GOBIERNO DE LA
REPÚBLICA DE HONDURAS

SECRETARÍA DE ESTADO
EN EL DESPACHO DE ENERGÍA

Country Report

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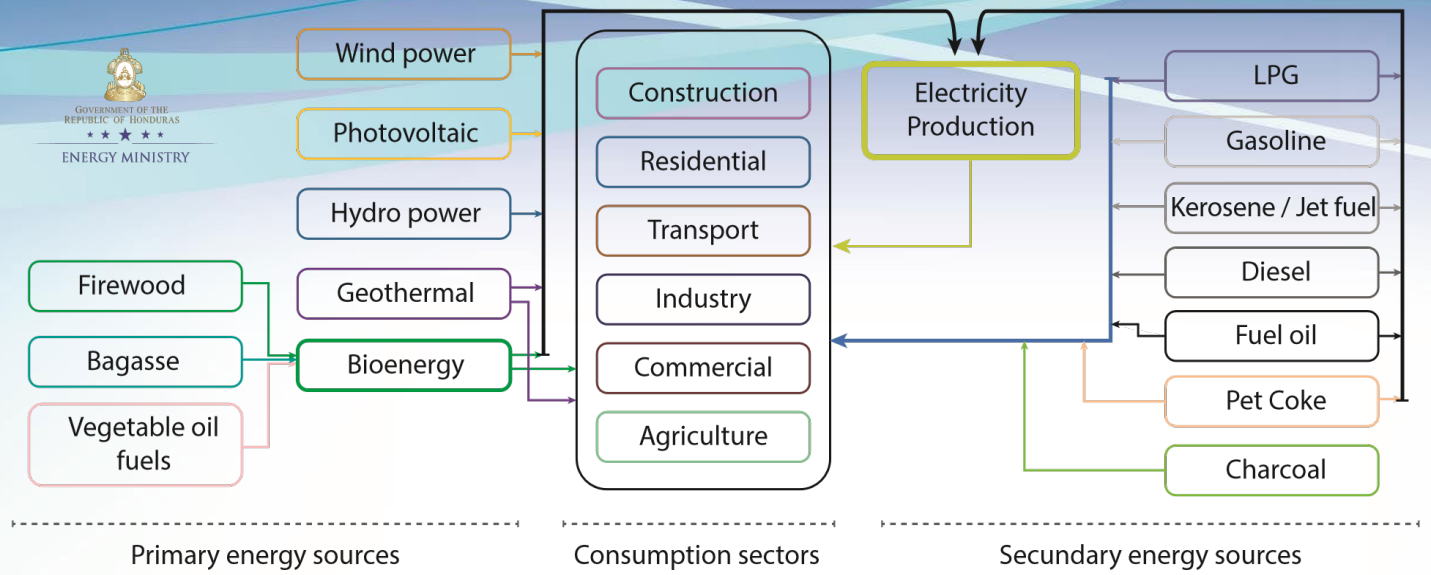
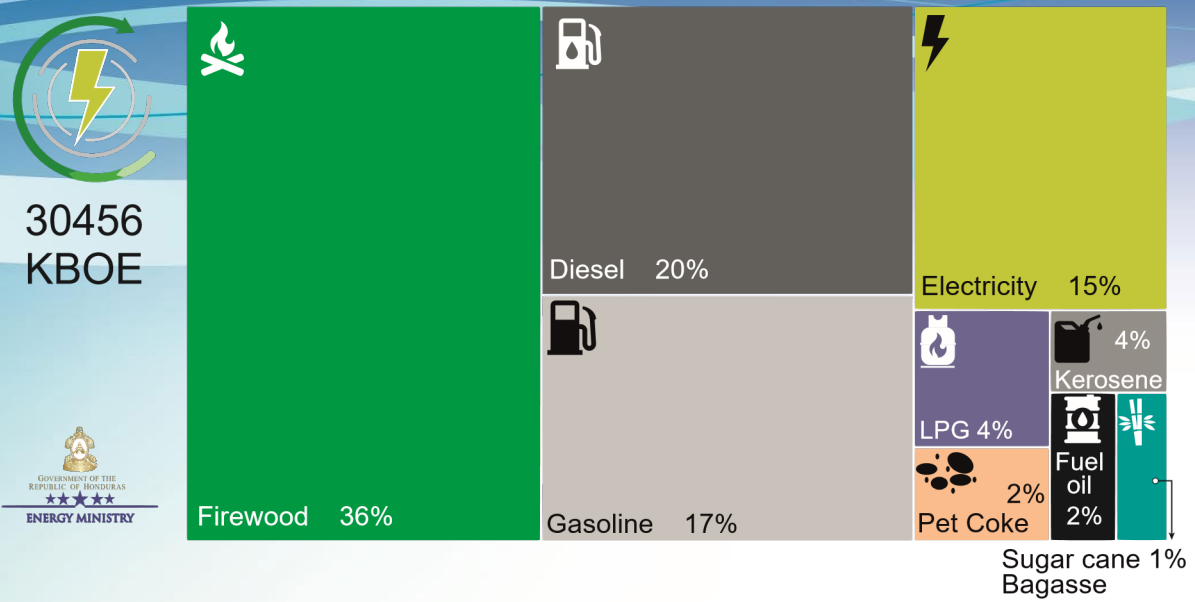
July 5th 2021

