

**Table 9a. U.S. Macroeconomic Indicators and CO<sub>2</sub> Emissions**

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
<b>Macroeconomic</b>															
Real Gross Domestic Product															
(billion chained 2009 dollars - SAAR) .....	<b>16,525</b>	<b>16,583</b>	<b>16,727</b>	<b>16,788</b>	<i>16,885</i>	<i>16,982</i>	<i>17,082</i>	<i>17,175</i>	<i>17,304</i>	<i>17,422</i>	<i>17,540</i>	<i>17,647</i>	<b>16,656</b>	<i>17,031</i>	<i>17,478</i>
Real Personal Consumption Expend.															
(billion chained 2009 dollars - SAAR) .....	<b>11,365</b>	<b>11,485</b>	<b>11,569</b>	<b>11,641</b>	<i>11,726</i>	<i>11,792</i>	<i>11,873</i>	<i>11,948</i>	<i>12,054</i>	<i>12,157</i>	<i>12,256</i>	<i>12,350</i>	<b>11,515</b>	<i>11,835</i>	<i>12,204</i>
Real Fixed Investment															
(billion chained 2009 dollars - SAAR) .....	<b>2,787</b>	<b>2,779</b>	<b>2,779</b>	<b>2,819</b>	<i>2,856</i>	<i>2,895</i>	<i>2,927</i>	<i>2,958</i>	<i>2,986</i>	<i>3,014</i>	<i>3,048</i>	<i>3,078</i>	<b>2,791</b>	<i>2,909</i>	<i>3,031</i>
Business Inventory Change															
(billion chained 2009 dollars - SAAR) .....	<b>42</b>	<b>-15</b>	<b>4</b>	<b>4</b>	<i>-14</i>	<i>-5</i>	<i>3</i>	<i>16</i>	<i>36</i>	<i>55</i>	<i>67</i>	<i>69</i>	<b>9</b>	<i>0</i>	<i>57</i>
Real Government Expenditures															
(billion chained 2009 dollars - SAAR) .....	<b>2,913</b>	<b>2,901</b>	<b>2,906</b>	<b>2,914</b>	<i>2,920</i>	<i>2,927</i>	<i>2,929</i>	<i>2,929</i>	<i>2,935</i>	<i>2,939</i>	<i>2,946</i>	<i>2,947</i>	<b>2,909</b>	<i>2,926</i>	<i>2,942</i>
Real Exports of Goods & Services															
(billion chained 2009 dollars - SAAR) .....	<b>2,102</b>	<b>2,111</b>	<b>2,162</b>	<b>2,140</b>	<i>2,149</i>	<i>2,162</i>	<i>2,178</i>	<i>2,189</i>	<i>2,200</i>	<i>2,213</i>	<i>2,229</i>	<i>2,248</i>	<b>2,129</b>	<i>2,170</i>	<i>2,223</i>
Real Imports of Goods & Services															
(billion chained 2009 dollars - SAAR) .....	<b>2,668</b>	<b>2,670</b>	<b>2,684</b>	<b>2,719</b>	<i>2,743</i>	<i>2,781</i>	<i>2,821</i>	<i>2,859</i>	<i>2,901</i>	<i>2,952</i>	<i>3,004</i>	<i>3,046</i>	<b>2,685</b>	<i>2,801</i>	<i>2,976</i>
Real Disposable Personal Income															
(billion chained 2009 dollars - SAAR) .....	<b>12,556</b>	<b>12,647</b>	<b>12,729</b>	<b>12,777</b>	<i>12,845</i>	<i>12,963</i>	<i>13,062</i>	<i>13,162</i>	<i>13,365</i>	<i>13,485</i>	<i>13,590</i>	<i>13,692</i>	<b>12,677</b>	<i>13,008</i>	<i>13,533</i>
Non-Farm Employment															
