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Energy Policy and Environmental Security Issues in Algeria (2020-2025)

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Summary: Algeria's energy policy is based on a two-pronged approach that combines continued reliance on fossil fuels—which account for 93.6% of exports and 50% of the budget—with the development of energy alternatives such as solar power and green hydrogen, aiming to generate 15 gigawatts of renewable energy by 2035. However, this transition has not yet translated into improved environmental security indicators, as greenhouse gas emissions continue to rise, reaching approximately 295 million metric tons of carbon dioxide equivalent by 2025, while the ecological deficit gap is widening to 240%, meaning that Algeria's ecological footprint exceeds its ecological capacity by more than double. The study indicates that the primary driver of the energy transition remains economic (securing gas for export) rather than environmental, which explains why natural gas continues to dominate the electricity mix at 97% despite promising projects. Structural challenges—including annual growth in domestic energy demand of 2%, continued fossil fuel subsidies, and rentier dependence on hydrocarbon revenues—constitute major obstacles to achieving the desired environmental security. Consequently, the current energy policy holds significant long-term environmental potential, but it has not yet succeeded in reversing the current trend of environmental degradation or decoupling economic growth from rising emissions.

Keywords: Energy; Energy Security; Environmental Security.

Jel Classification Codes: F13; F32; F41

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I- Introduction :

The topic of energy has been of interest to countries for decades, due to its economic importance in achieving economic development projects and operating means of production, as well as its political importance in terms of influence and control.

Despite the diversity of fossil energy sources, from coal to oil and natural gas, in addition to some oily materials, they have been linked to global economic problems that have threatened and continue to threaten the entire world, such that the price of a barrel of oil or a tonne of coal includes the environmental impacts and damage caused by its production.

Coal played an important role as an energy source in the early 20th century, but the undesirable risks of mining it led to oil and gas replacing it to meet those needs later on, as oil became increasingly important in the economies of both producing and consuming countries. Despite the emergence of the terrible disadvantages of oil, especially those related to environmental security, which prompted the world to reconsider its consumption and switch to natural gas as a second source of energy, its consumption has increased rapidly since 1920.

The shift in the concept of development has allowed for a convergence between human rights and the environment, transforming the concept of development from a focus on economic growth to one that adds a human dimension to the latter, by enshrining the human right to a healthy environment free from pollution. Humans need development that meets their needs while taking into account the balance of the ecological system, which will ensure the security of the state and, at the same time, enhance levels of development. Algeria is among the countries that hope to preserve the environment through their energy policies, even though their economies are based on fossil fuels.

Despite the steady increase in global demand for energy, which has been largely supplied by fossil fuels until now, the negative impact of these sources on human life, living organisms and environmental security has convinced Algeria, like other countries around the world, to use clean energy by adopting new sources of this resource. This has prompted countries that recognise the importance of this issue to turn this global need into profitable investment opportunities, especially those countries that possess clean energy production technologies. This leads us to ask the following questions :

To what extent do Algeria's energy policies affect environmental security ? What are the energy alternatives for achieving environmental security in Algeria ?

To address this issue, we have decided to approach the subject according to the following main themes :

The first theme : the conceptual framework of the study

The second theme : an analytical reading of the implications of energy policy on environmental security in Algeria.

The third theme : the means and mechanisms that can be adopted to rationalise energy policy in Algeria and achieve environmental security.

I. Conceptual framework of the study

This topic is linked to a number of concepts and terms that must be defined as an introduction to this study, namely the terms energy, energy policy and environmental security.

I.1. The concept of energy

Energy, in its general sense, refers to the force capable of moving matter, which may be latent and can be converted by humans from one form to another, or it may be in a non-latent form, as is the case with sunlight.

Early humans relied on their physical energy, which then evolved into the use of water energy through the battery machine, and later into the use of coal and oil as energy sources. The term ‘energy’ refers to the sources that have provided most of the energy needs of modern industrialised countries, such as coal, petroleum and natural gas, as a result of the industrial revolution. (Ben Mahad Samir, 2016)

Energy, in its various forms and sources, has been and continues to be the main nerve centre of national economies and an indicator of their success, as it is a measure of progress in all fields, whether economic, social or scientific.

Energy is defined as : ‘the capacity that consumes and causes a change in a material entity, from an initial state that differs in one or more criteria from its final state, corresponding to a

decrease in energy equal to the amount of change in this entity.' It is also defined as : everything that provides us with light and warmth, transports us from one place to another, enables us to extract and cultivate our food from the earth, puts water at our disposal, and drives the machines that serve us."

