



NDC ASPECTS

Country Report

Transition pathways for Morocco

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Key messages

- Morocco has taken several positive steps on climate action, including a substantially enhanced NDC in 2021. In its long-term strategy (LTS), Morocco speaks of its intention to achieve net zero within the century, but the government has not announced a specific net-zero target year or any other more detailed information
- Morocco remains heavily dependent on coal, and the government has announced plans to expand fossil gas and LNG infrastructure. It needs to commit to a coal phase out if it hopes to achieve the conditional NDC target but would need international support to do so.
- To ensure that the NDC targets are met, and climate action is further strengthened, Morocco could commit to a rapid coal phase-out from the power mix, strengthen its renewable energy targets to ensure that they are in line with the 1.5°C limit of the Paris Agreement and stop investing in coal and fossil gas

Introduction and Overview

In this factsheet, we provide an overview of the climate policy of Morocco focusing specifically on its Nationally Determined Contributions (NDCs). In the last decade, Morocco has been at the forefront of the energy transition. This was illustrated through the ambitious climate pledges presented in COP16 in Paris [1] and in Glasgow in COP21 [2], which are among the most ambitious globally, the establishment of a 52% renewable energy target for 2030, and the launching of the world's largest CSP plant [3].

Key topics of the country

There is strong political support for climate policy in Morocco, as the country has hosted the UNFCCC Conference of Parties twice, in 2001 and 2016, leading to a higher domestic climate policy commitment. The NDC ambition levels are ranked by international organizations as among the highest globally and are considered to be in line with the Paris Agreement goal to limit global warming to well-below 2°C and need only moderate improvements to align with the 1.5°C goal, as analysed in [4]. Moroccan institutions have also developed significant knowledge of innovative renewable energy financing instruments, while Moroccan companies have significant experience with Clean Development Mechanism. With very limited fossil fuel resources, Morocco is the largest net importer of energy in Africa. With a young and growing population and plans to further develop and diversify the economy, a committed energy strategy is developed [5] based on the uptake of renewable energy and energy efficiency, given its large renewable energy potentials [6], which may attract foreign investment and create domestic jobs. Morocco has put forward a detailed list of mitigation actions, investment programs and interventions it will deploy to achieve its updated NDC targets, separated into conditional and unconditional measures, with many of them already are under implementation or concretely planned.

The revised NDC includes key sectoral strategies and targets for the largest-emitting sectors, including energy production, industry, agriculture, transportation, and buildings. The updated NDC contains 61 mitigation actions, aiming to achieve the 45.5% emission reduction target by 2030, increasing the previous goal by 3.5%. These actions include large expansion of renewable energy capacities (wind, solar, and hydro), energy saving measures, reduced use of coal, deployment of low-emission vehicles, national logistics strategy, expansion of rails and tramways. In



addition, Morocco's updated NDC incorporates innovative approaches to meet its climate goals, as its conditional measures include the intention to reduce emissions from the phosphate and cement sectors through carbon capture and storage – CCS [2]. Morocco also targets emissions from desalination plants, which are crucial to fresh water supply in some regions, though the intention to use wind to power a desalination plant. Morocco's NDC refers to preparatory work on future carbon markets under Article 6 of the Paris Agreement, as the country aims to participate in pilot projects on future mechanisms, focusing on large-emitting sectors like energy. Morocco aims to collaborate with other countries to fight climate change, as demonstrated by the intention to establish a Green Partnership on energy, climate, and the environment with the EU [7]. Morocco plans to develop a 2050 vision as the foundation for a long-term, low-emissions development strategy, but has not established a net zero target yet.

Despite recent policy developments, Morocco's energy consumption is still increasing and is largely dominated by fossil fuels, which are imported due to the lack of domestic hydrocarbon production and resources. The country still relies heavily on the use of coal and is expanding its coal-fired power generation, despite minimal domestic coal reserves and, consequently, high import dependency [8, 9]. In December 2018, Morocco commissioned the 1.4 GW Safi ultra-supercritical coal power plant, which can supply around 25% of Morocco's electricity [10], while there are plans for new coal-fired plants [11]. Morocco has taken steps to extend the lifetime of some coal plants, e.g., in 2020 the Moroccan Electricity and Water Utility Company, ONEE, agreed to extend its power purchasing agreement (PPA) at the Jorf Lasfar plant from 2027 to 2044 [12]. The expansion of coal-fired power generation raises concerns for increasing emissions [13], while some measures of Morocco's NDC (e.g., gas infrastructure and power plants) may jeopardize long-term decarbonization, leading to a lock-in of emissions and stranded assets.

Key socio-economic figures and outlook

The economy of Morocco is considered a relatively liberal economy, governed by the law of supply and demand. Since 1993, in line with many Western world changes, Morocco has followed a policy of privatisation. Morocco has become a major player in African economic affairs, and is the 5th largest African economy by GDP (PPP).

