



FINANCING AN UNJUST ENERGY TRANSITION IN TUNISIA:

GREEN INVESTMENTS BY MULTILATERAL DEVELOPMENT BANKS IN TUNISIA'S ENERGY SECTOR

CONTENTS

LIST OF TABLES	3
LIST OF FIGURES	3
LIST OF BOXES	4
ACRONYMS AND ABBREVIATIONS	4
<hr/>	
EXECUTIVE SUMMARY	7
<hr/>	
INTRODUCTION	9
<hr/>	
1. RESEARCH CONTEXT	11
1.1. TUNISIA'S STRUCTURAL ENERGY LANDSCAPE	11
1.2. TUNISIA'S STRUCTURAL SOCIOECONOMIC LANDSCAPE	12
1.3. OVERVIEW OF MULTILATERAL COOPERATION IN TUNISIA	14
<hr/>	
2. MAPPING OF MDB AND IFI ENERGY PROJECTS IN TUNISIA	15
2.1. BREAKDOWN OF MDB AND IFI ENERGY INVESTMENT ALLOCATIONS BY PROJECT, SECTOR AND ENTITY	15
2.2. IN-DEPTH ANALYSIS OF EBRD ENERGY PROJECTS IN TUNISIA	17
2.3. MAIN FINDINGS EMERGING FROM THE MAPPING OF MDB ENERGY PROJECTS IN TUNISIA	18
<hr/>	
3. ANALYSIS AND EVALUATION OF THE DIRECT IMPACT OF MDB ENERGY INVESTMENTS IN TUNISIA	19
3.1. THE EFFECT OF MDB INVESTMENTS ON THE STEG'S CAPACITIES	19
3.2. THE IMPACT OF MDB INVESTMENTS ON RENEWABLE ENERGY DEVELOPMENT	20
3.3. DEVELOPMENTAL IMPACTS OF MDB ENERGY INVESTMENTS IN TUNISIA	20
3.4. SCOPE OF MDB CLIMATE FINANCING IN TUNISIA	22
<hr/>	
4. CRITICAL REVIEW OF MDB INVESTMENTS IN THE ENERGY TRANSITION IN TUNISIA	23
4.1. DIFFERENT PERSPECTIVES ON THE IMPACT OF ELECTRICITY SECTOR REFORMS ON WORKERS, BASED ON INTERNATIONAL BENCHMARKING AND TUNISIA'S EXPERIENCE WITH LIBERALISATION AND PRIVATISATION	23
4.2. PROJECTIONS REGARDING THE IMPACT ON EMPLOYMENT OF FOSSIL FUEL PHASE-OUT AND ENERGY TRANSITION: JUST AND INCLUSIVE TRANSITION PROSPECTS IN TUNISIA	25
4.3. WHAT IS THE ET PROCESS PROMOTED BY THE MDBS REALLY ACHIEVING IN TUNISIA?	27
<hr/>	
CONCLUSION ET RECOMMENDATIONS	29
<hr/>	
REFERENCES	32

LIST OF TABLES

Table 1: EBRD energy projects in Tunisia, 2014-August 2025

LIST OF FIGURES

- Figure 1: Evolution of the primary energy balance in Tunisia (ktoe-LHV), 1990-2024
- Figure 2: Domestic production of hydrocarbons (oil, condensates and gas) in Mtoe-LHV, 1990-2023
- Figure 3: Energy self-sufficiency rate in Tunisia, 1990-2024
- Figure 4: Electricity demand in Tunisia according to STEG forecasts, 2025-2040
- Figure 5: Trends and IMF forecasts regarding real GDP growth (annual percentage change) in Tunisia, 2000-2030
- Figure 6: Total investment in Tunisia (as a % of GDP), 2000-2029
- Figure 7: Changes in unemployment rates (%) and labour force participation rates, 2005-2023
- Figure 8: Benchmarking of Tunisia's employment/growth elasticity (arc elasticity), 1991-2017
- Figure 9: Trends and IMF projections regarding Tunisia's government gross debt (as a % of GDP), 2000-2030
- Figure 10: Evolution of Tunisia's budget deficit, 2000-2025
- Figure 11: Changes in the structure of public debt in Tunisia (in %), domestic debt vs. external debt, 2000-2025
- Figure 12: Evolution of Tunisia's external debt structure (in %), by type of cooperation, 2000-2024
- Figure 13: Map of all energy projects in Tunisia (pledges and actual disbursements, in million US\$) financed by MDBs and IFIs, 2014-August 2025
- Figure 14: Breakdown (in US\$) of MDB and IFI energy investments Tunisia, 2014-August 2025
- Figure 15: Breakdown (in millions of US\$) of MDB and IFI energy investments in Tunisia's public sector, 2014-August 2025
- Figure 16: Benchmarking of the electricity mix in MENA countries, 2015-2024
- Figure 17: Evolution of Tunisia's ETI score, 2015-2024
- Figure 18: Change in volume (in MTD) and share (in %) of FDI in energy within overall FDI in Tunisia, 2010-2024
- Figure 19: Comparison of EBRD ATQ scores, Green Transition axis, Egypt - Jordan - Morocco - Tunisia, 2016, 2023, and 2024
- Figure 20: Comparison of total climate finance allocated by MDBs during the reporting year (in million US\$) to countries in the MENA region, 2015-2023
- Figure 21: Energy investment financing needs for the ET in Tunisia under the 2021 NDC and the 2025 NDC (3.0), in billion US\$