(millions) .....	<b>143.5</b>	<b>144.0</b>	<b>144.6</b>	<b>145.1</b>	<i>145.6</i>	<i>146.0</i>	<i>146.4</i>	<i>146.7</i>	<i>147.2</i>	<i>147.7</i>	<i>148.2</i>	<i>148.7</i>	<b>144.3</b>	<i>146.2</i>	<i>148.0</i>
Civilian Unemployment Rate															
(percent) .....	<b>4.9</b>	<b>4.9</b>	<b>4.9</b>	<b>4.7</b>	<i>4.7</i>	<i>4.6</i>	<i>4.6</i>	<i>4.5</i>	<i>4.4</i>	<i>4.3</i>	<i>4.2</i>	<i>4.1</i>	<b>4.9</b>	<i>4.6</i>	<i>4.3</i>
Housing Starts															
(millions - SAAR) .....	<b>1.15</b>	<b>1.16</b>	<b>1.14</b>	<b>1.21</b>	<i>1.18</i>	<i>1.20</i>	<i>1.25</i>	<i>1.28</i>	<i>1.29</i>	<i>1.31</i>	<i>1.32</i>	<i>1.34</i>	<b>1.17</b>	<i>1.23</i>	<i>1.32</i>
<b>Industrial Production Indices (Index, 2012=100)</b>															
Total Industrial Production .....	<b>104.1</b>	<b>103.9</b>	<b>104.4</b>	<b>104.2</b>	<i>104.9</i>	<i>105.2</i>	<i>106.1</i>	<i>106.8</i>	<i>107.7</i>	<i>108.6</i>	<i>109.5</i>	<i>110.2</i>	<b>104.2</b>	<i>105.8</i>	<i>109.0</i>
Manufacturing .....	<b>103.9</b>	<b>103.6</b>	<b>103.8</b>	<b>104.1</b>	<i>104.4</i>	<i>104.6</i>	<i>105.4</i>	<i>106.1</i>	<i>107.0</i>	<i>107.8</i>	<i>108.8</i>	<i>109.5</i>	<b>103.8</b>	<i>105.1</i>	<i>108.3</i>
Food .....	<b>104.4</b>	<b>104.8</b>	<b>105.4</b>	<b>105.2</b>	<i>105.7</i>	<i>106.3</i>	<i>106.9</i>	<i>107.6</i>	<i>108.2</i>	<i>108.9</i>	<i>109.5</i>	<i>110.2</i>	<b>104.9</b>	<i>106.6</i>	<i>109.2</i>
Paper .....	<b>96.4</b>	<b>95.6</b>	<b>95.5</b>	<b>96.7</b>	<i>95.3</i>	<i>94.6</i>	<i>94.6</i>	<i>94.7</i>	<i>94.9</i>	<i>95.0</i>	<i>95.1</i>	<i>95.3</i>	<b>96.1</b>	<i>94.8</i>	<i>95.1</i>
Petroleum and Coal Products .....	<b>106.5</b>	<b>105.5</b>	<b>104.8</b>	<b>106.4</b>	<i>106.3</i>	<i>106.6</i>	<i>107.2</i>	<i>107.7</i>	<i>108.2</i>	<i>108.6</i>	<i>109.1</i>	<i>109.6</i>	<b>105.8</b>	<i>106.9</i>	<i>108.9</i>
Chemicals .....	<b>99.1</b>	<b>98.3</b>	<b>97.1</b>	<b>97.3</b>	<i>97.6</i>	<i>98.0</i>	<i>98.8</i>	<i>99.7</i>	<i>100.6</i>	<i>101.5</i>	<i>102.6</i>	<i>103.8</i>	<b>98.0</b>	<i>98.5</i>	<i>102.1</i>
Nonmetallic Mineral Products .....	<b>117.1</b>	<b>115.6</b>	<b>113.9</b>	<b>115.7</b>	<i>116.9</i>	<i>117.8</i>	<i>119.0</i>	<i>120.2</i>	<i>121.3</i>	<i>122.3</i>	<i>123.4</i>	<i>124.2</i>	<b>115.6</b>	<i>118.5</i>	<i>122.8</i>
Primary Metals .....	<b>94.8</b>	<b>95.7</b>	<b>92.8</b>	<b>92.4</b>	<i>92.6</i>	<i>92.4</i>	<i>93.0</i>	<i>93.6</i>	<i>94.1</i>	<i>94.4</i>	<i>95.1</i>	<i>95.9</i>	<b>93.9</b>	<i>92.9</i>	<i>94.9</i>
