
Mexico

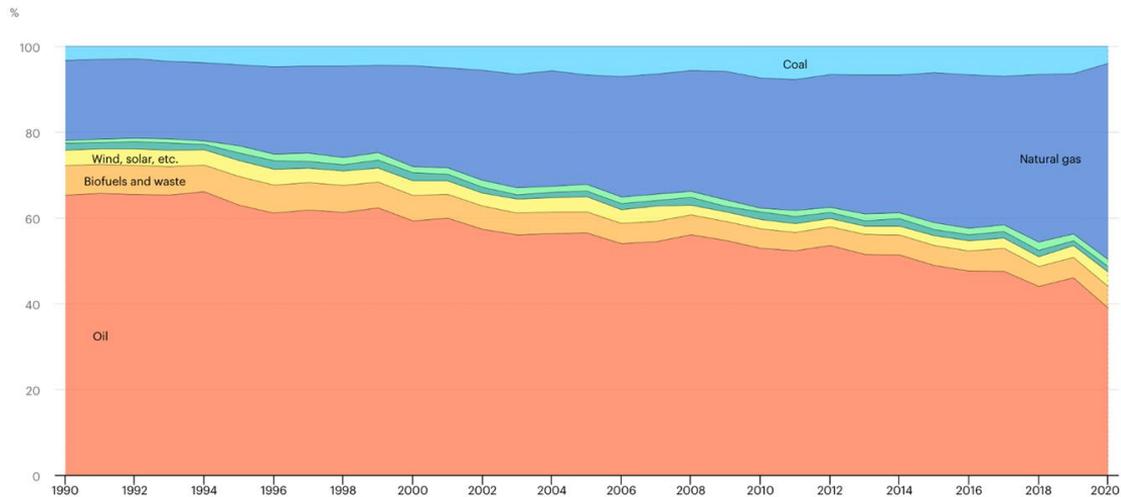
Energy's History &
Renewable Energy

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Total energy supply (TES) by source, Mexico 1990-2020



- According to the chart from the IEA, **Natural gas** is the main source for electricity, a large part imported from the United States.

- **1990**- Mexico's total supply was **968,260.0 TJ**

- **2020**- Mexico's total supply was

3,352,638.0 TJ



What is Natural Gas?

- Natural Gas is composed of 94% methane, small amounts of ethane, propane, butane and pentane.
- Natural gas is formed when plants and animals (organic matter) are trapped beneath the sedimentary layers of the earth.
- Some examples of how natural gas is used **to heat buildings and water**, to operate refrigeration and cooling equipment, to cook, to dry clothes, and to provide outdoor lighting.



Pros & Cons of Natural Gas

PROS

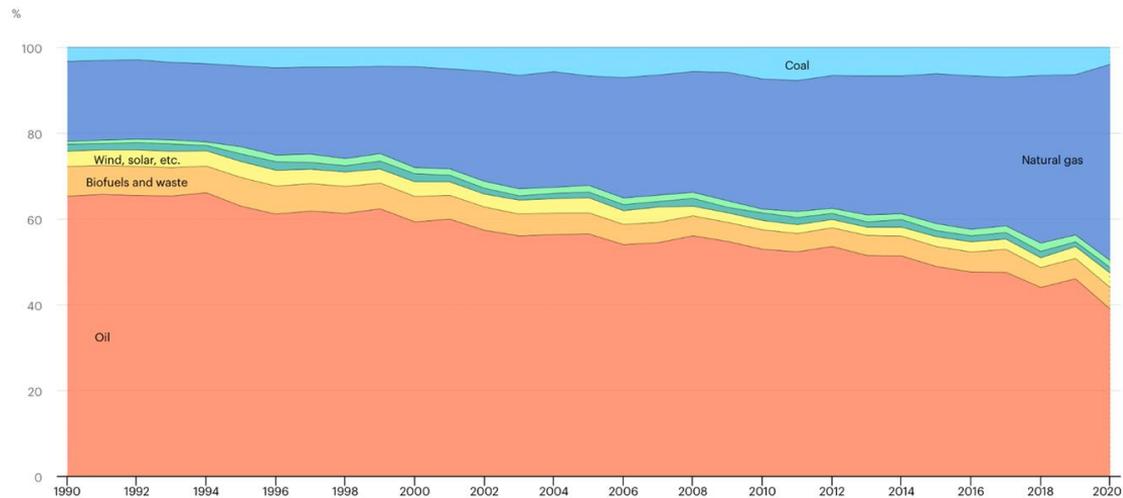
- Major global source of energy
- Cheaper compared to other fossil fuels
- Less harmful waste by-products than other fossil fuels.
- Abundant energy source
- Can be accessed in many countries
- Reliable