The Morocco's GDP was approximately US '2010 76.2 billion in 2010, and it grew with an annual average rate of 3.4% until 2019, followed by a reduction of 6.2% in 2020 as a result of COVID-19 and subsequent lockdowns. In the scenarios explored, Morocco's economy is projected to grow at an average annual rate of about 4% (in line with historical trends), thus reaching approximately 322 billion dollars in 2050. Morocco's population is expected to increase from 37 million in 2020, to about 45 million in 2050, as a result of increasing fertility rates (UN, 2022).

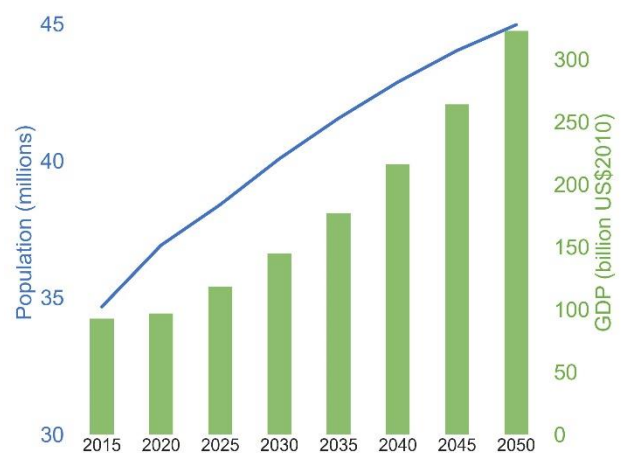


Figure 1: Morocco's expected population and GDP development.

The economic system of the country demonstrated resilience to the climate, commodity, and pandemic shocks of the early 2020s. The services sector accounts for just over half of the GDP. The industry sector – consisting of mining, construction and manufacturing – is an additional quarter. Morocco, however, still depends to an inordinate degree on agriculture, which accounts for around 14% of GDP but employs 40–45% of the Moroccan population.

The Emission Situation of Morocco in 2015

When the Paris Agreement was adopted in 2015, total greenhouse gas (GHG) emissions of Morocco were approximately 85 MtCO₂eq, as seen in Figure 2. In 2015, most of those emissions came from the energy sector, accounting for a share of about 66%. Following next, the agriculture sector had a share of 22% followed by the industry and waste sectors (with a share of 7% and 5% respectively in GHG emissions)

Exploring the energy sector in more detail, we see that electricity production was almost completely reliant on fossil fuels, including coal, oil, and gas. Considering renewable energy sources, hydropower and wind power were the most prominent, while the usage of solar, geothermal and biomass was very low (BP, 2022). Morocco had an emissions per capita rate of about 2.5 tCO₂eq in 2015.

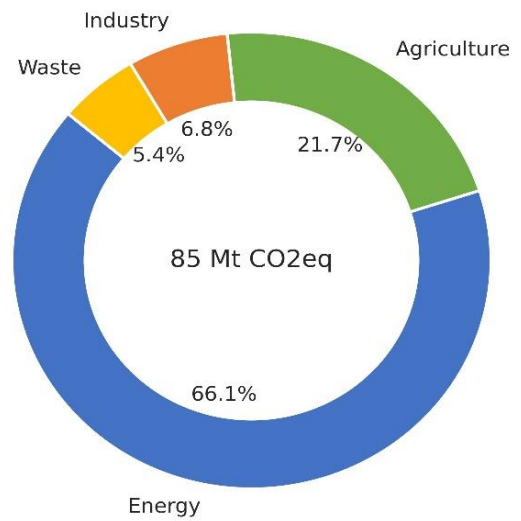


Figure 2: Morocco's CO₂eq emissions by sector in 2015. Source: PIK.