Coal-weighted Manufacturing (a) .....	<b>102.8</b>	<b>102.2</b>	<b>101.0</b>	<b>101.6</b>	<i>101.7</i>	<i>101.8</i>	<i>102.6</i>	<i>103.4</i>	<i>104.1</i>	<i>104.7</i>	<i>105.5</i>	<i>106.4</i>	<b>101.9</b>	<i>102.4</i>	<i>105.2</i>
Distillate-weighted Manufacturing (a) .....	<b>106.2</b>	<b>105.7</b>	<b>105.1</b>	<b>106.1</b>	<i>106.4</i>	<i>106.8</i>	<i>107.6</i>	<i>108.3</i>	<i>109.0</i>	<i>109.7</i>	<i>110.4</i>	<i>111.2</i>	<b>105.8</b>	<i>107.3</i>	<i>110.1</i>
Electricity-weighted Manufacturing (a) .....	<b>103.5</b>	<b>103.0</b>	<b>102.6</b>	<b>103.0</b>	<i>103.0</i>	<i>103.1</i>	<i>103.9</i>	<i>104.8</i>	<i>105.6</i>	<i>106.4</i>	<i>107.4</i>	<i>108.4</i>	<b>103.0</b>	<i>103.7</i>	<i>107.0</i>
Natural Gas-weighted Manufacturing (a) .....	<b>104.4</b>	<b>103.5</b>	<b>103.3</b>	<b>103.8</b>	<i>103.9</i>	<i>104.2</i>	<i>105.2</i>	<i>106.3</i>	<i>107.3</i>	<i>108.3</i>	<i>109.4</i>	<i>110.7</i>	<b>103.8</b>	<i>104.9</i>	<i>108.9</i>
<b>Price Indexes</b>															
Consumer Price Index (all urban consumers)															
(index, 1982-1984=1.00) .....	<b>2.38</b>	<b>2.39</b>	<b>2.40</b>	<b>2.42</b>	<i>2.44</i>	<i>2.45</i>	<i>2.46</i>	<i>2.48</i>	<i>2.49</i>	<i>2.50</i>	<i>2.52</i>	<i>2.53</i>	<b>2.40</b>	<i>2.46</i>	<i>2.51</i>
Producer Price Index: All Commodities															
(index, 1982=1.00) .....	<b>1.83</b>	<b>1.85</b>	<b>1.86</b>	<b>1.89</b>	<i>1.92</i>	<i>1.92</i>	<i>1.92</i>	<i>1.93</i>	<i>1.94</i>	<i>1.96</i>	<i>1.96</i>	<i>1.98</i>	<b>1.85</b>	<i>1.92</i>	<i>1.96</i>
Producer Price Index: Petroleum															
(index, 1982=1.00) .....	<b>1.21</b>	<b>1.46</b>	<b>1.53</b>	<b>1.63</b>	<i>1.71</i>	<i>1.77</i>	<i>1.79</i>	<i>1.73</i>	<i>1.71</i>	<i>1.83</i>	<i>1.85</i>	<i>1.82</i>	<b>1.45</b>	<i>1.75</i>	<i>1.80</i>
GDP Implicit Price Deflator															
(index, 2009=100) .....	<b>110.6</b>	<b>111.3</b>	<b>111.7</b>	<b>112.2</b>	<i>113.1</i>	<i>113.6</i>	<i>114.3</i>	<i>114.9</i>	<i>115.5</i>	<i>116.1</i>	<i>116.7</i>	<i>117.3</i>	<b>111.4</b>	<i>114.0</i>	<i>116.4</i>
<b>Miscellaneous</b>															
Vehicle Miles Traveled (b)															
(million miles/day) .....	<b>8,202</b>	<b>9,158</b>	<b>9,075</b>	<b>8,711</b>	<i>8,210</i>	<i>9,269</i>	<i>9,162</i>	<i>8,808</i>	<i>8,429</i>	<i>9,394</i>	<i>9,285</i>	<i>8,945</i>	<b>8,787</b>	<i>8,865</i>	<i>9,015</i>
Air Travel Capacity															
(Available ton-miles/day, thousands) .....	<b>548</b>	<b>603</b>	<b>609</b>	<b>578</b>	<i>567</i>	<i>594</i>	<i>595</i>	<i>579</i>	<i>571</i>	<i>597</i>	<i>600</i>	<i>588</i>	<b>585</b>	<i>584</i>	<i>589</i>
