

Section 5: Petroleum-based Energy Sources Consumed

46. Indicate the correct description of this establishment and follow instructions for completing either this section or Section 6. See pages 2 and 3 of this questionnaire for definitions of refinery and nonrefinery.

Census
use only
18010

(Check one box only)

- 1 Establishment consists of **REFINERY operations ONLY**.
(There may be nonrefinery (petrochemical) operations co-located, but those operations are identified as a separate establishment for purposes of the Annual Survey of Manufactures, Census Form MA-1000).
° Go to question 47 below.
- 2 Establishment consists of *both* **REFINERY and NONREFINERY operations**.
° Go to question 67, Section 6, page 19; do not complete Section 5, questions 47 through 66.
- 3 Neither of the above
° Call the MECS specialist at 1-800-528-3049, if establishment is **NOT A REFINERY**.
Please call before continuing questionnaire.

Questions 47 through 65:

47. For Establishments with REFINERY OPERATIONS ONLY:

For questions 48 through 65, enter the quantity consumed onsite during 1998 as a fuel for the production of heat, steam, power, or the generation of electricity for each petroleum-based energy source (fuel) listed below.

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include fuel consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

Energy Source	Census use only	Quantity Consumed as a Fuel
-		-
48. Butane as liquefied petroleum gas (LPG) or natural gas liquid (NGL).	36060	<input style="width: 100%; height: 20px;" type="text"/> Gallons
36061 1 <input type="checkbox"/> Butane not consumed in this establishment.		
49. Ethane as liquefied petroleum gas (LPG) or natural gas liquid (NGL).	37060	<input style="width: 100%; height: 20px;" type="text"/> Gallons
37061 1 <input type="checkbox"/> Ethane not consumed in this establishment.		

Continue to next page

Section 5: Petroleum-based Energy Sources Consumed, cont.

	Energy Source	Census use only	Quantity Consumed as a Fuel
50. 38061	Propane as liquefied petroleum gas (LPG) or natural gas liquid (NGL). 1 <input type="checkbox"/> Propane not consumed in this establishment.	38060	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> Gallons
51. 34061	Mixtures of ethane, butane, and propane 1 <input type="checkbox"/> Mixtures of ethane, butane and propane not consumed in this establishment.	34060	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> Gallons
52. 35061	Other liquefied petroleum gases (LPG) and natural gas liquids (NGL) (e.g., butylene, ethylene, propylene) 1 <input type="checkbox"/> Other LPG or NGL not consumed in this establishment.	35060	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> Gallons
53.	Total liquefied petroleum gases (LPG) and natural gas liquids (NGL) < Sum the quantities reported for questions 48 through 52. (Enter zero, if none.) P Copy this quantity to question 150, column 1, page 37.	24060	Total LPG and NGL <div style="border: 2px solid black; height: 20px; width: 100%;"></div> Gallons Copy to question 150, column 1, page 37
54. 28061	Diesel fuel, excluding highway usage 1 <input type="checkbox"/> Diesel fuel not consumed in this establishment.	28060	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> Barrels
55. 29061	Distillate fuel oil (numbers 1, 2 and 4 fuel oils) 1 <input type="checkbox"/> Distillate fuel oil not consumed in this establishment.	29060	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> Barrels
56.	Total diesel fuel and distillate fuel oil < Sum the quantities reported for questions 54 and 55. (Enter zero, if none.) P Copy this quantity to question 150, column 2, page 37.	22060	Total Diesel Fuel & Distillate <div style="border: 2px solid black; height: 20px; width: 100%;"></div> Barrels Copy to question 150, column 2, page 37

Continue to the next page

Section 5: Petroleum-based Energy Sources Consumed, cont.

Energy Source	Census use only	Quantity Consumed as a Fuel
57. Crude oil/lease condensate 20061 <input type="checkbox"/> Crude oil/lease condensate not consumed in this establishment.	20060	<input type="text"/> Barrels
58. Motor gasoline, excluding highway usage 23061 <input type="checkbox"/> Motor gasoline not consumed in this establishment.	23060	<input type="text"/> Gallons
59. Residual fuel oil (numbers 5, 6, Navy Special, and Bunker C) P Copy this quantity to question 150, column 3, page 37. 21061 <input type="checkbox"/> Residual fuel oil not consumed in this establishment.	21060	<p style="text-align: center;">Residual Fuel Oil</p> <input style="border: 2px solid black;" type="text"/> Barrels Copy to question 150, column 3, page 37
60. Waste and byproduct gases (e.g., refinery gas, off gas, vent gas, plant gas, still gas) 62061 <input type="checkbox"/> Waste and byproduct gases not consumed in this establishment.	62060	<input type="text"/> Million Btu
61. Fluid catalytic cracking unit coke 77061 <input type="checkbox"/> Fluid catalytic cracking unit coke not consumed in this establishment.	77060	<input type="text"/> Barrels
62. Marketable petroleum coke --unrefined or green 78061 <input type="checkbox"/> Marketable petroleum coke (unrefined or green) not consumed in this establishment.	78060	<input type="text"/> Barrels
63. Marketable petroleum coke -- calcined 79061 <input type="checkbox"/> Marketable petroleum coke (calcined) not consumed in this establishment.	79060	<input type="text"/> Barrels

Continue to next page

Section 5: Petroleum-based Energy Sources Consumed, cont.