The Current State of GHG Emissions

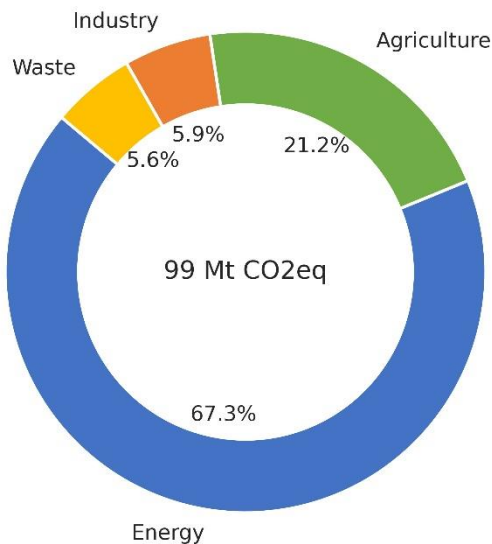


Figure 3: Morocco's CO₂eq emissions by sector in 2022. Source: PIK

After the Paris Agreement was adopted, Morocco's GHG emissions slightly increased from 85MtCO₂eq in 2015 to 99Mt in 2022. The sectoral shares in total GHG emissions remained relatively constant, with the energy sector increasing slightly its share from 66% in 2015 to 67% in 2022. While dropping one percentage points, the agriculture sector remained the second most prominent source of emissions, with a share of 21.2% in 2022. The industry and waste sectors followed with their shares at around 5.5%-6%, similar to 2015 levels. Finally, the emissions per capita rate increased modestly to 2.65 tCO₂eq in 2022, as a result of Morocco's continued reliance on fossil fuels. Those statistics indicate that Morocco has made limited progress in reducing GHG emissions since the Paris Agreement, and the government should implement more ambitious climate policies.

Nationally Determined Contributions of Morocco

Under its Nationally Determined Contribution (NDC) submitted in COP 16, Morocco committed to unconditionally reduce its greenhouse gas (GHG) emissions by 17% and conditionally by 42%, below business-as-usual emissions by 2030. These targets were recently strengthened with the updated Moroccan NDC [2], aiming at a 45.5% reduction of its greenhouse gases emissions by 2030, while 18.3% of this target is unconditional and the remaining is conditional to international assistance. The Moroccan NDC covers all sectors of the economy and relies heavily on energy sector transformation away from oil and coal and towards renewable energy sources and energy efficiency improvements in demand sectors.

Description	NDC Target for 2030	Long-term Target
GHG Mitigation	Unconditional emissions reduction of 18.3% below BAU by 2030, conditional target is strengthened to 45% below BAU by 2030	Net zero emissions within the century
Absolute Emissions (excl. LULUCF)	84-118 MtCO ₂ e in 2030	not adequate information about the Long-term Morocco's strategy
Compare with 2010	0%-53% above 2010 levels	Not adequate information

Table 1: Basic NDC information of Morocco's NDC and long-term targets

Morocco's updated NDC, submitted on 22 June 2021, strengthened its 2030 target, improving it in two ways. First, both the unconditional and conditional 2030 emissions reduction targets were revised to be more ambitious—from 17% to 18.3% below the business as usual (BAU) scenario for the unconditional target and from 42% to 45.5% for the conditional one. Morocco also revised downwards the BAU scenario, to which the reduction targets are applied. For the unconditional target, this leads to 21% lower emissions (excl. LULUCF) in 2030 compared to the first NDC submission, and 29% for the conditional target. Morocco's NDC covers all emitting sectors.

Morocco submitted its latest NDC update to the UNFCCC in 2021, strengthening its initial pledge. The updated target includes an unconditional emissions reduction of 18.3% below BAU by 2030, up from a 17% reduction in the previous NDC. Thanks to an updated BAU scenario, this new target translates to an absolute emissions level that is 21% lower than the previous target—from 145 MtCO₂e in the 2016 submission to 118 MtCO₂e in the latest one (excluding LULUCF). The conditional target was strengthened to 45% below BAU by 2030, up from a 42% reduction target in the first NDC. This would translate to an absolute emissions level of 84 MtCO₂e by 2030. The CAT rates Morocco's target as "Almost sufficient" when rated against modelled domestic pathways and when rated against the fair share contribution.

Morocco is on track to meeting its unconditional NDC target, but it needs additional support and measures to meet its conditional NDC. There are several positive recent climate developments in Morocco, including a commitment to halt the development of new coal-fired power plants at COP26, the ramping up of decarbonisation efforts in key sectors of the Moroccan economy, with new policies planned for the phosphate industry and the agricultural sector, and the release of the National Energy Efficiency Strategy, which seeks to reduce energy consumption in key sectors

of the Moroccan economy, including a 24% energy consumption reduction in the transport sector. To continue improving its climate action, Morocco could commit to a rapid coal phase-out from its power mix, with support from the international community, while strengthening its already ambitious renewable energy targets to ensure that they are in line with the 1.5°C limit of the Paris Agreement and stop investing in coal and fossil gas.

The government's renewable energy targets remain the core of the country's decarbonisation efforts. Morocco currently aims to increase renewable energy capacity to 52% of its electricity mix by 2030. The country pioneered renewable energy developments in the 2010's, but the pace has recently slowed down, with solar capacity additions stalling in 2019 and 2020. Considering that renewable energy amounted to 30% of electricity capacity in 2020, Morocco will need to considerably increase the roll out of renewable projects to meet its 2030 target.