Table 1: Total Crude Oil and Natural Gas Production in Algeria

Years	2020	2021	2022	2023	2024
Crude Oil (1,000 b/d)	~1.122-1.332	~1.134-1.353	~1.212-1.443	~1.183-1.408	~1.067-1.120
Natural Gas (bcm)	~81.4-93.3	~97.6-101.1	~97.6-101.5	~101.5-102.8	~102.5-103.4

Source : Compiled by researchers based on the Bank of Algeria's annual statistics, and OPEC Annual Statistical Bullet, 2025.

As shown in the table above, oil production declined in 2020 due to supply cuts under the OPEC+ agreement and the impact of the COVID-19 pandemic. However, production recovered in early 2021 as production restrictions were eased and global demand increased. The year 2022 saw a notable increase in production, coinciding with an increase in Algeria's quota within OPEC+. In 2023, production stabilized at high levels compared to 2020, while in 2024, there was a slight decline compared to the previous year, with continued adherence to the alliance's agreements.

As for natural gas, production declined in 2020 due to a drop in global demand at the onset of the COVID-19 pandemic. In 2021, production returned to pre-pandemic levels as European demand rebounded, and it remained at record levels starting in 2022, supported by increased European demand for Algerian gas. In 2023, production remained at very high levels. In 2024, production remained stable at high levels.

I. 2. The concept of energy security

Energy security is one of the security concepts that began to take shape and assume its scientific and practical place among the many variables that followed the post-Cold War era, where it became one of the determinants of national security for states, just like maintaining the status of the state, expansion, and securing borders. This indicates the importance of the economic power of states, especially industrial ones, as energy is the main driver of the economy and development. (Meziani Lotfi, 2012)

The concept of energy security varies from one country to another depending on the nature of the concept of national sovereignty, as well as the relationships between producers and consumers in the energy sector. This concept has evolved in connection with sovereignty over natural resources and the freedom of states to determine the best policies for their exploitation.

Energy security is defined as : 'A concept involving a wide range of relationships between countries and how they interact with each other, and is an integral part of a country's security strategy.' It is also defined as : the availability of usable energy supplies at the point of final consumption, at economically viable prices and in sufficient quantities, with due attention to the promotion of energy efficiency.' In a broader sense, energy security can be defined as 'the security of energy supplies without any obstacles or impediments." (Amina, 2014)

Energy security in Algeria is based mainly on traditional sources of energy such as oil and gas. Oil reserves are estimated at 12.2 billion barrels, representing only 0.9% of global reserves, while Algeria's natural gas reserves rank tenth with 4,504 billion cubic metres. In addition, there are huge reserves of shale gas worth more than 19 trillion cubic metres. Algeria is seeking to keep pace with global trends in the energy sector by diversifying its energy sources while preserving its oil wealth. (Dahmane, 2018)

I. 3. The concept of environmental security

Environmental security is a new concept that emerged after the Cold War and was reinforced by international measures, confirming the need to develop international strategies and mechanisms to address environmental degradation and enrich the field of security studies with issues of environmental degradation and climate change. (Amina, 2014)

The term environmental security combines the concepts of security and the environment, referring to security problems caused by human societies and their negative impact on the nvironment, as well as crises and disasters caused by the environment and the negative effects of this on human society, resulting in a relationship of mutual influence between the environment and society. Developments in recent decades have shown that there are new threats, other than military

risks, that threaten state security and human security, foremost among which are environmental threats. (Al-Nish, 2001)

Environmental security therefore means protecting the environment and natural resources from depletion, extinction and scarcity caused by risks, pollutants and deliberate crimes committed against the development of natural resources and the disruption of the ecological balance. Environmental security also represents the general sense of security felt by humans, which is linked to several factors, including the availability of appropriate living conditions in a healthy environment conducive to a dignified and healthy life, with the necessary protection from environmental risks**.** (Al-Nish, 2001)

Most countries around the world are seeking to develop environmental policies to reduce environmental pollution. Each country now has a legislative system to protect the environment by establishing specific controls and effective measures to protect living organisms and preserve the elements surrounding the environment, with a focus on various means that contribute to improving the environment and preventing its degradation, emphasising the application of environmental standards and specifications, and developing studies related to development, economics and environmental planning in line with the new global situation. (Takouacht Emad, 2011)

Interest in the environmental impacts of energy has grown since the early 1990s, particularly with regard to carbon dioxide and greenhouse gas emissions, as the burning of fossil fuels and deforestation are among the most important causes of changes in the nature of soil and forest land. The repeated use of energy sources also has a direct impact on climate change and living conditions. (Belkacem, 2008)

II- An analytical reading of the repercussions of energy policy on environmental security in Algeria:

Algeria is rich in considerable energy resources, including fossil fuels, which contribute significantly to the national economy. However, this does not make it immune to problems related to this vital resource, particularly with regard to environmental security. Therefore, in this section, we address the reality of both energy policy and environmental security in Algeria (first section) and the extent to which energy policy affects environmental security in the country (second section).