- Figure 22: Jobs (in thousands) in electricity, gas, steam and air conditioning production in CEE countries, 2008–2015
- Figure 23: Financial practices in human resource management within utility companies, in the framework of full investment cost recovery
- Figure 24: Simulations of job gains and losses in Tunisia (1,000 jobs/petajoule per year) as part of electricity decarbonisation projects, by energy sector 2015-2040
- Figure 25: International benchmarks: share of secondary school pupils in vocational education and training systems (in %), Tunisia, CEE countries, OECD, 2018
- Figure 26: International benchmarks related to on-the-job training programmes (in %), Tunisia, MENA region, CEE countries, global average
- Figure 27: Trends in electricity generation in Italy (total generation and by renewable source), vs. total electricity generation in Tunisia (all energy sources included), (GWh), 2010-2024

LIST OF BOXES

- Box 1: Impact on employment of L&P reforms in the electricity sector in EU countries
- Box 2: Vocational training is out of step with the challenges of decarbonisation: lack of green skills and poor prospects for employment in the energy transition

ACRONYMS AND ABBREVIATIONS

- AFD: Agence Française de Développement (French Development Agency)
- AfDB: African Development Bank
- ANME: Agence Nationale pour la Maîtrise de l'Énergie (National Agency for Energy Management)
- ATPG: l'Association Tunisienne du Pétrole et du Gaz (Tunisian Oil and Gas Association)
- BCT: Central Bank of Tunisia
- CAGR: Compound annual growth rate
- CBDR-RC: Common but differentiated responsibilities and respective capabilities (of the Paris Agreement signatories)
- CEE: Central and Eastern European
- CEF: Connecting Europe Facility
- CIF-CTF: Climate Investment Fund - Clean Technology Fund
- CNTJ: National Committee for a Just Transition
- DED: Department of Research and Documentation at the UGTT
- E&S: Environmental and Social
- EBRD: European Bank for Reconstruction and Development
- EIB: European Investment Bank

ELMED:	Electricity interconnection project between Tunisia and Italy
ENI:	European Neighbourhood Instrument
ET:	Energy transition
ETAP:	Entreprise Tunisienne des Activités Pétrolières (Tunisian Petroleum Activities Company)
ETI:	Energy Transition Index
EU:	European Union
FDI:	Foreign direct investment
GCF:	Green Climate Fund
GDP:	Gross domestic product
GEF:	Global Environment Facility
GHG:	Greenhouse gas
GIZ:	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
GWh:	Gigawatt hour
H2V:	Green hydrogen
IEA:	International Energy Agency
IFC:	International Finance Corporation of the World Bank Group
ILO:	International Labour Organization
IMF:	International Monetary Fund
INS:	National Institute of Statistics
IPCC:	Intergovernmental Panel on Climate Change
IPP:	Independent Power Producers
IRENA:	International Renewable Energy Agency
IsDB:	Islamic Development Bank
ITES:	Tunisian Institute for Strategic Studies
ITUC:	International Trade Union Confederation
JICA:	Japan International Cooperation Agency
KfW:	Kreditanstalt für Wiederaufbau (German Development Bank)
Ktoe-LHV:	Thousand tonnes of oil equivalent per cubic metre and per capita
L&P:	Liberalisation and privatisation
MDBs:	Multilateral development banks
MENA:	Middle East and North Africa
MENV:	Ministry of the Environment
MIME:	Ministry of Industry, Mines and Energy