	Census use only	Quantity Consumed as a Fuel
Energy Source		-
<p>64. Waste oils and tars</p> <p style="color: green;">71061</p> <p>1 <input type="checkbox"/> Waste oils and tars not consumed in this establishment.</p>	<p>71060</p>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>Barrels</p>
<p>65. Other petroleum-based combustible energy source not specified above</p> <p>Specify energy source and units, if not in Million Btu</p> <p>a. 95980 <div style="border: 1px solid black; width: 300px; height: 20px; margin-left: 10px;"></div></p> <p>b. 96980 <div style="border: 1px solid black; width: 300px; height: 20px; margin-left: 10px;"></div></p> <p>95061 1 <input type="checkbox"/> Other petroleum-based combustible energy source not consumed in this establishment.</p>	<p>95060</p> <p>96060</p>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>Million Btu</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>Million Btu</p>
<p>66. Go to question 89, Section 7, page 24. (Do not complete Section 6.)</p>		

Section 6: Petroleum-based Energy Sources Consumed and Shipped

67.

See pages 2 and 3 of this questionnaire for definitions of refinery and nonrefinery.

This section is ONLY for establishments with BOTH REFINERY AND NONREFINERY OPERATIONS

All other establishments, go to question 89, Section 7, page 24.

68.

For questions 69 to 87, answer columns 1 through 3 for each energy source (fuel) consumed in this establishment; all applicable information (columns) about an energy source should be entered before going on to the next energy source (line).

Report column 1 quantities for the entire establishment.

Columns 2 and 3 quantities should be reported for only the nonrefinery operations.

Column 1:

Enter quantity consumed onsite in 1998 as a fuel for the production of heat, steam, power, or the generation of electricity for the entire establishment (both refinery and nonrefinery operations).

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include fuel consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

Column 2:

Enter quantity consumed onsite at the petrochemical plant for all purposes other than fuel use in 1998.

Include all quantities consumed as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment. For example, butane processed in producing rubber compounds.

Exclude all offsite dispositions such as sales and transfers to other establishments.

Column 3:

Enter quantity shipped offsite during 1998 from the petrochemical plant to other establishments (manufacturing or nonmanufacturing).

Exclude any quantities transferred between a petroleum refinery and a petrochemical plant if the two are treated (reported) as a single establishment for this survey.

Continue to next page

Section 6: Petroleum-based Energy Sources Consumed and Shipped, cont.

Energy Source		Entire Establishment	-----Nonrefinery Operations Only-----		
		060 <i>column 1</i>	070 <i>column 2</i>	080 <i>column 3</i>	
		Quantity Consumed as a Fuel	Quantity Consumed for All Nonfuel Purposes	Quantity Shipped Offsite to Other Establishments	
		Cen- sus use only			
69.	Butane as liquefied petroleum gas (LPG) or natural gas liquid (NGL). 1 <input type="checkbox"/> Butane not consumed and not shipped	36	-	-	-
36061			Gallons	Gallons	Gallons
70.	Ethane as liquefied petroleum gas (LPG) or natural gas liquid (NGL). 1 <input type="checkbox"/> Ethane not consumed and not shipped	37			
37061			Gallons	Gallons	Gallons
71.	Propane as liquefied petroleum gas (LPG) or natural gas liquid (NGL). 1 <input type="checkbox"/> Propane not consumed and not shipped	38			
38061			Gallons	Gallons	Gallons
72.	Mixtures of ethane, butane, and propane. 1 <input type="checkbox"/> Mixtures of ethane, butane and propane not consumed and not shipped	34			
34061			Gallons	Gallons	Gallons
73.	Other liquefied petroleum gases (LPG) and natural gas liquids (NGL) (e.g., butylene, ethylene, propylene) 1 <input type="checkbox"/> Other LPG or NGL not consumed and not shipped	35			
35061			Gallons	Gallons	Gallons
74.	Total liquefied petroleum gases (LPG) and natural gas liquids (NGL) consumed as a fuel	24	<div style="border: 2px solid black; padding: 5px; display: inline-block;"> Total LPG and NGL </div>		
			Gallons		
	< Sum the quantities reported in column 1 for questions 69 through 73. (Enter zero, if none.)		Copy to question 150, column 1, page 37		

P Copy this quantity to question 150, column 1, page 37.