II.1. The reality of energy policy and environmental security in Algeria

We will address the reality of energy policy in Algeria (first), then the reality of environmental security in Algeria (second).

II.1. 1. The reality of energy policy in Algeria

Algeria's economy is largely based on rentierism, relying mainly on the export of energy resources, namely oil and natural gas, which are available in the southern regions. The country's economy therefore depends on ensuring the flow of these two resources and their continuity at a steady pace.

Algeria therefore seeks to achieve the overall objective of its national energy policy, which is to fully recover its oil wealth, by gradually gaining control over foreign interests in Algeria and developing a successful policy that guarantees national supply in the medium and long term, in light of the growing demand for national energy needs, with the need to continuously meet financing needs. (Takouacht Emad, 2011)

Algeria's energy strategy is embodied in a set of laws and principles consistent with its membership in the Organisation of Petroleum Exporting Countries (OPEC). Its energy exploitation has gone through two distinct phases. The first was during the colonial period, which was characterised by the subjugation of Algeria's wealth to the French coloniser. The second phase came after independence, with the nationalisation of Algeria's hydrocarbons, which in turn went through two stages.

The first stage was the nationalisation of the fuel distribution sector in 1967, when Algeria purchased all of British Petroleum's (BP) interests in fuel distribution, as well as its share in the Algiers refinery, increasing Algeria's share from 10% to 20.4%. American and British companies were placed under supervision in preparation for their eventual acquisition through nationalisation or purchase. Subsequently, the American companies Esso and Mobil were nationalised in the field of fuel distribution, making it 100% national. This was followed by Algeria's purchase of Total's share in the Algiers refinery, increasing its stake to 56%. (Takouacht Emad, 2011)

The second phase consisted of nationalising the oil production sector, with the issuance of nationalisation decrees for all non-French companies operating in production in 1970. This nationalisation included Shell, Mobil, Yunomont and Amif. These decisions paved the way for the historic and courageous decision issued by President Houari Boumediene on 24 February 1971 to nationalise all French companies operating in the Algerian Sahara. (Charaf, 2013)
During this period, Decree No. 71-22 was issued on 12 April 1971, defining the framework within which foreign companies could operate in the field of exploration and exploitation of liquid hydrocarbons. This decree abolished the concession system and established a mandatory 51% controlling partnership with Sonatrach for any company wishing to engage in hydrocarbon exploration and production in Algeria.

Another part of Algeria's energy policy, and a reflection of its fundamental objectives, is the maximum hydrocarbon valuation plan for Sonatrach, developed with the assistance of the American company Bechtel, which aims to implement a massive investment programme during the period 1976-2005 This involved drilling 2,000 wells and building seven natural gas liquefaction plants, in addition to seven giant refineries. The cost of this programme was estimated at US$36.4 billion, half of which was to be raised through foreign loans.
The task of implementing the government's energy policy was entrusted to two national institutions under the supervision of the then Ministry of Energy and Petrochemical Industries, namely the national company Sonatrach, which is responsible for oil exploration, production, transportation, refining and marketing, and the national electricity and gas company Sonelgaz, which is responsible for the construction and operation of power plants and the electricity and gas distribution network in the domestic market. (Tassadit Boussein, 2015)

II.1. 2. The reality of environmental security in Algeria

The Algerian government has paid great attention to the environment, as it suffers, like other countries, from many environmental problems such as air and water pollution, urban expansion and desertification. This concern has been reflected in the enactment of laws to protect the environment, in addition to the economic measures that have been adopted and implemented. (Nabil, 2012)

Table 2: The Impact of Different Types of Energy

Type of Energy	Environmental Impact	Details
Fossil Fuels	Strong Negative	Positive shocks increase emissions, while negative shocks weaken the impact
Renewable Energy	Moderately Positive	Reduces emissions by 0.155% for every 1% increase in its share
Technological Innovation	Mixed	Positive impacts reduce emissions, but the overall effect remains limited

Source : Climate Change Tracker Algeria-Progress and Recent Impact 2025.