Morocco's electricity mix remains heavily dominated by coal, with lifetime extensions recently planned for key coal-fired plants. At COP26, Morocco agreed to cease permit issuance and construction of new plants but has not committed to a coal phase-out. On top of that, the government has recently unveiled plans to expand fossil gas infrastructure. In 2022, Algeria recently halted gas supply via the Maghreb-Europe pipeline, which previously accounted for all of Morocco's gas imports. As a result, Morocco is now building LNG terminals to accommodate imports via Spain. Morocco has also opened its doors to offshore gas exploration. These developments pose a significant threat to Morocco's decarbonisation plans and risk locking the country into a high-emissions pathway. International support will therefore be key to help Morocco make the best of its vast renewable energy potential and ditch fossil gas and coal once and for all.

In December 2021, Morocco submitted its long-term strategy (LTS) to the UNFCCC, in which it committed to increase the share of renewable energy in the electricity mix to 80% by 2050 (Kingdom of Morocco, 2021c). In its LTS, Morocco also stated it will explore scenarios to achieve net zero emissions. The government intends to consider scenarios based on sectoral analysis to achieve carbon neutrality by the end of the century. However, a concrete plan has yet to be released.

Key Decarbonization Pathways

In this section, we explore the decarbonization pathways of Morocco, based on the targets included in the NDC document and long-term strategy, as well as expert analysis and modelling. We intend to evaluate the climate pledges of Russia, and assess their alignment with the Paris Agreement goals, i.e. the 1.5°C and 2°C global temperature increase limits. The scenarios used in the following analysis are based on detailed modelling using the MENA-EDS model and expert assessment of the Russian climate ambitions, along with information from the official policy documents. We have established a business as usual (BAU) scenario, taking into account the current climate policies and legislation being implemented in the Russian Federation. The NDC/LTT scenario is based on the targets and plans included in the NDC and long-term strategy documents, that have been submitted by Russian officials. Those scenarios were created using MENA-EDS (Fragkos et al, 2013), an energy system model that has been utilized in various climate policy studies and academic research (Fragkos, 2023).

Impact of Morocco's NDCs on Primary Energy Consumption

We begin the analysis by focusing on the scenario impact on Morocco's primary energy consumption. As seen in Figure 4, primary energy is projected to steadily increase in the BAU scenario, reaching approximately 2.1 EJ/year in 2050. The main drivers of this increase are increasing population, economic growth and rising living standards for Moroccan citizens. In contrast, the NDC/LTT scenario projects that primary energy consumption will grow at more moderate rates, reaching 1.1 EJ in 2050 due to energy efficiency improvements in the buildings, transport and industrial sectors and the deployment of more efficient technologies and fuels. In the BAU scenario, primary energy is dominated by fossil fuels, with oil, gas and coal having a total share of 85% in the primary fuel mix, reflecting the continuation of current trends. Nuclear energy is not deployed in any of the scenarios in Morocco. Renewable energy sources are underutilized, with biomass, hydropower, solar and wind energy having a combined share of 15%. In the NDC/LTT scenario, fossil fuel usage drops significantly, with the share of fossil fuels at 33% in 2050, resulting from the imposition of ambitious climate policies to ensure that Morocco meets its NDC and long-term climate targets. As emphasized in the Morocco's NDC document, renewable energy sources have a significantly higher uptake, with a total share of 19% in the primary energy mix in 2030 and 66% in 2050, mostly driven by the high uptake of solar and wind power as well as biomass.