Continue to next page

Section 6: Petroleum-based Energy Sources Consumed and Shipped, cont.

		Entire Establishment 060 <i>column 1</i>	-----Nonrefinery Operations Only----- 070 <i>column 2</i> 080 <i>column 3</i>	
Energy Source	Cen- sus use only	Quantity Consumed as a Fuel	Quantity Consumed for All Nonfuel Purposes	Quantity Shipped Offsite to Other Establishments
-		-	-	-
75. Natural Gas 1 <input type="checkbox"/> Natural gas not consumed for nonfuel purposes and not shipped from the petrochemical establishment 30061	30		<input style="width: 100%; height: 20px;" type="text"/> 1,000 cubic feet (mcf)	<input style="width: 100%; height: 20px;" type="text"/> 1,000 cubic feet (mcf)
76. Crude oil/lease condensate 1 <input type="checkbox"/> Crude oil/lease condensate not consumed and not shipped 20061	20	<input style="width: 100%; height: 20px;" type="text"/> Barrels	<input style="width: 100%; height: 20px;" type="text"/> Barrels	<input style="width: 100%; height: 20px;" type="text"/> Barrels
77. Motor gasoline, excluding highway usage 1 <input type="checkbox"/> Motor gasoline not consumed and not shipped 23061	23	<input style="width: 100%; height: 20px;" type="text"/> Gallons	<input style="width: 100%; height: 20px;" type="text"/> Gallons	<input style="width: 100%; height: 20px;" type="text"/> Gallons
78. Diesel fuel, excluding highway usage 1 <input type="checkbox"/> Diesel fuel not consumed and not shipped 28061	28	<input style="width: 100%; height: 20px;" type="text"/> Barrels	<input style="width: 100%; height: 20px;" type="text"/> Barrels	<input style="width: 100%; height: 20px;" type="text"/> Barrels
79. Distillate fuel oil (numbers 1, 2 and 4 fuel oils) 1 <input type="checkbox"/> Distillate fuel oil not consumed and not shipped 29061	29	<input style="width: 100%; height: 20px;" type="text"/> Barrels	<input style="width: 100%; height: 20px;" type="text"/> Barrels	<input style="width: 100%; height: 20px;" type="text"/> Barrels
80. Total diesel fuel and distillate fuel oil consumed as a fuel < Sum the quantities reported in column 1 for questions 78 and 79. (Enter zero, if none.) P Copy this quantity to question 150, column 2, page 37.	22	Diesel & Distillate <input style="width: 100%; height: 20px; border: 2px solid black;" type="text"/> Barrels Copy to question 150, column 2, page 37		

Continue to next page

Section 6: Petroleum-based Energy Sources Consumed and Shipped, cont.

Energy Source		Entire Establishment -----Nonrefinery Operations Only-----			
		060 <i>column 1</i>	070 <i>column 2</i>	080 <i>column 3</i>	
		Quantity Consumed as a Fuel	Quantity Consumed for All Nonfuel Purposes	Quantity Shipped Offsite to Other Establishments	
		-	-	-	
81.	Residual fuel oil (numbers 5, 6, Navy Special, and Bunker C)	21	<div style="border: 2px solid black; padding: 2px; display: inline-block;">Residual Fuel Oil</div> <div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels
P Copy this quantity to question 150, column 3, page 37.		Copy to question 150, column 3, page 37			
21061	1 <input type="checkbox"/> Residual fuel oil not consumed and not shipped				
82.	Waste and byproduct gases (e.g., refinery gas, off gas, vent gas, plant gas, still gas)	62	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Million Btu	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Million Btu	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Million Btu
62061	1 <input type="checkbox"/> Waste and byproduct gases not consumed and not shipped				
83.	Fluid catalytic cracking unit coke	77	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels
77061	1 <input type="checkbox"/> Fluid catalytic cracking unit coke not consumed and not shipped				
84.	Marketable petroleum coke -- unrefined or green	78	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels
78061	1 <input type="checkbox"/> Marketable petroleum coke (unrefined or green) not consumed and not shipped				
85.	Marketable petroleum coke -- calcined	79	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels
79061	1 <input type="checkbox"/> Marketable petroleum coke (calcined) not consumed and not shipped				
86.	Waste oils and tars	71	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels	<div style="border: 1px solid black; width: 100px; height: 20px; margin-top: 5px;"></div> Barrels
71061	1 <input type="checkbox"/> Waste oils and tars not consumed and not shipped				

Continue to next page