Aircraft Utilization															
(Revenue ton-miles/day, thousands) .....	<b>326</b>	<b>366</b>	<b>375</b>	<b>356</b>	<i>341</i>	<i>362</i>	<i>368</i>	<i>359</i>	<i>344</i>	<i>368</i>	<i>373</i>	<i>364</i>	<b>356</b>	<i>358</i>	<i>362</i>
Airline Ticket Price Index															
(index, 1982-1984=100) .....	<b>281.8</b>	<b>305.0</b>	<b>273.0</b>	<b>271.9</b>	<i>281.1</i>	<i>308.9</i>	<i>288.5</i>	<i>297.6</i>	<i>299.4</i>	<i>324.0</i>	<i>300.5</i>	<i>308.4</i>	<b>282.9</b>	<i>294.0</i>	<i>308.1</i>
Raw Steel Production															
(million short tons per day) .....	<b>0.238</b>	<b>0.247</b>	<b>0.238</b>	<b>0.230</b>	<i>0.242</i>	<i>0.240</i>	<i>0.211</i>	<i>0.178</i>	<i>0.227</i>	<i>0.231</i>	<i>0.212</i>	<i>0.173</i>	<b>0.239</b>	<i>0.217</i>	<i>0.210</i>
<b>Carbon Dioxide (CO<sub>2</sub>) Emissions (million metric tons)</b>															
Petroleum .....	<b>571</b>	<b>572</b>	<b>589</b>	<b>580</b>	<i>564</i>	<i>577</i>	<i>593</i>	<i>583</i>	<i>571</i>	<i>582</i>	<i>598</i>	<i>590</i>	<b>2,311</b>	<i>2,317</i>	<i>2,341</i>
Natural Gas .....	<b>440</b>	<b>328</b>	<b>343</b>	<b>374</b>	<i>436</i>	<i>322</i>	<i>331</i>	<i>384</i>	<i>453</i>	<i>329</i>	<i>340</i>	<i>390</i>	<b>1,485</b>	<i>1,473</i>	<i>1,513</i>
Coal .....	<b>308</b>	<b>297</b>	<b>415</b>	<b>343</b>	<i>332</i>	<i>308</i>	<i>403</i>	<i>341</i>	<i>347</i>	<i>308</i>	<i>398</i>	<i>341</i>	<b>1,363</b>	<i>1,383</i>	<i>1,395</i>
Total Energy (c) .....	<b>1,322</b>	<b>1,199</b>	<b>1,349</b>	<b>1,298</b>	<i>1,335</i>	<i>1,209</i>	<i>1,330</i>	<i>1,310</i>	<i>1,374</i>	<i>1,222</i>	<i>1,339</i>	<i>1,324</i>	<b>5,168</b>	<i>5,185</i>	<i>5,260</i>

- = no data available

SAAR = Seasonally-adjusted annual rate

(a) Fuel share weights of individual sector indices based on EIA *Manufacturing Energy Consumption Survey*.

(b) Total highway travel includes gasoline and diesel fuel vehicles.

(c) Includes electric power sector use of geothermal energy and non-biomass waste.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.**Historical data:** Latest data available from U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Statistical release G17; Federal Highway Administration; and Federal Aviation Administration. Minor discrepancies with published historical data are due to independent rounding.**Projections:** EIA Regional Short-Term Energy Model. Macroeconomic projections are based on Global Insight Model of the U.S. Economy.