



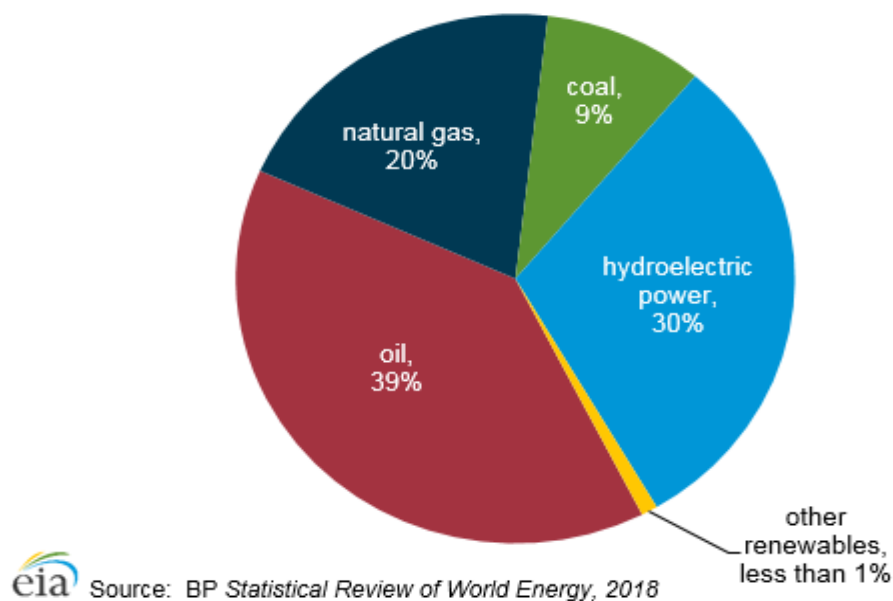
## Country Analysis Executive Summary: Colombia

Last Updated: January 7, 2019

### Overview

- In 2017, Colombia was South America’s largest coal producer and the region’s third-largest oil producer after Venezuela and Brazil. The country is also a significant oil exporter, ranking as the sixth-largest crude oil exporter to the United States in 2017.
- At 39%, oil accounted for the largest share of Colombia’s total energy consumed in 2017. (Figure 1).<sup>1</sup>
- The country relies on hydropower for most of its electricity needs. Despite being a major coal producer Colombia uses very little coal domestically, instead exporting most of its coal production.

**Figure 1. Total energy consumption in Colombia by fuel type, 2017**

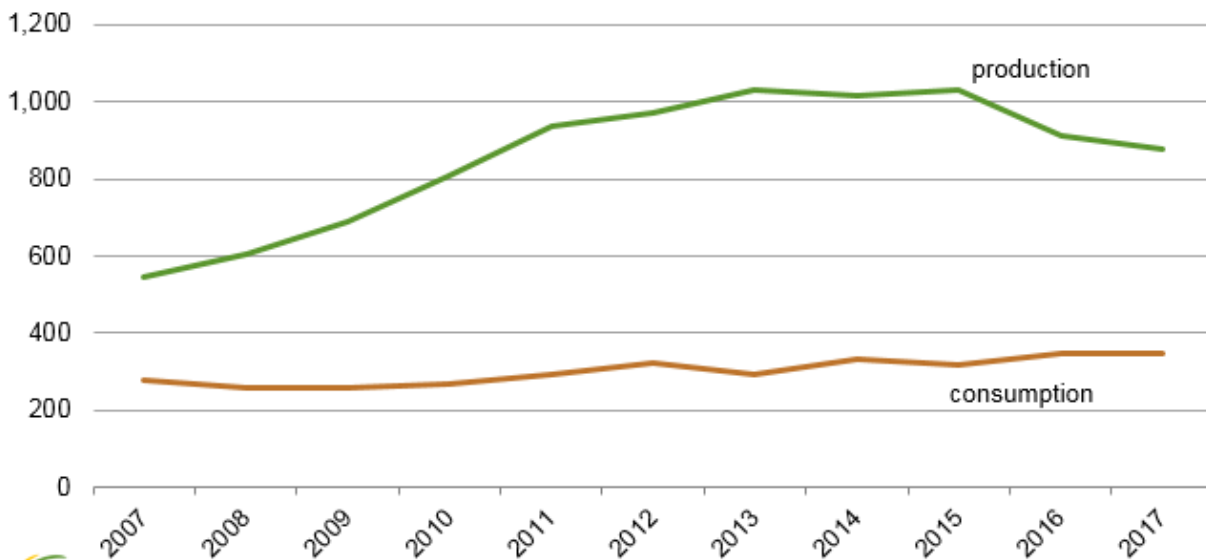


## Petroleum and other liquids

### Exploration and production

- According to the *Oil & Gas Journal*, Colombia had 1.7 billion barrels of proved crude oil reserves at the end of 2017, down 17% from the previous year.<sup>2</sup>
- In 2017, Colombia's total petroleum and other liquids production averaged 879,000 b/d, continuing a declining trend in production (Figure 2).