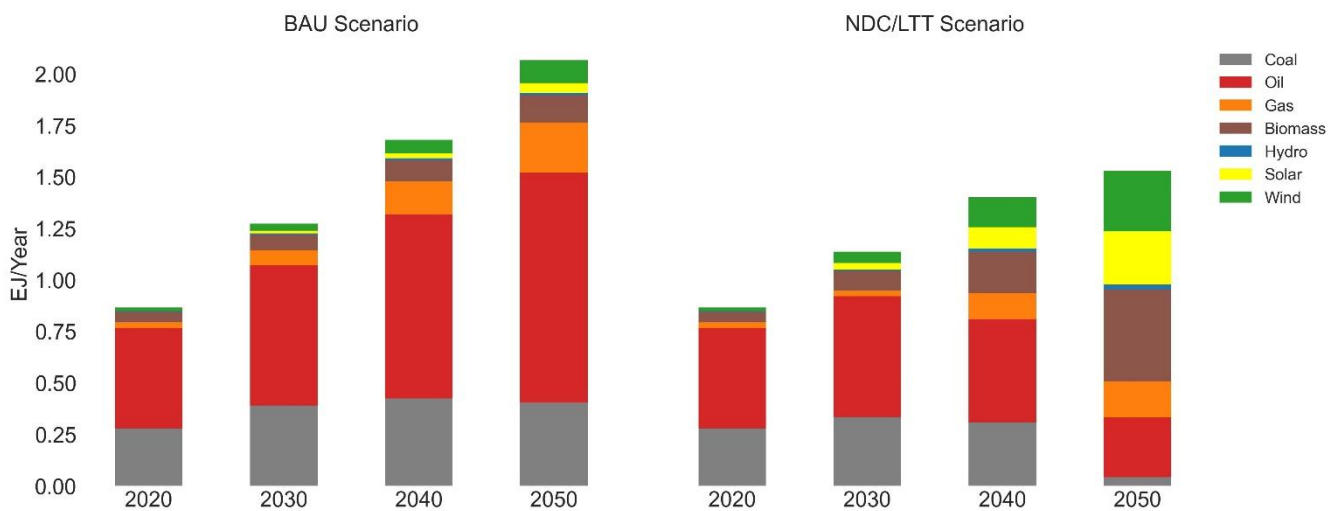


Figure 4: Primary energy consumption of Morocco in the BAU and NDC/LTT Scenarios. Source: MENA-EDS Model

Sectoral System Transformations

In this section, we explore the sectoral transformations of the Morocco's economy as a result of the NDC/LTT scenario, that was created by utilizing the MENA-EDS model. Our analysis covers all the main energy demand and supply sectors, including industry, buildings, transportation, and electricity production. As seen in Figure 5, final energy consumption increases significantly in the BAU scenario by 2050 (especially in the transport and buildings sectors), mostly driven by the growing population, economic activity and rising living standards combined with the lack of ambitious climate policies. In contrast, the NDC/LTT scenario projects a limited increase of final energy consumption, due to the energy efficiency improvements and the gradual uptake of more efficient energy forms and technologies (e.g. electric vehicles instead of conventional ICEs) that are planned in Morocco's NDC document.

Industry

The Morocco's industry sector is largely dependent on fossil fuels, with the BAU scenario projecting a total share of 59% for fossil liquids, gases and solids in 2050, only slightly below the current 62%. The share of in the BAU scenario is projected to modestly increase from 34% in 2020 to 37% in 2050, with solid biomass covering only a 4%-5% of industrial energy needs of the country. In the NDC/LTT scenario, fossil fuel usage is drastically reduced by 2050, with a total share of 29% (compared to 59% in the BAU scenario), due to the more ambitious climate policies and NDC targets of Morocco that promote the electrification of industrial processes and the deployment of renewable energy sources to reduce industrial emissions. As a result, the share of electricity is projected to increase from 37% in BAU to about 50% in the NDC/LTT scenario in 2050, replacing carbon intensive energy sources, and reducing GHG emissions. Finally, biomass solids get a higher share of 12%, replacing the use of coal, while the use of hydrogen (accounting for about 9% of industrial energy use in 2050) also emerges in Morocco, facilitated by the vast and cheap renewable energy potential of the country (especially solar and wind power). Morocco's fertiliser industry, a world leader, has ambitious plans to produce green ammonia.

Buildings

In the BAU scenario, Morocco's buildings sector (including residential and services sectors) remains heavily reliant on fossil fuels, with fossil liquids having a total share of 44% in 2050, primarily used for space and water heating. Electricity usage is projected to increase in this scenario, from the current 27% to 36% in 2050 as a result of the increasing penetration of electric and electronic appliances and equipment in households as incomes grow. Biomass solids will continue to be utilized, with a total share of around 20% in the BAU scenario. In the NDC/LTT scenario, the use of fossil fuels is projected to decline to only 7% in 2050 as a result of ambitious climate policies and strong electrification policies, whereas electricity share increases further to about 70% by 2050 mostly driven by the uptake of electric appliances as well as electric heating. This is a result of the combined efforts to reduce emissions and electrify the buildings sector. In addition, sectoral energy consumption is 25% lower compared to BAU, because of improved energy efficiency standards, thermal insulation and the use of modern equipment and energy efficient appliances. In this context, the use of traditional biomass is projected to decline due to increased urbanisation and rising living standards and the NDC targets of clean cooking, while biomass and solar water heaters are increasingly deployed in Morocco's buildings. Finally, the model-based analysis shows that there is no need to develop massive gas and hydrogen grids in Morocco, as other low-carbon technologies can be used to achieve Morocco's climate targets in a cost-efficient and equitable manner.

Transportation

In the BAU scenario, energy consumption in the transport sector is projected to rapidly increase with an average annual growth rate of 3.6% over the period 2025-2050, driven by a rapid motorization trend and increasing rates of car ownership as incomes grow, while energy consumption in freight transport is closely linked to economic activity and thus it is projected to increase vigorously. The transport sector is projected to remain heavily reliant on fossil fuels in the BAU scenario, with petroleum products accounting for about 97% of the fuel mix in 2050. Electricity and biofuels only make little inroads in the BAU scenario, with shares of 2% and 1% respectively. In contrast, the NDC/LTT scenario projects a significant drop in fossil fuel usage, whereas electricity share increases to 42% in 2050 driven by the massive uptake of electric vehicles. This is a result of conventional internal combustion engine (ICE) vehicles being gradually phased down, while sustainable technologies like electric vehicles (EV) are adopted. Furthermore, the share of biofuels is also projected to increase to 10% in 2050, indicating the utilization of alternative fuels, like ethanol, biodiesel and others to reduce emissions from sectors where electrification is challenging (e.g. aviation, shipping).