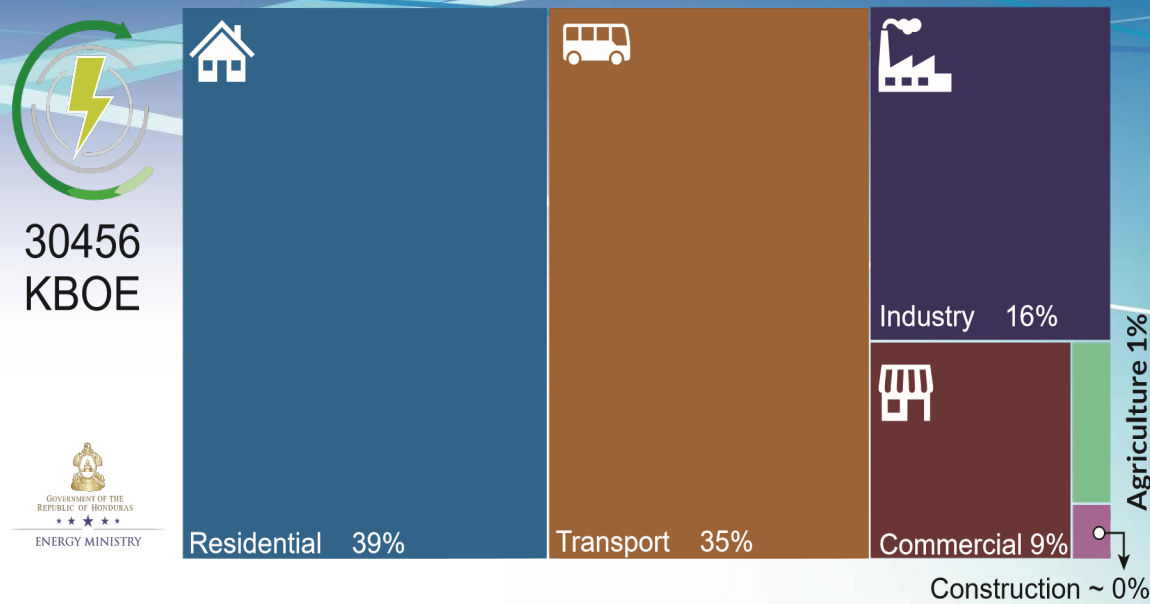
EMPRESA NACIONAL DE
ENERGÍA ELÉCTRICA
ENEE

