

**Table 8. U.S. Renewable Energy Consumption (Quadrillion Btu)**

U.S. Energy Information Administration | Short-Term Energy Outlook - December 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
<b>Electric Power Sector</b>															
Hydroelectric Power (a) .....	<b>0.684</b>	<b>0.594</b>	<b>0.538</b>	<b>0.560</b>	<b>0.728</b>	<b>0.701</b>	<b>0.540</b>	<i>0.607</i>	<i>0.623</i>	<i>0.704</i>	<i>0.630</i>	<i>0.534</i>	<b>2.376</b>	<i>2.577</i>	<i>2.491</i>
Wood Biomass (b) .....	<b>0.064</b>	<b>0.057</b>	<b>0.065</b>	<b>0.058</b>	<b>0.061</b>	<b>0.049</b>	<b>0.060</b>	<i>0.062</i>	<i>0.066</i>	<i>0.060</i>	<i>0.074</i>	<i>0.068</i>	<b>0.244</b>	<i>0.232</i>	<i>0.267</i>
Waste Biomass (c) .....	<b>0.066</b>	<b>0.068</b>	<b>0.074</b>	<b>0.074</b>	<b>0.070</b>	<b>0.072</b>	<b>0.072</b>	<i>0.069</i>	<i>0.066</i>	<i>0.067</i>	<i>0.070</i>	<i>0.067</i>	<b>0.281</b>	<i>0.284</i>	<i>0.271</i>
Wind .....	<b>0.431</b>	<b>0.460</b>	<b>0.387</b>	<b>0.534</b>	<b>0.575</b>	<b>0.529</b>	<b>0.452</b>	<i>0.548</i>	<i>0.572</i>	<i>0.616</i>	<i>0.457</i>	<i>0.598</i>	<b>1.812</b>	<i>2.103</i>	<i>2.244</i>
Geothermal .....	<b>0.037</b>	<b>0.037</b>	<b>0.036</b>	<b>0.038</b>	<b>0.040</b>	<b>0.039</b>	<b>0.040</b>	<i>0.041</i>	<i>0.040</i>	<i>0.040</i>	<i>0.041</i>	<i>0.040</i>	<b>0.148</b>	<i>0.161</i>	<i>0.161</i>
Solar .....	<b>0.044</b>	<b>0.069</b>	<b>0.070</b>	<b>0.049</b>	<b>0.061</b>	<b>0.093</b>	<b>0.108</b>	<i>0.072</i>	<i>0.077</i>	<i>0.140</i>	<i>0.137</i>	<i>0.084</i>	<b>0.233</b>	<i>0.334</i>	<i>0.439</i>
Subtotal .....	<b>1.326</b>	<b>1.286</b>	<b>1.170</b>	<b>1.312</b>	<b>1.535</b>	<b>1.484</b>	<b>1.272</b>	<i>1.399</i>	<i>1.445</i>	<i>1.628</i>	<i>1.409</i>	<i>1.391</i>	<b>5.094</b>	<i>5.690</i>	<i>5.873</i>
<b>Industrial Sector</b>															
Hydroelectric Power (a) .....	<b>0.004</b>	<b>0.003</b>	<b>0.002</b>	<b>0.003</b>	<b>0.004</b>	<b>0.003</b>	<b>0.002</b>	<i>0.003</i>	<i>0.004</i>	<i>0.003</i>	<i>0.002</i>	<i>0.003</i>	<b>0.013</b>	<i>0.013</i>	<i>0.012</i>
Wood Biomass (b) .....	<b>0.324</b>	<b>0.320</b>	<b>0.324</b>	<b>0.321</b>	<b>0.316</b>	<b>0.310</b>	<b>0.317</b>	<i>0.315</i>	<i>0.305</i>	<i>0.301</i>	<i>0.312</i>	<i>0.314</i>	<b>1.290</b>	<i>1.258</i>	<i>1.232</i>
Waste Biomass (c) .....	<b>0.046</b>	<b>0.049</b>	<b>0.050</b>	<b>0.049</b>	<b>0.047</b>	<b>0.047</b>	<b>0.048</b>	<i>0.051</i>	<i>0.050</i>	<i>0.049</i>	<i>0.047</i>	<i>0.052</i>	<b>0.195</b>	<i>0.193</i>	<i>0.198</i>
Geothermal .....	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<b>0.004</b>	<i>0.004</i>	<i>0.004</i>
Biofuel Losses and Co-products (f) .....	<b>0.189</b>	<b>0.192</b>	<b>0.195</b>	<b>0.199</b>	<b>0.196</b>	<b>0.193</b>	<b>0.202</b>	<i>0.203</i>	<i>0.197</i>	<i>0.199</i>	<i>0.202</i>	<i>0.203</i>	<b>0.776</b>	<i>0.794</i>	<i>0.800</i>