CONS

- Greenhouse gas emissions/global warming
- Destruction of habitats due to mining
- High initial costs for homeowners
- Water and soil pollution from fracking
- Fracking may lead to earthquakes
- Air pollution/ Acid rain



Total energy supply (TES) by source, Mexico 1990-2020



- Oil takes a large part on the graph, meaning that it was once the main source of energy in Mexico.
- **1990**- Mexico's total supply was **3,382,597 TJ**
- **2020**- Mexico's total supply was **2,851,413.0 TJ**



Pros & Cons of Oil

Pros

- Our whole infrastructure is built around it
- Rather cheap energy source
- Quite efficient energy source
- Storage of oil is easy
- Reliable energy source
- Local job creation
- Crucial energy source during energy transition process

Cons

- Air pollution
- Ocean pollution
- Greenhouse gas emissions and global warming
- Ozone layer depletion
- Acid rain
- Extraction of oil may destroy habitats
- Finite resource
- Health issues
- Working in the oil industry can be dangerous
- Leaks and accidents



Natural Gas vs. Oil

Natural Gas

1990- Mexico's total supply was

968,260.0 TJ

2020- Mexico's total supply was

3,352,638.0 TJ

Oil

1990- Mexico's total supply was

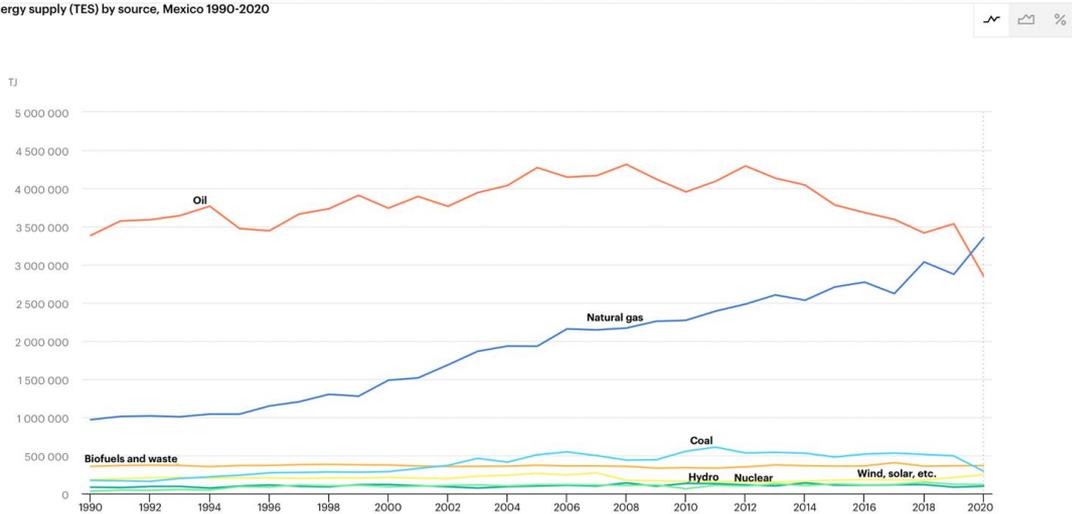
3,382,597 TJ

2020- Mexico's total supply was

2,851,413.0 TJ



Total energy supply (TES) by source, Mexico 1990-2020



- Oil was Mexico's main source of electricity from 1990-2019. In 2019, oil went from **3,535,507.0 TJ** to **2,851,413.0 TJ** in 2020.
- The reason for this change was new **pipeline infrastructure** that required more natural gas.