General Information



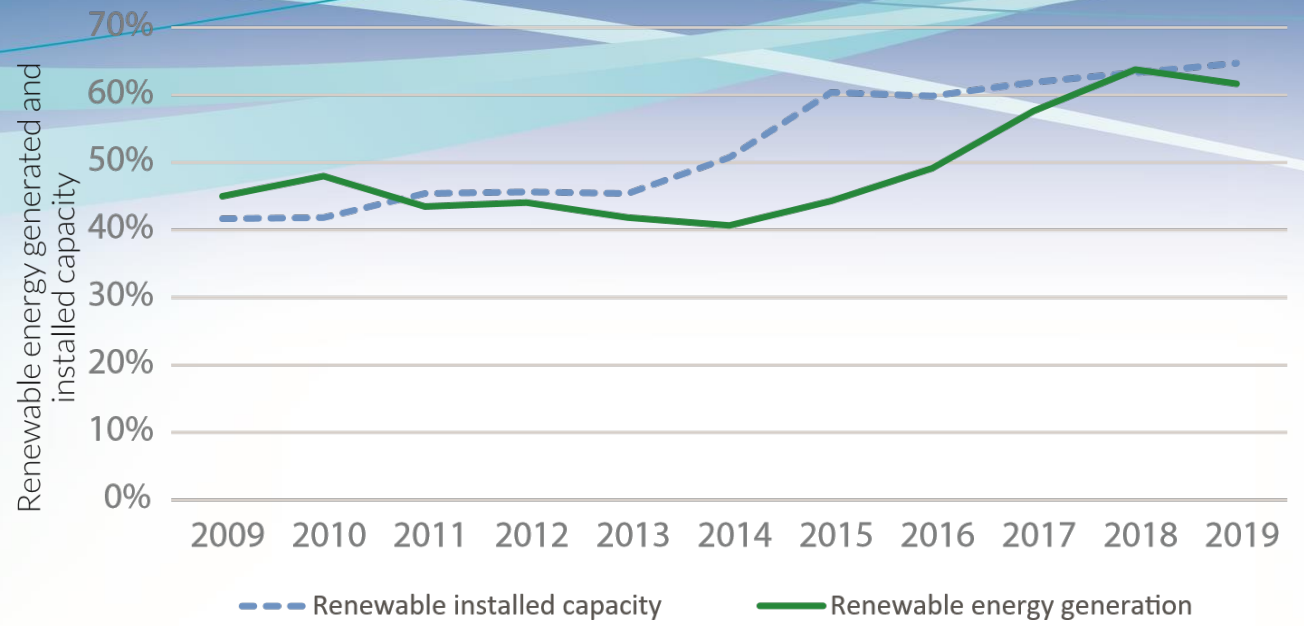
In Honduras, there are 16 energy sources and, some of them, could be used for direct uses or they can be transformed into electricity. In addition, these energy sources are inputs for 6 consumption sectors: Construction, Residential, Transport, Industry, Commercial and, Agriculture.



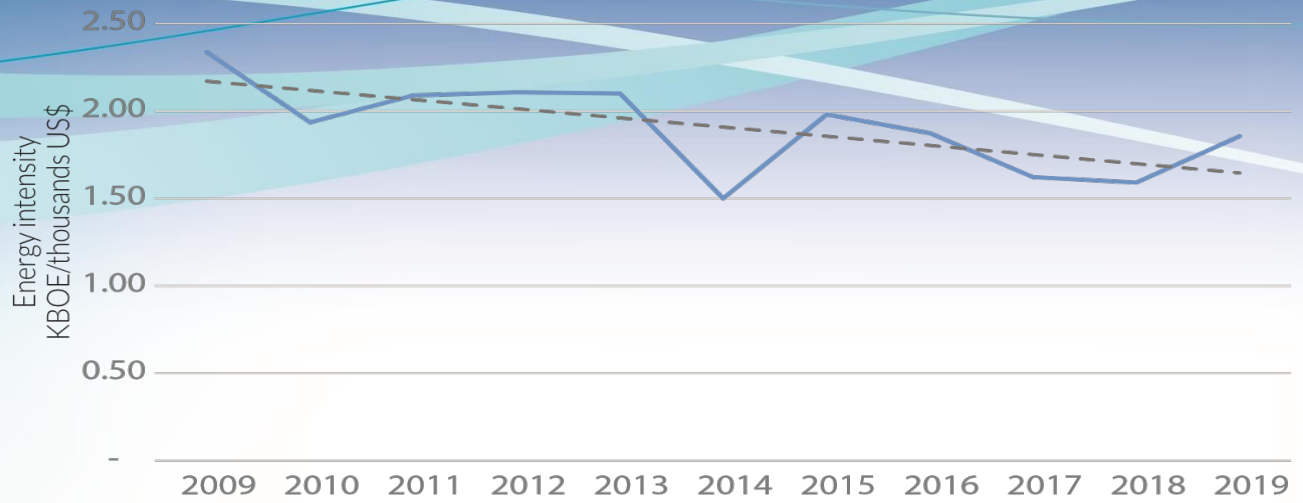


This Energy Balance shows that energy's final consumption in 2019 is 30,456 KBOE which represents an increment of approximately 3% with respect to the final energy consumption reported in 2018.