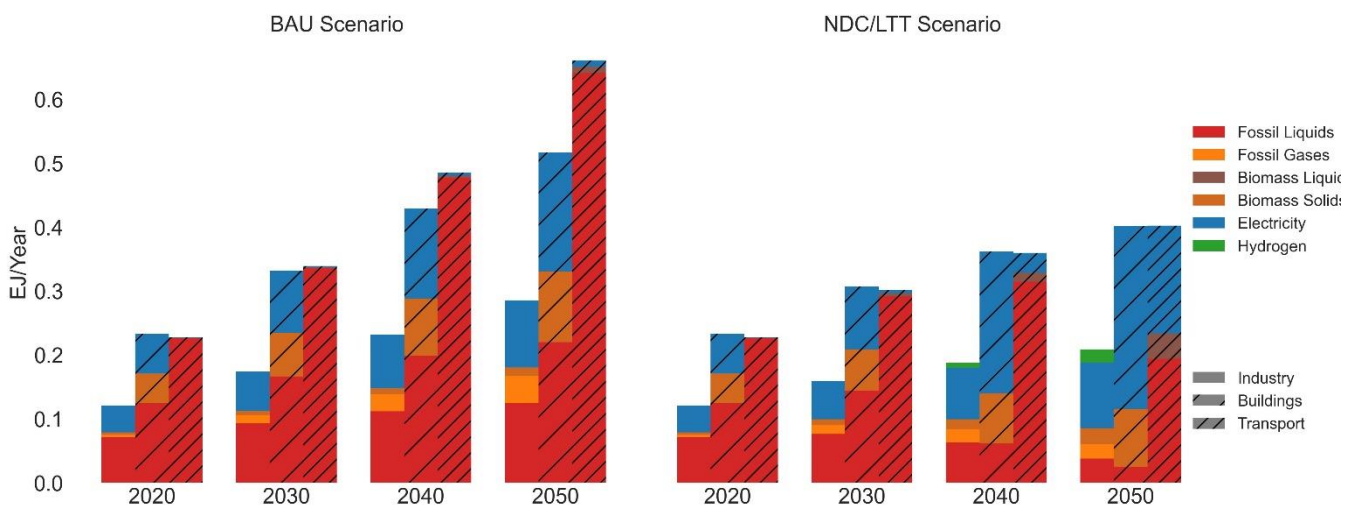


Figure 5: Final energy consumption of Morocco by main sector and fuel in the BAU and NDC/LTT Scenarios.

Source: MENA-EDS Model

Electricity Production

As seen in figure 6, electricity production is projected to keep increasing in both the BAU and NDC/LTT scenarios, albeit at a significantly higher rate in the latter scenario, with total production being approximately 80% higher in 2050 compared to BAU; this is driven by the accelerated electrification of energy and mobility end-uses in the NDC/LTT scenario as well as the emergence of hydrogen use in industry requiring renewable-based electricity. In the BAU scenario, electricity production is largely dependent on fossil fuels (mostly coal and gas), but their share is projected to decline from the current 80% to 58% in 2050, driven by already adopted policies to reduce Morocco’s dependence on coal-fired power plants. The continued cost reduction of renewable energy technologies combined with the vast and cheap solar and wind resources in Morocco would lead to a rapid uptake of renewable energy, increasing their share from the current 20% to 42% in 2050. Nuclear energy is not utilized in any of the scenarios. In the NDC/LTT scenario, fossil fuel usage drops significantly, with a share of 12% in 2050 (most of this combined with CCS), because of the intensified efforts to reduce GHG emissions and the accelerated deployment of solar and wind power combined with storage batteries to ensure flexibility in the grid and effectively balance intermittent power production. Carbon capture and storage (CCS) will be utilized to reduce the carbon intensity of coal and gas power plants especially after 2040 when this technology becomes commercially available at relatively competitive costs. Finally, the combined RES uptake is significantly higher than the BAU scenarios standing at 88% in 2050 — with wind, and solar having significant contributions— as emphasized in the NDC document, and the Morocco’s long-term climate strategy, focusing on the deployment of renewable energy sources.

