Electricity consumption iraq

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?2021,, 57.3%,, 36.7%?,,5.9%? 2023,30 ?

Iraq"s electricity generation primarily depends on fossil fuels. In 2021, natural gas was the largest source at 57.3% of the total, followed by oil at 36.7%. Renewable energy, mainly from hydroelectric power, contributed 5.9%.[1] As of 2023[update], the 30 gigawatts (GW) of installed capacity cannot meet summer peak demand.[2]

In 2021, the majority of Iraq"s electricity consumption was attributed to the residential sector, which used 65.0% of the total. This was followed by the commercial and public services sector at 21.6%, and industrial activities at 11.2%. The smallest share was consumed by the agriculture and forestry sector, accounting for only 2.2%.[1]

According to the United States Department of Energy officials, demand for electricity has been stimulated by a growing economy and a surge in consumer purchases of appliances and electronics.[obsolete source][3] In addition, electricity is subsidized in Iraq, which leads to increased demand.[2]

Due to a weak grid and institutional problems many consumers use small generators or rooftop solar panels.[2]

Electricity entered Iraq for the first time in 1917 where the first electric machine was installed in "Khan Dala" building.[4]

Prior to the Gulf War, the total installed generating capacity was 5,100 MW, which fell to about 2,300 MW after the Gulf War. Approximately 87% of the population had access to electricity.[5] A combination of wars, sanctions, looting and vandalism has however, severely affected the entire power system infrastructure in Iraq.

During the 1991 Gulf War, the electricity system suffered severe damage. Several transmission lines were put out of service, electrical substations were damaged. While some of the damage of the 1991 war was repaired and about 4,500 MW of generating capacity was available in 1999 when Iraq reorganized its electricity sector. The sector was separated from the Ministry of Industry, and the Commission of Electricity (CoE) was established on June 21, 1999. About 4,500 MW of generating capacity became available by the end of 2002, power supply remained insufficient and unreliable. Programmed load shedding and unplanned power outages were frequent.[6]

Although the power system was not significantly affected by the last conflict, capacity was reduced to

approximately 3,300 MW by a combination of further breakdowns, lack of spares and interruption of major maintenance cycles. The balance between generation versus demand as reported on 18 July 2004 by the Coalition Project Contracting Office (PCO) (Agency responsible for Coalition projects following the Coalition Provisional Authority (CPA), which completed its mandate as of 30 June 2004) is as follows:

Prewar Baghdad had electricity 16 to 24 hours per day and was favored for distribution. The remainder of Iraq received 4-8 hours of electricity per day.[7] Post war, Baghdad no longer has priority and therefore both Baghdad and the country as a whole received on average 15.5 hours of electricity per day as of February 2010.[8]

The 1990 installed capacity of 9,295 MW consisted of 120 power-generating units in various thermal, gas turbine and hydroelectric power stations. Approximately 70% of Iraq"s installed power generating capacity was damaged or destroyed during the 1991 Gulf War. All major power stations were damaged and nearly 80% of the gas turbines units were affected. After 1991, only about 50 units were available, with a generation capacity of 2,325 MW. The construction work on three new large thermal power stations at Yousifiya, Al-Shemal and Al-Anbar were stopped, because of the ensuing sanctions.[11]

The majority of the power plants in Iraq were built between the mid-1970s and 1980s, with a few small gas-fired plants commissioned in 2003. The majority of the existing power plants are thermal plants that use crude oil supported by gas-fired and hydro plants.[12]