**Figure 2. Total petroleum and other liquids production and consumption**  
thousand barrels per day



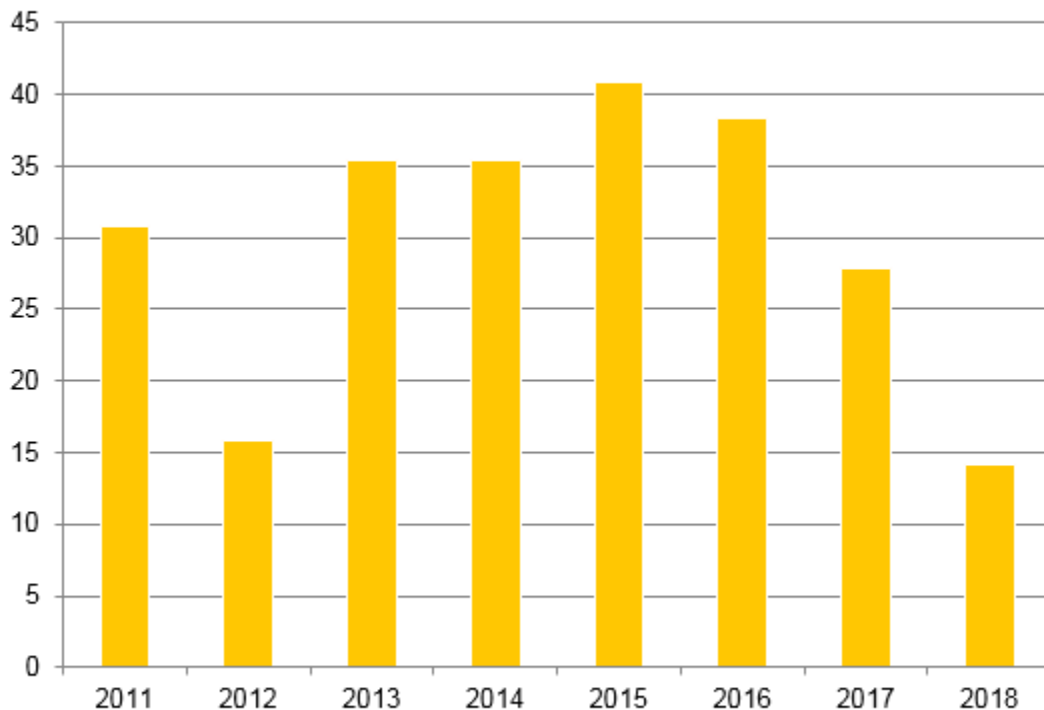
Source: U.S. Energy Information Administration, based on Agencia Nacional de Hidrocarburos de Colombia

### Supply disruptions

- From the beginning of 2018 through November 2018, there have been an average of 11,000 b/d of supply disrupted (Figure 3), largely because of bombings on oil infrastructure. This number would be significantly higher if the Bicentenario crude oil pipeline had not been reversed earlier in 2018 to transit crude oil displaced by the attacks.
- The Caño Limón – Coveñas crude oil pipeline is the most frequent target of militant attacks. In 2017, as a result of bombings attributed to the Colombian National Liberation Army (ELN) rebel group, the pipeline had outages equivalent to it being inoperative 53% of the year.<sup>3</sup> As of November 2018, the oil pipeline had been attacked over 80 times.<sup>4</sup>
- In early 2018, Ecopetrol suspended production at the Castilla, Chichimene, and CPO-9 fields because of violent labor protests.<sup>5</sup>

**Figure 3. Colombian supply disruptions, by year**

thousand barrels per day



Source: U. S. Energy Information Administration *Short-Term Energy Outlook*  
(note: 2018 year to date)