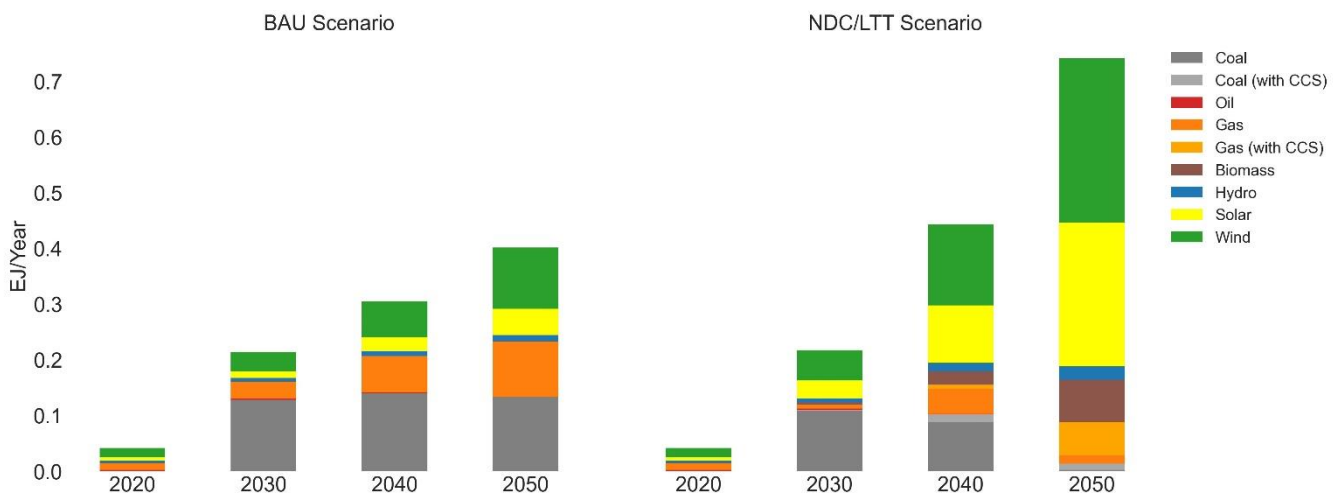


Figure 6: Electricity production of Morocco by fuel in the BAU and NDC/LTT scenarios. Source: MENA-EDS Model

Greenhouse Gas Emissions

In this section, we analyze the CO₂ emission trajectories of the Morocco’s energy sector, in the BAU and NDC/LTT scenarios. As seen in Figure 7, the BAU scenario projects an upward trend for CO₂ emissions, increasing from 62 MtCO₂ in 2020, to approximately 88 MtCO₂ in 2030, and further to 137 MtCO₂ in 2050. In the NDC/LTT scenario, the growth of CO₂ emissions decelerates this decade, in order to meet the Morocco’s NDC target (CO₂ emissions stand at 71 MtCO₂ in 2030); this is followed by an emissions reduction after 2030 to 67 MtCO₂ in 2040. Afterwards, CO₂ emissions are projected to decline even more drastically, reaching 24 MtCO₂ in 2050. This is a result of the assumed Morocco’s ambition to strengthen climate action aiming to achieve net zero emissions during this century, combined with the continued cost reductions of low- and zero-carbon technologies. It should also be noted that independent experts have assessed that Morocco’s climate targets and policies as “Almost sufficient”, indicating that Morocco’s climate policies and commitments are not yet consistent with the Paris Agreement’s 1.5°C goal, but could be with moderate improvements. Morocco’s policies and unconditional target meet its fair-share contribution to limiting warming to 1.5°C. Morocco’s conditional target, to be achieved with international support, is almost, but not yet compatible with the 1.5°C warming goal of the Paris Agreement.