Furthermore, approximately 75% of the consumed energy in 2019 is demanded by Residential and Transport sectors; the consumption by these sectors are relatively constant with respect to the reports in 2018. In addition, the Industry sector increased in 2%, while Commerce and Construction sectors decreased by 1% and 2%, accordingly.



Additionally, one of Honduras' development goals indicate that to 2038 the electricity generation matrix must be composed by 80% of renewable sources. As of today, Honduras reports to have an electricity generation matrix composed by 60% of renewable sources, in addition Honduras, in less than one decade, increased the participation of renewable sources from 40% to 60%, evidencing the efforts that diverse actors in the country have been conducting to create a cleaner and more robust energy sector.



Government of the Republic of Honduras
Energy Ministry

Now, regarding the energy – economy nexus, Honduras aims to decouple energy consumption and wealth generation. Therefore, to show Honduras' efforts in this nexus, the Ministry of Energy applied the energy intensity index, which associates final energy consumption with the Gross Domestic Product (GDP) in Honduras for a specific year. In this regard, the previous graph shows a 10-year period trend indicating that from 2009 to 2019 as GDP increased the total energy consumed decreased.

Furthermore, about the energy – environment nexus, according to the Ministry of Environment of Honduras about 41% of country's total emissions come from the energy sector and, therefore, depicting the relevance of the energy sector to mitigate greenhouse gas emissions.

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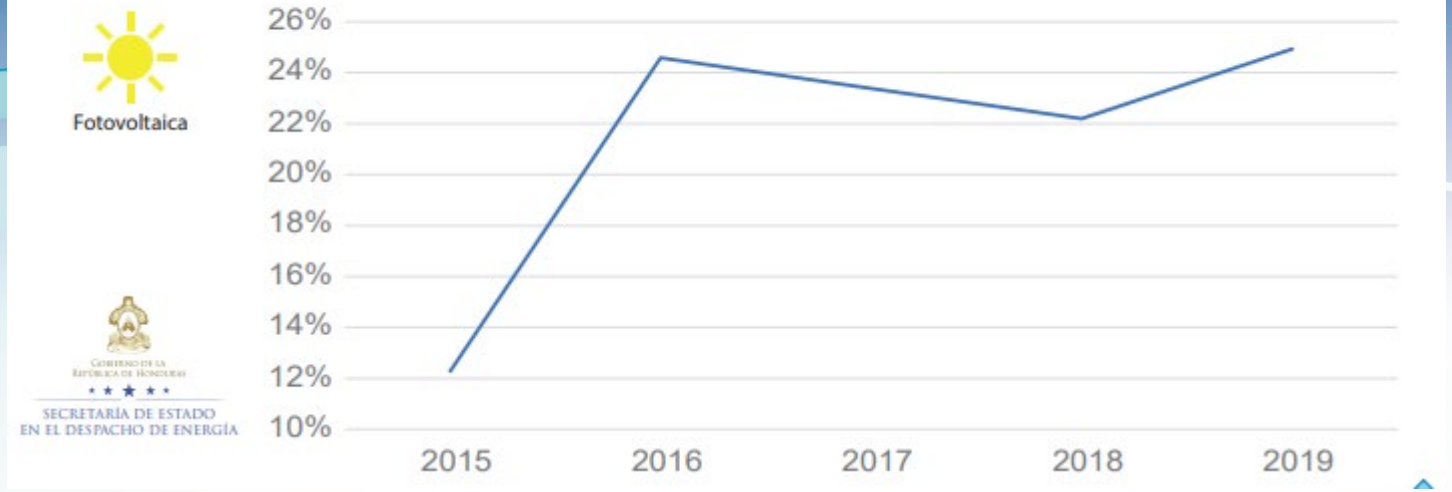
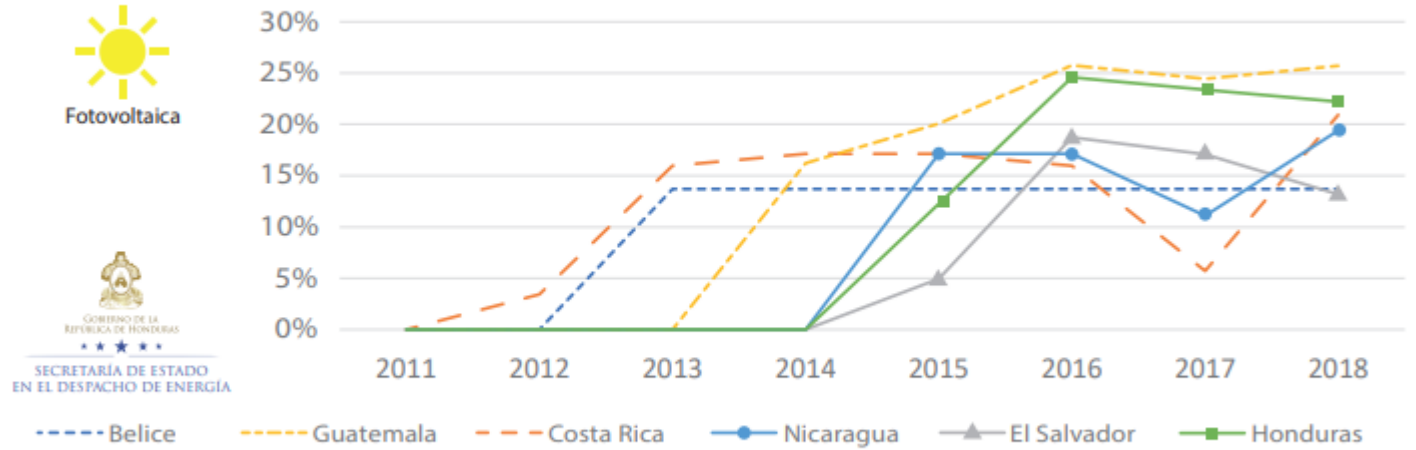
Figura 3: Factor de planta de las generadoras Fotovoltaicas de Honduras