MoF:	Ministry of Finance
MTD:	Million Tunisian dinars
Mtoe:	million tonnes of oil equivalent
Mtoe-LHV:	million tonnes of oil equivalent per cubic metre and per capita
MW:	Megawatt
NDC:	Nationally Determined Contribution
NIP:	Neighbourhood Investment Platform
OECD:	Organisation for Economic Co-operation and Development
ONEM:	National Observatory of Energy and Mines
PPP:	Public-private partnership
PRDS:	Regional social dialogue platforms
PROPARCO:	Société de Promotion et de Participation pour la Coopération Économique (development finance institution of the French Development Agency – AFD)
PST:	Tunisian Solar Plan
RE:	Renewable Energy
SAP:	Structural adjustment programme
SEMED:	Southern and Eastern Mediterranean
SP:	System performance
STEG:	Tunisian Electricity and Gas Company
TR:	Transition readiness
UGTT:	Union Générale Tunisienne du Travail (Tunisian General Labour Union)
UNFCCC:	United Nations Framework Convention on Climate Change
WB:	World Bank
WEF:	World Economic Forum

EXECUTIVE SUMMARY

The findings of this report confirm that the energy transition in Tunisia remains illusory in the current context, considering the interventions of multilateral development banks (MDBs), founded on the ‘privatise to decarbonise’ doctrine and the exclusion of public alternatives without any serious assessment of their feasibility. Analysis shows that these interventions – ranging from those of the European Bank for Reconstruction and Development (EBRD) to the ELMED project – are replicating a greenwashed version of structural adjustment, granting concessions to foreign energy companies, reducing the role of Tunisia’s state-owned electricity and gas company, the STEG, and steering the sector towards a model geared towards capital rather than energy sovereignty and autonomy.

The findings also reveal that the absence of social dialogue is one of the main weaknesses of MDB investments. The energy transition process is being managed according to a techno-market approach that excludes workers, their unions and local communities, exacerbating a governance crisis already marked by poor transparency, conflicts of interest and weak institutional capacity. There is, moreover, no evidence of an energy transition pathway being taken that truly serves the interests of Tunisia, its citizens, and its workers. The current approaches are systematically threatening the viability of the STEG, heightening energy insecurity and macroeconomic risks, and undermining the prospects for a just and inclusive energy transition.

Far from rejecting multilateral cooperation, and while recognising MDBs as crucial to the energy transition, the present study suggests redirecting the multilateral cooperation in this field towards a more

constructive alternative approach founded on social justice and equitable benefit sharing. This approach places social dialogue at the centre of the energy transition process, re-establishes the role of the STEG, and ensures the meaningful participation of trade unions, workers and local communities within the framework of energy sovereignty. This pathway is the basis for a range of policy recommendations put forward in the report, aimed at supporting a just and inclusive energy transition that serves Tunisia’s strategic interests.

The energy transition requires stronger governance and transparency, as well as the promotion of responsible energy citizenship, which are key to guiding decision-making and ensuring a just transition. Social dialogue must be placed at the centre of this process, through the establishment, for example, of a National Council for a Just Transition (CNTJ) to facilitate tripartite consultations between workers, employers and the government, with the participation of civil society and experts, alongside regional social dialogue platforms to adapt climate and energy policies to regional and local circumstances. Such mechanisms constitute institutional innovation in line with the participatory approach set out in the Paris Agreement and provide a participatory framework for a just transition that is context-specific and based on inclusion and equity. In this respect, multilateral development banks, and particularly the European Bank for Reconstruction and Development (EBRD), are urged to make their financing conditional not only on compliance with this fundamental principle, but also on a set of key criteria, such as: consistency with national strategies (the NDC, the energy strategy); support for national institutional capacities rather than foreign institutions; promotion of industrial development through technology transfer and the development of a green value chain in Tunisia; regional integration through projects that reduce inequalities and provide communities with tangible benefits, such as job creation and the reinvestment of profits.