## Refining

- According to the *Oil & Gas Journal*, at the end of 2017 Colombia had 420,000 b/d of crude oil refining capacity at five refineries, four of which are owned by Ecopetrol.
- In 2017, Colombia operated its refining plants at approximately 85% of full utilization.<sup>6</sup> Colombia refinery production reached a new high of 346,000 b/d in 2017 because of the completion of projects at the country's two largest refineries, Cartagena and Barrancabermeja.<sup>7</sup>

## Trade

- Crude oil production far exceeds domestic demand and so the country remains a net crude oil exporter. In 2017, Colombia exported 580,000 b/d of crude oil, a decline from 2016, because of the allocation of domestic crude oil that supplies the Cartagena refinery, which increased domestic demand.<sup>8</sup>
- The United States was the primary destination for crude oil exports, receiving exports of 330,000 b/d in 2017.

## Natural gas

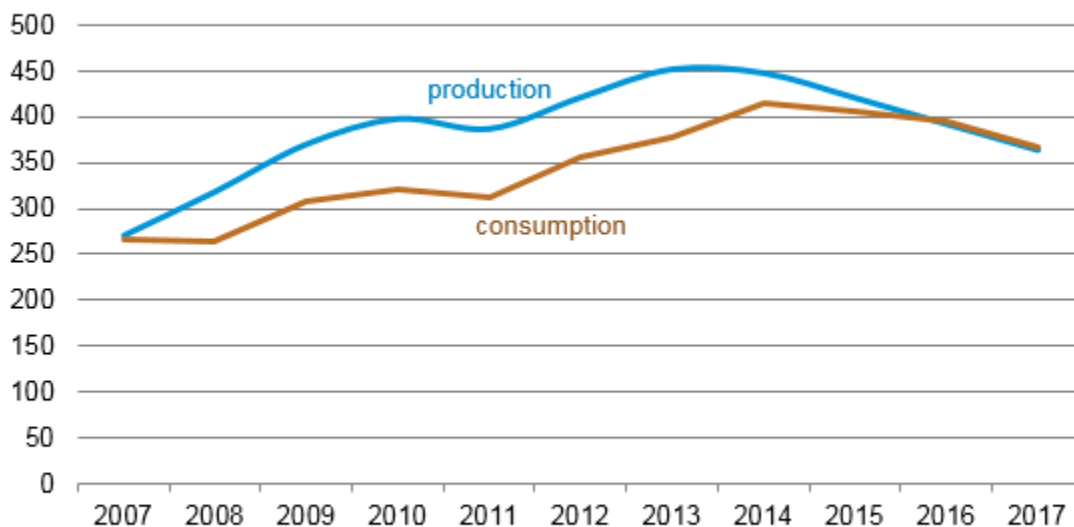
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- Colombia had proved natural gas reserves of nearly 4.02 trillion cubic feet (Tcf) at the end of 2017.<sup>9</sup>
- In the first half of 2018, liquefied natural gas (LNG) imports have been higher than in the previous two years.

### Exploration and production

- In 2017, Colombia produced 363 billion cubic feet (Bcf) of dry natural gas, and it consumed about 368 Bcf (Figure 4).

**Figure 4. Colombian dry natural gas production and consumption**  
billion cubic feet



Source: U.S. Energy Information Administration, based on Agencia Nacional de Hidrocarbos de Colombia

## Coal

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- Colombia had 5.4 trillion short tons of proved coal reserves (mostly bituminous coal) in 2017, the largest in South America.<sup>10</sup>
- The country exports most of the coal it produces and was the fourth-largest coal exporter in the world in 2017 after Australia, Indonesia, and Russia.<sup>11</sup>

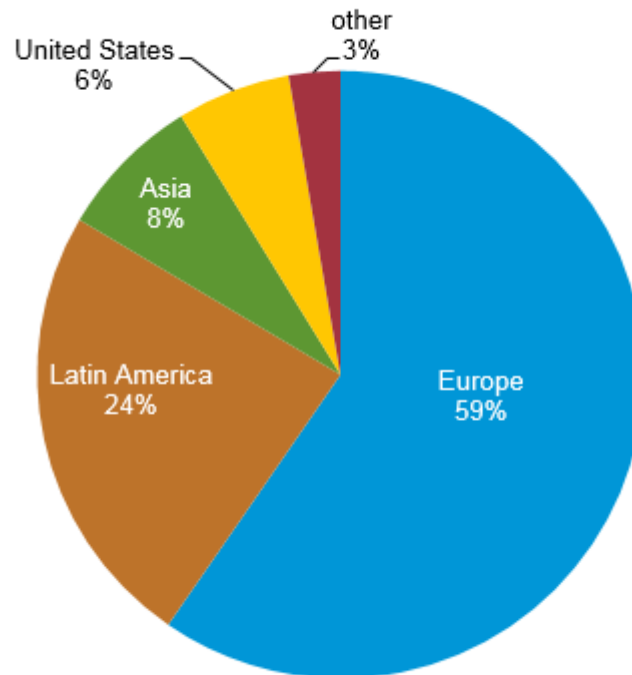
### Exploration and production

- Colombia produced 98.6 million short tons (MMst) of coal in 2017, but only 11.4 MMst was consumed domestically in 2016.<sup>12</sup>