The installed capacity and the plant factor of solar technology showed growth during the 2016-2019 period, currently reaching 510.8 MW and 25%, respectively. Therefore, it is observed that the plant factor has remained between 24% and 26% in the last four years



Fuente: Elaboración Propia con datos de Dirección General de Electricidad y Mercados (2020) y de Comisión Económica para América Latina y El Caribe (CEPAL) (2019).

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Figura 5: Factores de planta de las generadoras Geotérmicas de los países de Centro América

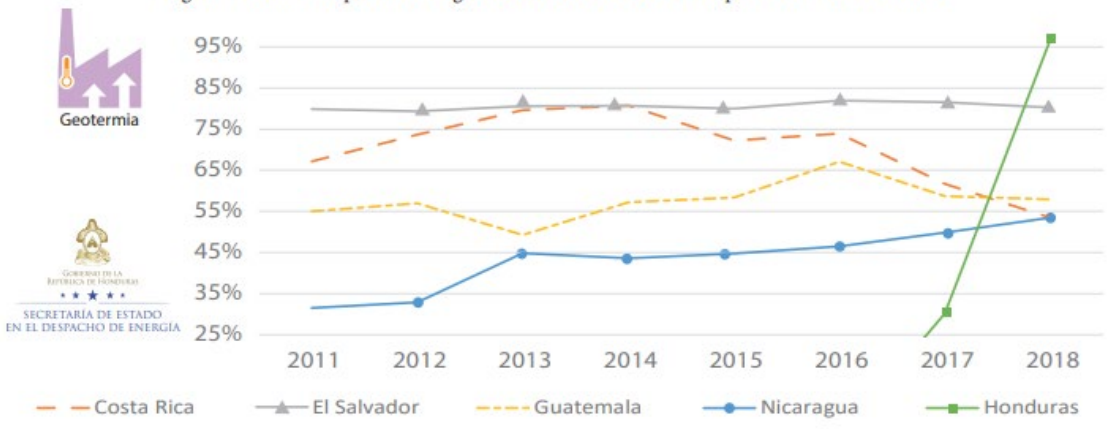
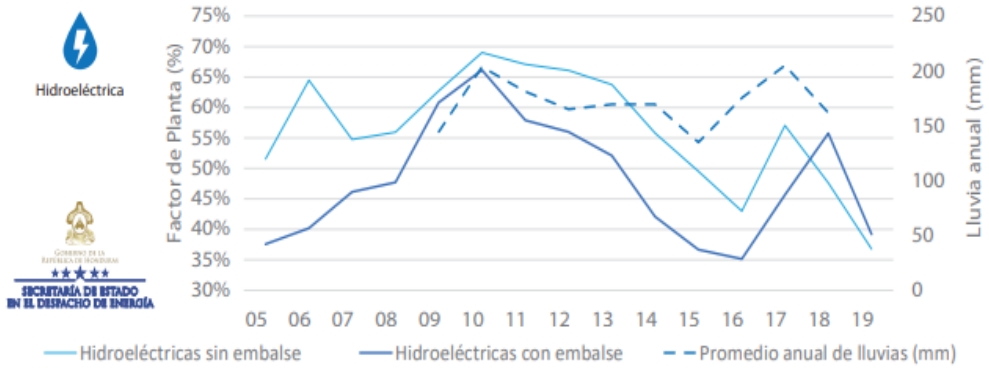
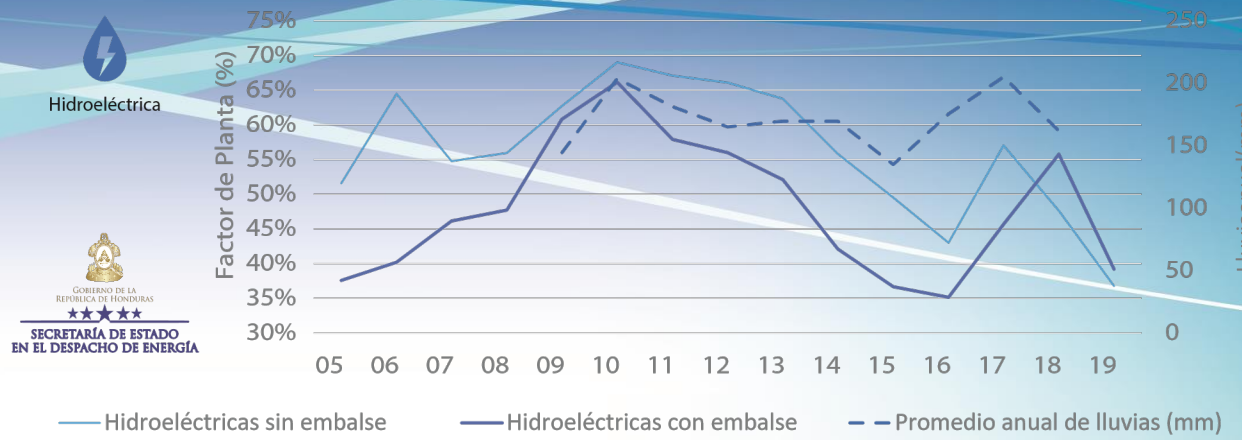


Figura 6: Factor de planta de las Generadoras hidroeléctricas y promedio anual de precipitación



Fuente: Elaboración propia con datos de Dirección General de Electricidad y Mercados (2020) e Instituto Nacional de Estadísticas (INE) (2019).



Also, it is noteworthy that the factor of use of hydroelectric plants without a reservoir has remained on average 47% during 2015-2019. However, these plants have greater generation availability in the station.

Therefore, to generate stable access to electricity, it is necessary to complement this generation with thermal plants based on fossil fuels, particularly during the dry season during which it tends to present the greatest demand for energy and power in the system.