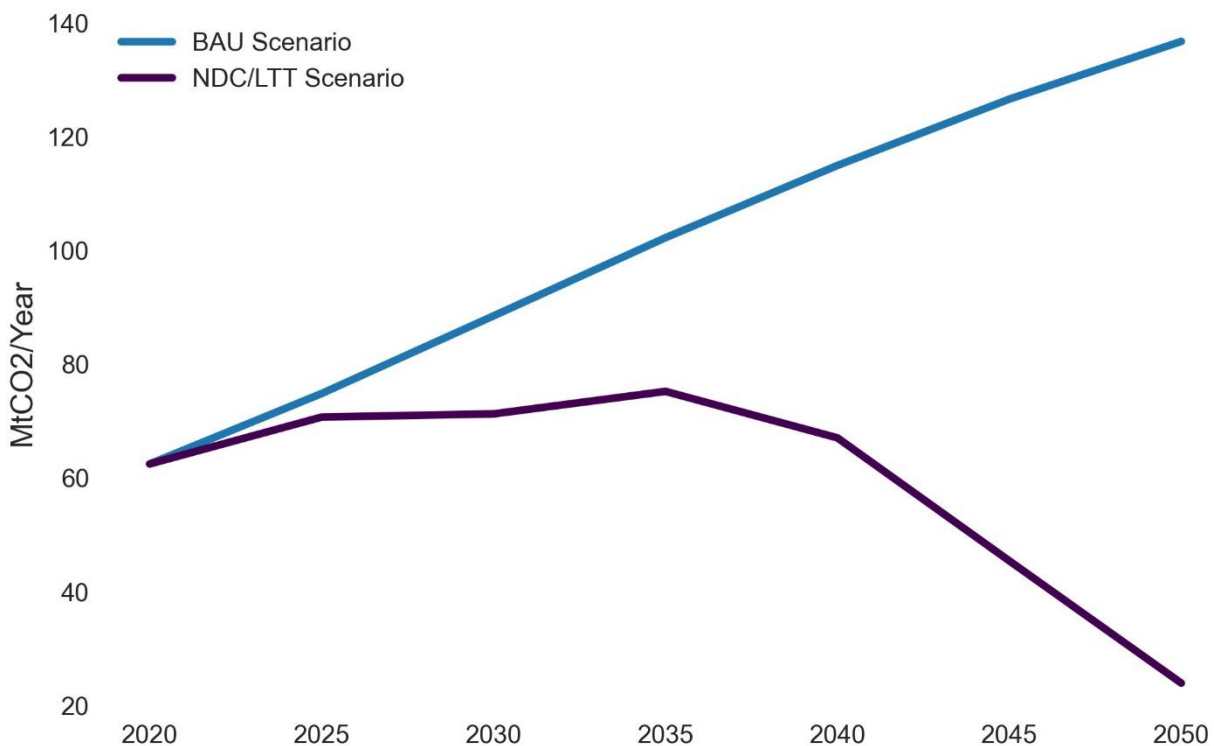


Figure 7: Annual CO₂ Emissions of the Morocco’s energy sector in the BAU and NDC/LTT Scenarios. Source: EDS Model

Key messages for next NDCs

Morocco has set ambitious climate pledges in its updated Nationally Determined Contribution, aiming to reduce emissions by up to 45.5% from Baseline scenario levels in 2030, while 18.3% of this goal is unconditional, and the remaining 27.2% is conditional to international assistance. In last years, Morocco's emission pledges have been supported by domestic energy strategies aiming to increase the development of renewable energy and accelerate efficiency improvements, while trying to attract private investment in the energy sector. Morocco puts strong emphasis on climate action and clean energy transition, with climate policy seen as important diplomatic tool, especially in interaction with African states. Morocco's Nationally Determined Contribution is consistently ranked as one of the NDCs with the highest level of ambition. Despite recent policy developments, Morocco's energy consumption has been rapidly increasing in the last decades and is still dominated by fossil fuels, while the plans for expansion of coal-fired electricity generation raise significant concerns. Political tensions and conflicts may raise barriers for the implementation of Morocco's ambitious NDC targets, delaying the installation of renewable energy projects and extending the lifetime of coal-fired power plants. In addition, NDC prioritizes the development of natural gas plants and infrastructure, posing additional challenges for long-term decarbonization and potentially leading to stranded assets and carbon lock-in. As the ambition of Morocco's NDC is one of the highest globally, it requires increased climate action and more ambitious policy measures directed towards accelerated uptake of renewable energy and energy efficiency improvements.

The implementation the Moroccan NDC can pave the way towards the structural systemic transformations required to ensure compatibility with Paris Agreement goals by 2050. As Morocco has vast renewable resources that can be exploited to replace fossil fuel use in and beyond the power sector, the climate ambition of its next NDC can further increase beyond current NDC targets focusing on key mitigation pillars; the complete restructuring of the electricity sector with large-scale expansion of renewable energy (facilitated by innovation dynamics and learning-by-doing effects) and accelerated energy efficiency improvements in all end-use sectors. Morocco has a long history of success with CSP and PV power plants and will continue to operate it. Battery storage may also emerge to complement solar PV as a diurnal storage to meet the electricity demand in the evenings and at night. Hydrogen production is also developed to function as a seasonal storage by converting and storing electricity produced from wind power and solar CSP and PV but also can provide energy for the industrial sector. With the decarbonisation of electricity well before 2050, the increased electrification of energy services should become an increasingly important means in the next Morocco's NDC to reduce emissions, especially in hard-to-abate sectors, including transport through the deployment of battery electric and plug-in hybrid vehicles. The rapid upscaling of mature, conventional technologies (solar, wind) combined with the deployment of new, emerging options (storage, Carbon Capture and Storage, Green Hydrogen and Ammonia) in hard-to-abate sectors can significantly reduce Morocco's emissions by 2050 but requires acceleration of policy ambition and climate efforts. A strategy of systematic and well-planned diversification of the energy mix in Morocco towards low-emission alternatives as part of its next NDC, particularly renewable energy resources, lead to a more efficient energy system and reduction of emissions accompanied by large reductions in its energy import dependence.

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