Subtotal .....	<b>0.568</b>	<b>0.570</b>	<b>0.576</b>	<b>0.578</b>	<b>0.567</b>	<b>0.559</b>	<b>0.574</b>	<i>0.577</i>	<i>0.561</i>	<i>0.557</i>	<i>0.568</i>	<i>0.577</i>	<b>2.292</b>	<i>2.277</i>	<i>2.263</i>
<b>Commercial Sector</b>															
Wood Biomass (b) .....	<b>0.018</b>	<b>0.018</b>	<b>0.018</b>	<b>0.018</b>	<b>0.018</b>	<b>0.018</b>	<b>0.019</b>	<i>0.019</i>	<i>0.019</i>	<i>0.019</i>	<i>0.020</i>	<i>0.019</i>	<b>0.073</b>	<i>0.074</i>	<i>0.078</i>
Waste Biomass (c) .....	<b>0.013</b>	<b>0.010</b>	<b>0.010</b>	<b>0.012</b>	<b>0.012</b>	<b>0.011</b>	<b>0.012</b>	<i>0.012</i>	<i>0.012</i>	<i>0.011</i>	<i>0.011</i>	<i>0.013</i>	<b>0.045</b>	<i>0.048</i>	<i>0.047</i>
Geothermal .....	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<b>0.020</b>	<i>0.020</i>	<i>0.020</i>
Subtotal .....	<b>0.049</b>	<b>0.051</b>	<b>0.052</b>	<b>0.049</b>	<b>0.052</b>	<b>0.057</b>	<b>0.059</b>	<i>0.053</i>	<i>0.055</i>	<i>0.061</i>	<i>0.061</i>	<i>0.054</i>	<b>0.200</b>	<i>0.220</i>	<i>0.231</i>
<b>Residential Sector</b>															
Wood Biomass (b) .....	<b>0.106</b>	<b>0.108</b>	<b>0.109</b>	<b>0.109</b>	<b>0.096</b>	<b>0.096</b>	<b>0.100</b>	<i>0.105</i>	<i>0.106</i>	<i>0.106</i>	<i>0.106</i>	<i>0.106</i>	<b>0.432</b>	<i>0.397</i>	<i>0.426</i>
Geothermal .....	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>	<i>0.011</i>	<i>0.011</i>	<i>0.011</i>	<i>0.011</i>	<i>0.011</i>	<b>0.041</b>	<i>0.044</i>	<i>0.045</i>
Solar (d) .....	<b>0.024</b>	<b>0.037</b>	<b>0.040</b>	<b>0.029</b>	<b>0.031</b>	<b>0.047</b>	<b>0.050</b>	<i>0.036</i>	<i>0.038</i>	<i>0.058</i>	<i>0.061</i>	<i>0.045</i>	<b>0.130</b>	<i>0.165</i>	<i>0.203</i>
Subtotal .....	<b>0.140</b>	<b>0.155</b>	<b>0.159</b>	<b>0.148</b>	<b>0.138</b>	<b>0.154</b>	<b>0.161</b>	<i>0.153</i>	<i>0.155</i>	<i>0.176</i>	<i>0.179</i>	<i>0.163</i>	<b>0.602</b>	<i>0.606</i>	<i>0.674</i>
<b>Transportation Sector</b>															
Ethanol (e) .....	<b>0.267</b>	<b>0.284</b>	<b>0.293</b>	<b>0.284</b>	<b>0.283</b>	<b>0.290</b>	<b>0.300</b>	<i>0.291</i>	<i>0.277</i>	<i>0.295</i>	<i>0.299</i>	<i>0.294</i>	<b>1.129</b>	<i>1.163</i>	<i>1.165</i>
Biomass-based Diesel (e) .....	<b>0.034</b>	<b>0.059</b>	<b>0.065</b>	<b>0.057</b>	<b>0.051</b>	<b>0.066</b>	<b>0.088</b>	<i>0.076</i>	<i>0.059</i>	<i>0.071</i>	<i>0.086</i>	<i>0.087</i>	<b>0.215</b>	<i>0.281</i>	<i>0.303</i>
Subtotal .....	<b>0.301</b>	<b>0.343</b>	<b>0.359</b>	<b>0.341</b>	<b>0.334</b>	<b>0.356</b>	<b>0.385</b>	<i>0.367</i>	<i>0.336</i>	<i>0.366</i>	<i>0.385</i>	<i>0.381</i>	<b>1.344</b>	<i>1.442</i>	<i>1.468</i>
<b>All Sectors Total</b>															
Hydroelectric Power (a) .....	<b>0.687</b>	<b>0.598</b>	<b>0.540</b>	<b>0.563</b>	<b>0.732</b>	<b>0.705</b>	<b>0.543</b>	<i>0.611</i>	<i>0.627</i>	<i>0.708</i>	<i>0.632</i>	<i>0.537</i>	<b>2.389</b>	<i>2.590</i>	<i>2.504</i>