In view of the serious environmental deterioration indicators in Algeria, the public authorities have sought to adopt a practical national environmental plan, which includes a set of objectives and guidelines for identifying and detecting basic environmental problems. (Nabil, 2012)

As part of the national policy for environmental conservation, Sonatrach is carrying out a series of operations at its production facilities aimed at recovering fugitive gases by recovering associated gas, which is burned at oil fields. According to the company, Algeria has taken the initiative to establish a joint-venture in the environmental field to protect the seas and oceans from pollution resulting from environmental disasters in the hydrocarbon sector. It also organised an international forum on marine pollution caused by hydrocarbons in May 2010. This forum, organised in collaboration with the Organisation of African Petroleum Producing Countries, aims to evaluate risk prevention and intervention systems to combat marine pollution. (Takouacht Emad, 2011)

A special programme for the rehabilitation of refineries has also been included, with a view to bringing facilities into line with international standards and improving the quality of petroleum products. This programme will enable the upgrading and modernisation of processing units, the establishment of a self-monitoring system for air emissions and the improvement of fuel quality through the reduction of sulphur and aromatic compounds. The sector has also committed to

introducing a radical management system to eliminate toxic waste and the risks resulting from conversion and production processes by treating liquid waste, such as used water and drilling mud, etc. (Takouacht Emad, 2011)

The following table shows environmental security performance indicators in Algeria for the period 2020–2025

Table 3: The Impact of Different Types of Energy

Indicator	2020	2024/2025	Environmental Assessment
Total Emissions (million metric tons of CO_2 equivalent)	266.7	~280–290 (estimate)	Increase
Algeria's ranking in Africa's	3rd	3rd	emissions Remains high
Per capita emissions (tons/year)	~5	5	High
Ecological deficit (%)	~200%	240%	Deterioration
Share of renewable energy in the electricity mix	<1% ~	~1–2%	Slight improvement
Methane leaks	~25% of total emissions	remain high	Structural problem

Source : Ourworldindata.org/profile/CO_2/algeria2023.

II.2. The impact of conventional energy on environmental security in Algeria

The extraction of conventional energy from fossil sources involves many processes that have a polluting effect on the environment, given the nature of these sources, which are gaseous, liquid and solid at the same time, causing a great deal of damage to nature and the environment in which we live, both in the short and long term.

Coal, as a fossil source of conventional energy that is being depleted, poses several risks when it is broken down, particularly the risk of methane gas ignition resulting from coal fragmentation, known as 'frie damp', which forms an explosive mixture when combined with air. Not to mention the possibility of coal dust igniting when mixed with air, especially at the surface of the pits in the operating area, which could result in the collapse of the mine and damage to the area. Added to this is the pollution of natural waterways and the land surrounding the mine as a result of the disposal of water used in the fragmentation of coal deposits, which carries coal dust with it. (Meziani Lotfi, 2012)

In many cases, oil extraction from reservoirs also results in pollution of the environment surrounding these deposits and wells, as a result of the dangers associated with exploration or extraction operations. An example of this is the violent explosion-like eruption of petroleum oil from wells into the North Sea in 1977.

As for natural gas, although it is the cleanest of the conventional energy sources, with its extraction causing negligible pollution to nature by 90% compared to the previous sources, it contains a small amount of hydrogen sulphide gas, which, if caught by fire and ignited, can have a devastating effect on the environment.

The transport of conventional energy sources, with the exception of gas, can also have negative effects on the environment, particularly in relation to the intercontinental transport of coal and oil, which can cause severe pollution of seawater, especially when an accident occurs involving one of the tankers, resulting in oil spills that often cover a large area of the sea surface, causing significant damage to all living organisms living near the accident site. (Marginalisation from Tekouacht).

III- Ways and means that can be adopted to rationalise energy policy in Algeria and achieve environmental security.

