics that can be track to better understand changes over time in energy consumption)?</p>	<p>1 Yes</p> <p>2 No (xxxxx)</p> <p>3 Don't Know</p>
<p>218. Does management at this establishment assign a representative(s) to be responsible for energy management?</p>	<p>1 Yes</p> <p>2 No (xxxxx)</p> <p>3 Don't Know</p>
<p>219. If yes to question 218, what percentage of the designated representative(s) job responsibilities are related to managing energy (if more than one person responsible, use average across all persons)?</p> <p>1. <25%</p> <p>2. 25%-49%</p> <p>3. 50%-74%</p> <p>4. 75%-99%</p> <p>5. 100%</p>	<p>(xxxxx)</p>

<p>220. Does the establishment have submetering (metering beyond the main utility, revenue or supplier meter)?</p> <p><input type="checkbox"/></p> <p>a. <input type="checkbox"/> Electric</p> <p>b. <input type="checkbox"/> Natural Gas</p> <p>c. <input type="checkbox"/> Other _____</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/> (xxxxx)</p>
<p>221. Does the establishment have a methodology and criteria for prioritizing improvements to energy use/consumption?</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>1 Yes</p> <p>2 No (xxxxx)</p> <p>3 Don't Know</p>
<p>222. Between Jan 1,2014 and December 31, 2014, has the establishment conducted an audit on any energy system to identify potential energy saving opportunities?</p>	<p>1 Yes</p> <p>2 No (xxxxx)</p> <p>3 Don't Know</p>
<p>223. If yes, which systems (check all that apply)?</p> <p>a. Pumping systems</p> <p>b. Compressed air systems</p> <p>c. Process heating systems</p> <p>d. Steam systems</p> <p>e. Fan systems</p> <p>f. Process cooling and refrigeration systems</p> <p>g. Computing systems</p> <p>h. Facility HVAC</p> <p>i. Facility lighting</p> <p>j. Other direct machine drives</p> <p>k. Plant wide</p>	<p>(xxxxx)</p>
<p>224. For capital investment projects, what is the establishment's maximum simple payback (time period in years typically calculated as implementation cost divided by annual cost savings) that is currently allowed?</p> <p>1. 1 year</p> <p>2. 1-2 years</p> <p>3. 2-3 years</p> <p>4. 3-4 years</p> <p>5. > 4 years</p> <p>6. Have no such requirement</p> <p>7. Do no know</p>	<p>(xxxxx)</p>



Energy-Management Activities

<p>225. Does your establishment measure oxygen and carbon dioxide (or combustible) levels in boiler and other fuel fired heating equipment flue gasses to “tune” the burners?</p>	<p>1 Yes 2 No (13476) 3 Don’t Know</p>
<p>226. Does your establishment use the flue gases from fuel fired heating equipment to preheat combustion air, preheat charge equipment/material, or provide heat for other processes in your establishment?</p>	<p>1 Yes 2 No (13477) 3 Don’t Know</p>
<p>227. Does your establishment’s process heating system maintenance program include the following activities?</p> <p>a. Furnace inspections to seal openings and repair cracks and damaged insulation in furnace walls, doors, etc.</p>	<p>1 Yes 2 No (13478) 3 Don’t Know</p>
<p>b. Cleaning of heat transfer surfaces to avoid build up of soot, scale, or other material.</p>	<p>1 Yes 2 No (13479) 3 Don’t Know</p>
<p>c. Inspecting, calibrating, and adjusting temperature/pressure sensors, controllers, valve operators, etc.</p>	<p>1 Yes 2 No (13480) 3 Don’t Know</p>
<p>228. Do you keep an inventory of all motors in your establishment?</p>	<p>1 Yes 2 No (13481) 3 Don’t Know</p>
<p>229. Does your establishment have staff or equipment dedicated to detecting and controlling compressed air system leaks?</p>	<p>1 Yes 2 No (13483) 3 Don’t Know</p>
<p>230. Does your establishment track the amount of energy spent in compressed air systems?</p>	<p>1 Yes 2 No (13484) 3 Don’t Know</p>



Energy Technologies

	"Census Use Only"	
231. Were any of the following technologies in use at your establishment anytime during 2014?		
a. Computer control of building-wide environment (e.g., space-heating equipment, cooling equipment, lights).	14010	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
b. Computer control of processes or major energy-using equipment (e.g., boilers, furnaces, conveyors used in the manufacturing process).	14020	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
c. Waste heat recovery.	14030	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
d. Adjustable-speed motors.	14040	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
e. Oxy-fuel firing.	14950	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
232. Does your establishment have procedures in place to temporarily reduce electricity consumption in times of critical grid conditions (i.e., when the electric utility has indicated a need to reduce electric demand)?		1 Yes 2 No 3 Don't know
233. Are there controls in place to automate any procedures for reducing electricity demand in times of critical grid conditions (i.e., when the electric utility has indicated a need to reduce demand)?		1 Yes 2 No 3 Don't know

Energy Technologies

234. Were any of the following technologies associated with cogeneration in use at your establishment anytime during 2014?	"Census Use Only"	
a. Steam turbines supplied by either conventional or fluidized bed boilers.	14042	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
b. Conventional combustion turbines with heat recovery.	14043	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
c. Combined-cycle combustion turbines.	14044	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
d. Internal combustion engines with heat recovery.	14045	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know
e. Steam turbines supplied by heat recovered from high-temperatures processes.	14046	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No <input type="checkbox"/> 3 Don't know

Establishment Size

235. How many buildings were on this establishment site as of December 31, 2014?	"Census Use Only"	
<p>Buildings include: structures enclosed by walls extending from the foundation to the roof, parking garages, even if not totally enclosed by walls and a roof, or structures erected on pillars to elevate the first fully enclosed level.</p> <p>Excluded buildings are: structures (other than the exceptions noted above) that are not totally enclosed by walls and a roof, mobile homes and trailers, even if they house manufacturing activity, structures not ordinarily intended to be entered by humans, such as storage tanks, or non-buildings that consume energy (such as pumps and constructions sites).</p>	17010	<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> Number of Buildings
236. What was the approximate total enclosed square footage of the buildings located on this establishment site as of December 31, 2014?	13010	<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> Total square feet

Remarks

237. Please use this space for any explanations that may be essential in understanding your reported data. If additional space is needed, attach a separate sheet, including the 10-digit Survey ID located on the mailing label on the front of this questionnaire.

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