- Mexico has a fast-growing electricity sector, with demand increasing on average by 1.6% per year since 2000.
- At present Mexico's coverage of electricity is **98%**, which is among the highest in the world.
- Mexico has around **50,000 megawatts** of installed capacity, and are very close to **26 million users**, which includes residential, commercial, agricultural, and industrial.



Renewable Energy

- often referred to as clean energy, comes from natural sources or processes that are constantly replenished.

**Solar and wind energy **



Renewable Energy

- Mexico has had many opportunities to attract solar and wind energy investments, but recent legal and regulatory changes are scaring investors and derailing climate goals.
- Mexico's government has worked to implement reforms that will hinder privately funded renewable energy projects.
- The rule changes allow the country's state-run electricity company, the CFE, to turn away from less expensive electricity produced from solar and wind, and **prioritize** electricity produced by state-run facilities using fossil fuel sources.
- Renewable energy and clean fuel sources only contribute to approximately 26% of the electricity generation of Mexico

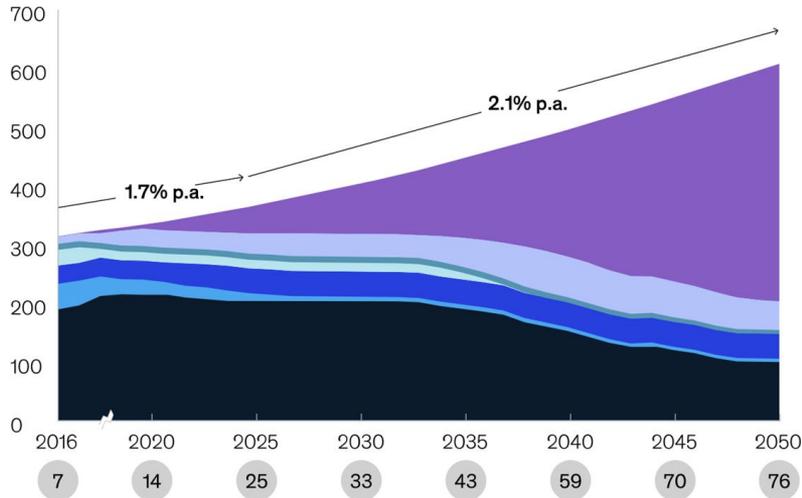


- Lopez Obrador, the president of Mexico, blames wind turbines for **polluting** the visual landscape in rural areas.
- Lopez Obrador is **prioritizing** fossil fuels at the expense of renewable energy.
- US Chamber of Commerce has deemed Obrador's changes **“deeply troubling”**.
- Mexico's National Chamber of the Manufacturing Industry warns that the changes would result in **“poor quality services and higher costs.”**

Mexico's energy sector investment requirements by 2030, \$ billion

■ Solar
 ■ Wind
 ■ Nuclear
 ■ Coal
 ■ Hydro
 ■ Other¹
■ Gas
 ✕ % share of renewable sources²

Mexico's reference case, TWh



2016–50 CAGR, %



- Despite legal matters, renewables have the potential to generate more than 75% of Mexico's power by 2050. Mexico could be a **"powerhouse"** if they play their cards right.

¹ Primarily includes oil, biomass, and geothermal.

² Including biomass, geothermal, hydro, solar, and wind.

Source: McKinsey analysis



Switching from fossil fuels to renewables will benefit the country of Mexico and the environment. Mexico has promise to reach these goals with a little change.

Thank you for listening!



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