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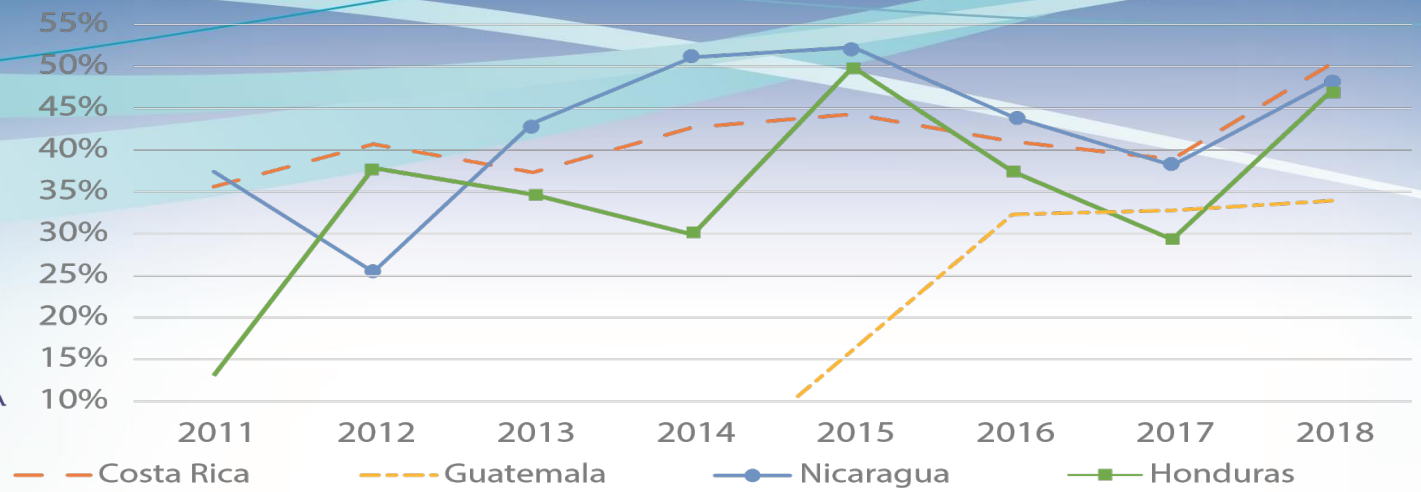
Eólica



Installed capacity with wind resource reached 235 MW in 2019, with which 818 GWh were generated. In Figure 8, the plant factor of the wind generators of the region is shown, where it is observed that the factors of the plants of Honduras have a considerable variation over the years, this can be partially explained by the additions capacity that have occurred over the years (2014, 2016, 2017 and 2019) and, to the variability of the resource that is currently being used. In addition, in this same figure, it is observed that the plant factors of Nicaragua (47%) and Costa Rica (43%) are higher than that of Honduras (39%) for 2018.

Electricidad

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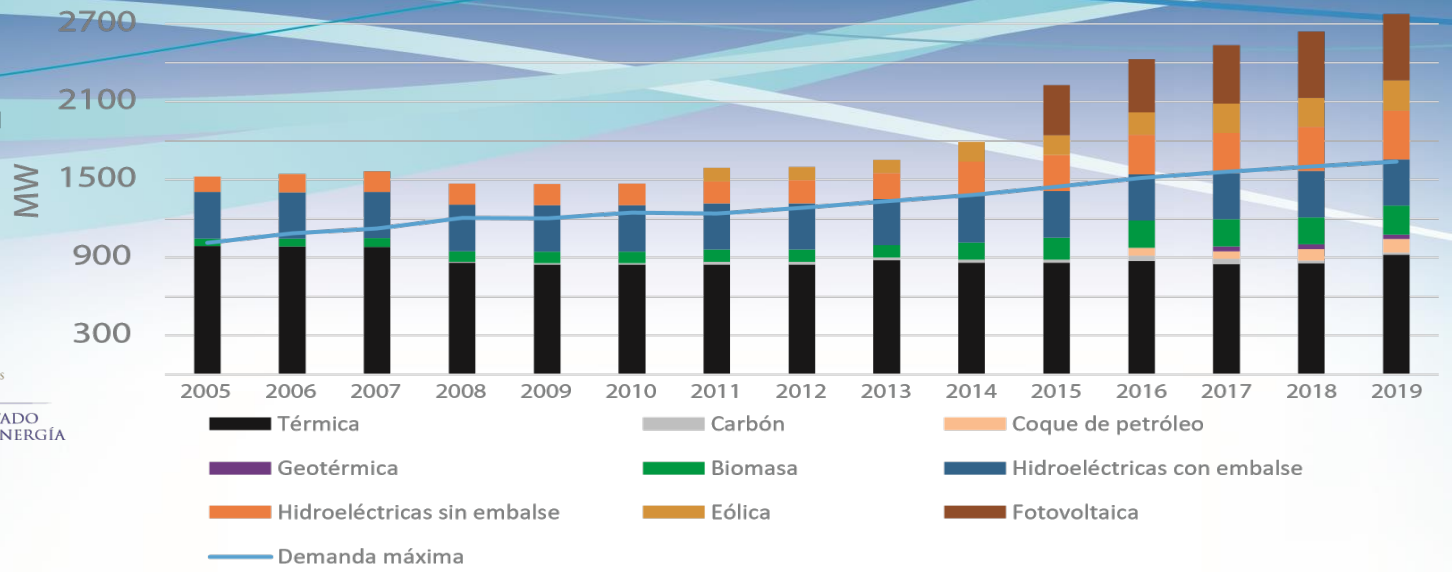