Algeria hopes and works, like other countries around the world, to strike a balance between energy production and its clean and efficient use. In this regard, energy experts emphasise the need for Algeria to adopt a set of mechanisms to rationalise energy policy in order to address the issue of energy security, as part of its ongoing efforts to ensure environmental security in its various dimensions. These mechanisms are as follows :

III.1 Adopting new energy alternatives to achieve environmental security

As Algeria seeks to build an energy model based on integrating traditional and modern energies to ensure energy security and achieve environmental security, it has developed a programme aimed at developing renewable energies and further promoting energy efficiency. This programme is based on a fundamental strategy of expanding the use of inexhaustible energy resources and attempting to gradually eliminate dependence on fossil fuels. Therefore, the most important renewable energies that Algeria can adopt and exploit in line with the approach of building what is known as energy diversity as a means of ensuring energy security and achieving environmental security are as follows :

III.1.1 Solar energy as an energy alternative to achieve environmental security

Solar energy occupies an important place in the new energy programme, given Algeria's vast desert areas, which can receive large amounts of sunlight which can be converted from solar energy into electrical energy through the installation of electronic panels, or what are known as solar cells, thereby reducing the burden on the fuel sector. (Kaouane Slimane and Djaba Ahmed, 2015)

In this regard, Algeria has adopted a strategy aimed at developing a genuine solar energy industry, with a long-term plan to produce 22,000 megawatts between 2011 and 2030, of which 12,000 megawatts will cover domestic demand and 10,000 megawatts for export. By 2030, more than 37% of national electricity production is expected to come from solar energy. (Sabrina, 2017)

The following are the key statistics and major projects in Algeria:

Table 4: Key Statistics and Projects in Algeria

Index.	Value
Solar radiation	2,500–2,300 kWh/m²/year in desert regions.
Annual sunshine hours	2,000–3,500 hours
Area suitable for solar energy	169,000 km² (capable of generating energy far exceeding national demand)
Projects Under Development	More than 200 solar sites across 46 provinces
Phase 1	(Under Construction): 22 solar sites in southern provinces, with a total capacity of 3,200 MW
Short-term target	3,000 MW by the end of 2026
Strategic target for 2035	15,000 MW of renewable energy (mostly solar and wind)

Source : CDER 2026.

Algeria's strategy aims to achieve environmental and economic benefits through solar energy by :

- ✓ **Reducing dependence on gas** : The development of solar energy will reduce the use of natural gas in domestic electricity generation, thereby freeing up this raw material for export or for higher-value-added uses.
- ✓ **Providing green electricity** : The first 400 megawatts of solar power have already begun feeding into the national power grid.

III.1.2 Wind energy

Wind energy is characterised by its advanced technologies and self-operating generators that do not require continuous maintenance or fuel. It also does not release carbon dioxide, which protects the environment from pollution and ensures environmental security. Therefore, the use of wind energy as an alternative energy source contributes to economic growth and saves a lot of money. (Nisima & i Abdelaziz)

In order to develop interest in wind energy in Algeria, which accounted for only 3% of renewable energy sources in 2011, a programme was put in place to develop wind power during the period 2010-2014. In addition, plans have been drawn up to identify sites with high wind activity in Algeria, with a view to increasing wind power production by 2015. (Sabrina, 2017)

III.1.3 Hydroelectric power

Hydroelectric power is a mature technology and one of the most common alternative energy sources. It is generated by harnessing the kinetic and potential energy of flowing water, which can be converted into mechanical energy by a turbine wheel, which in turn drives machines and electric generators. (Nisima & i Abdelaziz)

In Algeria, despite the amount of rainfall, the amount of water used is negligible compared to European countries, which leads to the evaporation of this water due to heat, or its rapid flow towards the sea or towards groundwater fields.

III.1.4 Nuclear energy

Nuclear energy is an important option for electricity production and water desalination in Algeria, as it is a low-carbon source of electricity generation It does not emit any airborne pollutants such as carbon dioxide, helps reduce dependence on gas, and can produce electricity at a relatively stable cost compared to gas-fired power plants.

Algeria occupies an important position in the field of nuclear energy, as it possesses the most important uranium mines in the Hoggar and Aghlab mountain ranges, and possibly in a large area of the Tassili range. Algeria has used this energy in the fields of healthcare and agriculture, It is currently developing a programme with the International Atomic Energy Agency (IAEA) to generate electricity from nuclear energy. It also intends to use uranium to double its electricity generation and production, opening the door to foreign investors in partnership with Algerian institutions, particularly in the southern regions of Tindouf and Tamanrasset.

It can therefore be said that Algeria has long been trying to break into the field of nuclear energy, but the lack of economic and human resources (specialised scientific expertise) has meant that its efforts in this area have taken the form of cooperation with other countries, such as Germany, Argentina and North Korea, to establish research reactors.