## Trade

- Coal is the country's second-largest export after oil and petroleum products. According to Global Trade Tracker, Colombia exported 113 MMst of coal in 2017, mainly to Europe and Latin America (Figure 5).<sup>13</sup>

Figure 5. Colombia's coal exports by destination, 2017



Source: U.S. Energy Information Administration, based on Global Trade Tracker

- In 2017, Colombian coal was the largest source of U.S. coal imports, accounting for 78% of imports or 6.09 MMst.<sup>14</sup>

## Electricity

- In 2017, Colombia had 16.8 gigawatts (GW) of installed electricity generation capacity.
- Colombia generated 57 billion kilowatt hours (Kwh) and consumed 53 Kwh in 2017. Generation mainly came from renewable resources, accounting for 87% of total generation. Renewable energy sources include hydro, wind, solar, and biomass. Hydropower accounted for more than 80% of all power generation in 2017.<sup>15</sup>
- The first solar plant in the country, Celsia Solar Yumbo, came online September 2017 with an installed capacity of 9.8 MW.<sup>16</sup>

## Trade

- In 2017, Colombia imported 194 GWh of hydroelectricity from Ecuador, down 48% from 2016 as a result of greater water availability in Colombia for hydroelectric generation, as well as additional generation sources overall during 2017.<sup>17</sup>

- Colombia exports to both Ecuador and Venezuela. Exports to Venezuela equaled 0.4 GWh and exports to Ecuador equaled 18.5 GWh in 2017.<sup>18</sup>

## Notes

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- In response to stakeholder feedback, the U.S. Energy Information Administration has revised the format of the Country Analysis Briefs. As of December 2018, updated briefs are available in two complementary formats: the Country Analysis Executive Summary provides an overview of recent developments in a country's energy sector and the Background Reference provides historical context. Archived versions will remain available in the original format.
- Data presented in the text are the most recent available as of December 12, 2018.
- Data are EIA estimates unless otherwise noted.

## Endnotes

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<sup>1</sup> BP *Statistical Review of World Energy 2018*. Accessed August 14, 2018.

<sup>2</sup> Oil & Gas Journal, *Worldwide Reserves*, January 1, 2018.

<sup>3</sup> Ecopetrol, [press release](#), February 28, 2018.

<sup>4</sup> Reuters, "[Colombia Ecopetrol cleans spill after latest bomb attack on Cano Limon pipeline](#)," November 13, 2018.

<sup>5</sup> Reuters, "[Colombia's Cano Limon pipeline hit by three more bombings](#)," February 11, 2018.

<sup>6</sup>FGE, *Latin America Monthly*, February 2, 2018.

<sup>7</sup> Ecopetrol, [press release](#), February 28, 2018.

<sup>8</sup> The Organization of the Petroleum Exporting Countries (OPEC), *Annual Statistical Bulletin, 2018*. Table 5.3: World crude oil exports by country.

<sup>9</sup> Oil & Gas Journal, *Worldwide Reserves*, January 1, 2018.

<sup>10</sup> BP *Statistical Review of World Energy 2018*. Accessed September 18, 2018.

<sup>11</sup> Global Trade Tracker. Accessed September 18, 2018.

<sup>12</sup> BP *Statistical Review of World Energy 2018*. Accessed September 18, 2018.

<sup>13</sup> Global Trade Tracker. Accessed September 18, 2018.

<sup>14</sup> U.S. Energy Information Administration, *Coal Data Browser*. Accessed September 18, 2018.

<sup>15</sup> XM, "[2017 SIN Operation Report and Market Administration](#)."

<sup>16</sup> Celsia webpage. Accessed August 21, 2018.

<sup>17</sup> XM, "[2017 SIN Operation Report and Market Administration](#)."

<sup>18</sup> XM, "[2017 SIN Operation Report and Market Administration](#)."