In 2019, the total installed capacity in the SIN was 2,776.3 MW, being 37.6% of generation plants based on petroleum derivatives (bunker, diesel and petroleum coke), thus showing an increase with respect to the capacity reported by these plants in 2018 (36.6%). On the other hand, the remaining 62.4% of installed capacity comes from plants that generate with renewable resources, being the water resource the one with the highest participation.

Prices

Tipo de Generación	USD/kWh
Eólica	0.1484
Solar Fotovoltaica	0.1424
Biomasa	0.1387
Hidroeléctrica	0.1275
Térmica	0.1175
Geotérmica	0.1162

Fuente: Dirección General de Electricidad y Mercados (2020).

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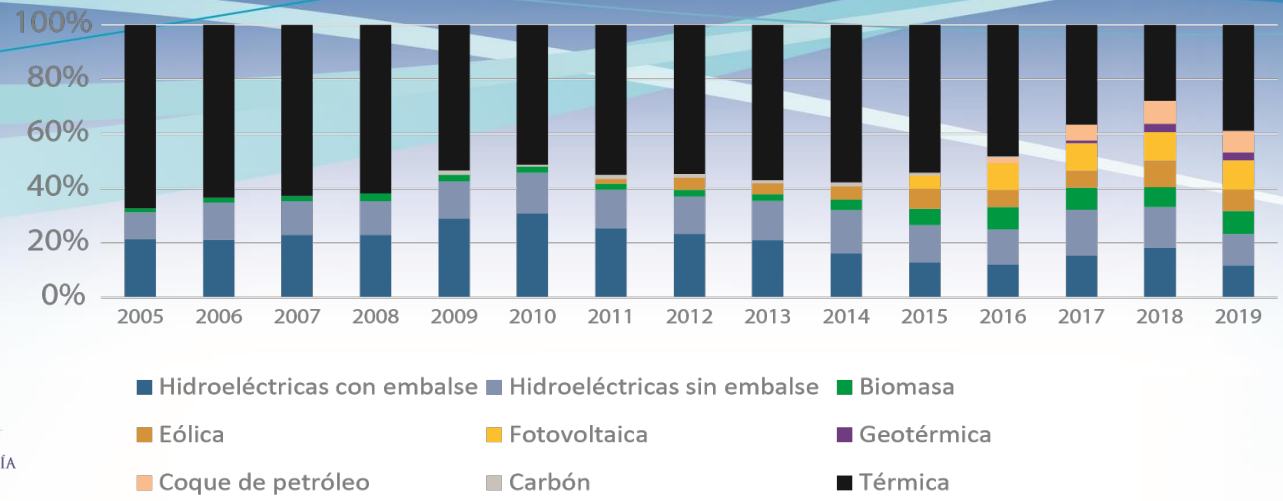
Electricidad



Gobierno de la República de Honduras
Secretaría de Estado en el Despacho de Energía

Because 2019 was a year with a marked drought, generation with hydroelectric sources both with reservoirs and run-of-river decreased in the generation matrix. As a result, these hydroelectric plants contributed only 23% of the energy of the SIN, showing a considerable reduction with respect to the data reported for 2018 (33% of the energy of the SIN). This decrease in the availability of hydropower has been offset through the generation with petroleum derivatives that went from generating 36% of the energy in 2018 to 47% in 2019.

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Empresa Nacional de Energía Eléctrica ENEE

- Difficulties of Energy Policy

- Grid Constraint
- Pressure on Consumers.
- Affect competitiveness
- Non Consensus (Political)
- No international incentives

- Gracias Thank You

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