Given the economic and the energy challenges facing Tunisia, **the most appropriate structural model would be a public-private partnership (PPP) led by the STEG, with a clearly defined role for the private sector.** This approach would rest on a tripartite structure comprising the STEG, the Tunisian private sector and local banks, **and foreign independent power producers (IPPs), which should make a significant commitment to technology transfer and reinvestment.** This balance would enable the STEG to lighten the burden of power purchase agreements, **stimulate structural investment, and ensure that added value remains within the national economy and that a green national value chain continues to develop.** The establishment of this PPP would require detailed social dialogue involving all stakeholders.

The UGTT is also required to integrate energy transition into its strategy, formulating legitimate demands, supporting trade union organising, strengthening communication and

raising public awareness of the risks of the current approach and the consequences of poor governance. This involves strengthening social dialogue at the micro, meso and macro levels, organising green sectors, and developing trade union advocacy that redirects the transition towards energy sovereignty – equity – and inclusion. The public pathway should prioritise energy efficiency throughout the value chain, considering it a cornerstone of public policy development and the energy transition itself, together with the need for cutting-edge energy planning.

Given the growing importance of multilateral climate funds, particularly the Green Climate Fund (GCF), **strengthening institutional, technical and financial capacities is essential to advancing the accreditation of Tunisian institutions with such funds. The development of an effective knowledge management strategy within the national financial system is also crucial to accessing concessional financing.** Non-concessional financing, for its part, should be excluded from climate finance, which cannot be considered a substitute for official development assistance (ODA).

INTRODUCTION

Climate justice underpins the fairness of the energy transition (ET) by requiring historically high-emitting countries and multilateral development banks (MDBs) to prioritise financing for developing countries through ‘common but differentiated responsibilities and respective capabilities’ (CBDR-RC), a fundamental principle of the Paris Agreement (Klinsky et al., 2017; McCauley & Heffron, 2018). MDBs are therefore key players in financing the energy transition (ET) in developing countries (Kim & Lee, 2021). Their interventions have, however, proven to be limited in scope, failing to provide the necessary funding and to achieve the transformational changes anticipated (Basilio, 2025; Xu & Gallagher, 2022). The investments made by these institutions remain aligned with the prevailing international energy and climate doctrine that makes private sector-led energy transition a policy priority and an implicit prerequisite for unlocking fossil fuel phase-out financing (TUED, 2023c, 2023a). These two observations are particularly relevant to Tunisia. Despite the country’s ambitious climate commitments, as set out in its Nationally Determined Contribution (NDC) for 2021 (MENV, 2021) and 2025 (UNFCCC, n.d.), to substantially reduce carbon intensity, current policies are failing to meet the expected ET targets (Fragkos & Zisarou, 2022). This failure can be attributed to chronic underinvestment by the public sector (ITUC, 2023; ITES, 2022) and limited climate financing from Tunisia’s international financial partners (WB, 2023, p. 59). Similarly, MDB energy investments in Tunisia appear to favour a private sector approach involving foreign IPPs (independent power producers) through public-private partnerships (PPPs). Tunisia’s multilateral partners, for their part, show very little interest in a public pathway to ET, encouraging controversial policies that

limit the role of the state-owned electricity and gas company, the STEG, in renewable energies (RE) to electricity transmission.