Wood Biomass (b) .....	<b>0.512</b>	<b>0.503</b>	<b>0.518</b>	<b>0.508</b>	<b>0.492</b>	<b>0.473</b>	<b>0.497</b>	<i>0.502</i>	<i>0.497</i>	<i>0.487</i>	<i>0.512</i>	<i>0.507</i>	<b>2.040</b>	<i>1.963</i>	<i>2.004</i>
Waste Biomass (c) .....	<b>0.126</b>	<b>0.125</b>	<b>0.130</b>	<b>0.132</b>	<b>0.128</b>	<b>0.129</b>	<b>0.131</b>	<i>0.133</i>	<i>0.128</i>	<i>0.127</i>	<i>0.128</i>	<i>0.132</i>	<b>0.514</b>	<i>0.521</i>	<i>0.516</i>
Wind .....	<b>0.431</b>	<b>0.460</b>	<b>0.387</b>	<b>0.534</b>	<b>0.575</b>	<b>0.529</b>	<b>0.452</b>	<i>0.548</i>	<i>0.572</i>	<i>0.616</i>	<i>0.457</i>	<i>0.598</i>	<b>1.812</b>	<i>2.103</i>	<i>2.244</i>
Geothermal .....	<b>0.057</b>	<b>0.056</b>	<b>0.056</b>	<b>0.056</b>	<b>0.057</b>	<b>0.056</b>	<b>0.057</b>	<i>0.058</i>	<i>0.058</i>	<i>0.057</i>	<i>0.058</i>	<i>0.058</i>	<b>0.224</b>	<i>0.229</i>	<i>0.230</i>
Solar .....	<b>0.086</b>	<b>0.132</b>	<b>0.136</b>	<b>0.096</b>	<b>0.112</b>	<b>0.169</b>	<b>0.185</b>	<i>0.127</i>	<i>0.136</i>	<i>0.229</i>	<i>0.229</i>	<i>0.150</i>	<b>0.450</b>	<i>0.594</i>	<i>0.744</i>
Ethanol (e) .....	<b>0.272</b>	<b>0.289</b>	<b>0.298</b>	<b>0.289</b>	<b>0.287</b>	<b>0.295</b>	<b>0.305</b>	<i>0.301</i>	<i>0.282</i>	<i>0.300</i>	<i>0.304</i>	<i>0.299</i>	<b>1.148</b>	<i>1.188</i>	<i>1.184</i>
Biomass-based Diesel (e) .....	<b>0.034</b>	<b>0.059</b>	<b>0.065</b>	<b>0.057</b>	<b>0.051</b>	<b>0.066</b>	<b>0.088</b>	<i>0.076</i>	<i>0.059</i>	<i>0.071</i>	<i>0.086</i>	<i>0.087</i>	<b>0.215</b>	<i>0.281</i>	<i>0.303</i>
Biofuel Losses and Co-products (f) .....	<b>0.189</b>	<b>0.192</b>	<b>0.195</b>	<b>0.199</b>	<b>0.196</b>	<b>0.193</b>	<b>0.202</b>	<i>0.203</i>	<i>0.197</i>	<i>0.199</i>	<i>0.202</i>	<i>0.203</i>	<b>0.776</b>	<i>0.794</i>	<i>0.800</i>
<b>Total Consumption</b> .....	<b>2.384</b>	<b>2.405</b>	<b>2.316</b>	<b>2.428</b>	<b>2.626</b>	<b>2.610</b>	<b>2.435</b>	<i>2.549</i>	<i>2.552</i>	<i>2.788</i>	<i>2.602</i>	<i>2.566</i>	<b>9.533</b>	<i>10.220</i>	<i>10.508</i>

- = no data available

(a) Conventional hydroelectric power only. Hydroelectricity generated by pumped storage is not included in renewable energy.

(b) Wood and wood-derived fuels.

(c) Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.

(d) Includes small-scale solar thermal and photovoltaic energy used in the commercial, industrial, and electric power sectors.

(e) Fuel ethanol and biomass-based diesel consumption in the transportation sector includes production, stock change, and imports less exports. Some biomass-based diesel may be consumed in the residential sector in heating oil.

(f) Losses and co-products from the production of fuel ethanol and biomass-based diesel

**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 EIA databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226 and *Renewable Energy Annual*, DOE/EIA-0603; *Petroleum Supply Monthly*, DOE/EIA-0109.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.