The following are the latest developments in nuclear energy for peaceful purposes (December 2025)

Table 5: **Latest Developments in Nuclear Energy for Peaceful Purposes in Algeria (December 2025)**

Indicator	Details
Agreement	Signing of a joint declaration between Algeria and the International Atomic Energy Agency (IAEA) in December 2025
Target Technology	Small Modular Reactors (SMRs), for electricity generation and seawater desalination
Existing Infrastructure	The Nour reactor (1 MW) in Algiers and the Al-Salam reactor (15 MW) in El Birein (both subject to IAEA safeguards)
Next Step	A mission of experts from the International Atomic Energy Agency to Algeria in 2026 to support feasibility studies

Source : Nuclear Engineering International, 2025.

III.1.5 Renewable green energy

Green energy, or agricultural fuel (fuel extracted from plants), has recently become widespread in some countries, accompanied by global publicity promoting it as the ideal alternative to petroleum as a fuel source, especially in the transport sector, and as a clean energy source with less impact on global warming than fossil fuels. In addition, it is a permanent and renewable resource, available every year, provided that there is sufficient agricultural land and water, as is the case in Brazil and the United States, despite the problems surrounding this source, the most important of which is the conversion of agricultural land for energy purposes rather than for food production. (Issa, 2008)

Green hydrogen is the cornerstone of Algeria's energy transition strategy, as the country possesses unique natural and logistical assets that position it to become a major supplier to Europe.

The following table outlines the strategic framework and objectives:

Table 6 : Strategic Framework and Ambitions

Indicator	Details
National Strategy	Adopted in May 2024, setting interim targets through 2050
Interim Targets	200 MW (2030) ← 6 GW (2040) ← 15 GW (2050)
Export target to Europe (2040)	4 million tons annually (about 10% of European demand) via the "Southern Hydrogen Corridor – SoutH2"
Expected production cost (2030)	3.4–5.3 euros/kg (globally competitive thanks to solar resources)
Flagship project	a 50-megawatt pilot plant in Arzew, in partnership with German companies

Source : Prepared by researchers based on the following sources : Luiss Mediterranean Platform, 2025. Algerian Radio / Algerian Press Service, 2026.

The expected environmental impact includes a 25–30% reduction in carbon emissions compared to a scenario of continued reliance on fossil fuels (according to the accelerated development scenario), Annual reduction in emissions of 25–35 million metric tons of carbon dioxide equivalent as a result of replacing gray hydrogen (from natural gas) with green hydrogen, contribution to GDP (2040) of 6–9% in the accelerated development scenario, with up to 250,000 jobs expected by 2040.

IV- Structural Challenges Affecting Environmental Security

Algeria faces structural challenges that affect environmental security, including: (Boukhatem, 2025)

IV .1. Economic Dependence on Fossil Fuels

- ✓ Fossil fuel exports account for 93.6% of total export revenues
- ✓ They contribute approximately 50% of the national budget
- ✓ This dependence hinders a rapid energy transition and creates tension between economic and environmental goals.

IV .2. Growth in Domestic Energy Demand

- ✓ Electricity access rate: 99.8% (2020)
- ✓ Population growth: 2% annually, projected to reach 53 million by 2030
- ✓ Domestic gas consumption: 53 billion cubic meters (2024), a significant increase from 39 billion cubic meters (2020).

IV .3. Water resource stress

- ✓ Per capita water availability: less than 600 cubic meters/year (below the water stress threshold of 1,000 cubic meters).
- ✓ Water gap: Demand exceeds supply by more than 27 billion cubic meters annually.
- ✓ The energy sector (particularly refining and mining) is putting pressure on already scarce water resources.

- Conclusion

In conclusion, we can say that Algeria is one of the countries striving to maintain its energy security under an energy policy closely linked to the hydrocarbon sector, which occupies an important place in the Algerian economy through the development of the regulatory aspect, accompanied by legislative developments in the field, This is in order to keep pace with international developments, on the one hand, and to achieve the objectives set for the various policies pursued in this sector, on the other.

On the other hand, Algeria is no less concerned than other countries about environmental pollution and renewable energy, given its huge potential in this area, which, to say the least, would prolong the life of traditional energy sources, boost employment opportunities, It also achieves a balance between energy and demand, as well as protecting the environment and the economy.

However, it should be noted that the transition to renewable energy requires significant efforts in terms of reform and investment, through the establishment of a national programme to

develop the use of these renewable energies in order to diversify energy sources and reducing the dominance of oil in the national economy. This can only be achieved by adopting policies and legislation that limit the use of fossil fuels and gradually adopt renewable energy as one of the energy sources, in order to achieve environmental security.

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