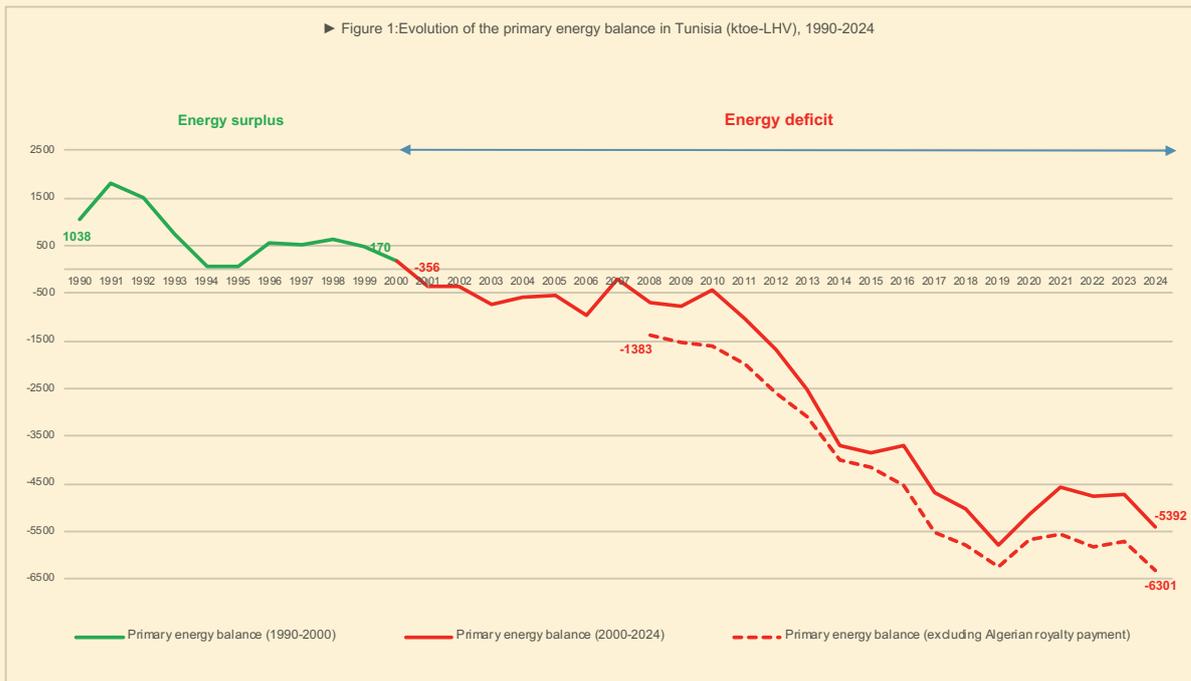
The present report aims to shed light on the impact of MDB interventions on the energy transition in Tunisia, placing particular emphasis on the role of the EBRD, the institution most heavily involved in these projects (Attig-Bahar et al., 2021), against the background of the failure of the standard model for reforming the electricity sector, advocated in the mid-1990s by the World Bank, the International Monetary Fund (IMF) and other MDBs during the wave of structural adjustment programmes (SAPs) in developing countries in the 1980s (Hall & Nguyen, 2017; Yi-Chong, 2005), and the emergence of the hybrid model (Gratwick & Eberhard, 2008, p. 3958) based on the same approach but wrapped in the new language of sustainability and just transition, giving rise to green structural adjustment. To this end, our research seeks to highlight how the EBRD and other MDBs are shaping the prospects for a just energy transition, and to identify the implications of this process with a view to laying the foundations for trade union advocacy for a just energy transition driven by public policy and sovereignty, focused on citizens/workers, and aligned with the guidelines for a just transition (ILO, 2015). Accordingly, section one of the report outlines Tunisia’s energy and socioeconomic landscapes, their complex interdependence, which makes the ET an essential process, and the current state of multilateral cooperation. Section two maps the MDBs’ energy projects in Tunisia, with particular emphasis on EBRD projects. Section three and section four analyse and assess the impact of these investments from a dual multi-level perspective, using a mixed methods approach and critical reflection focusing on employment and just transition. Finally, the conclusion presents the main findings and sets out recommendations for the development of trade union and citizen advocacy in the broadest sense, aimed at achieving a truly just energy transition in Tunisia.

1. RESEARCH CONTEXT

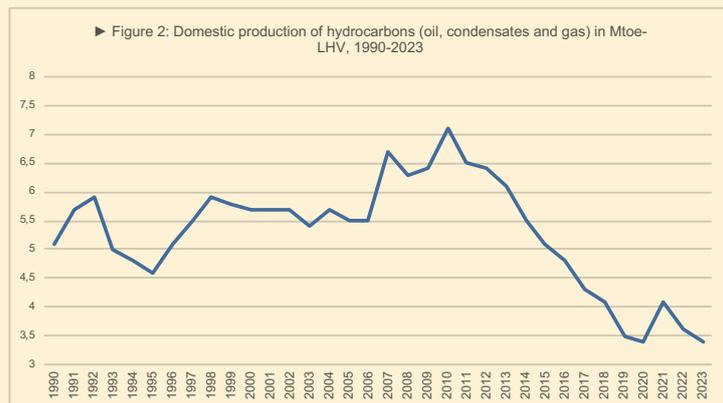
1.1. TUNISIA'S STRUCTURAL ENERGY LANDSCAPE

Since the 2000s, Tunisia has been in the grip of a growing structural energy deficit, which is compromising the country's energy security and increasing its dependence on imports (ITES, 2022, p. 19). Analysis shows that primary resources have eroded at a compound annual growth rate (CAGR) of 5 per cent over the 2010-2024 period, while primary energy demand has increased

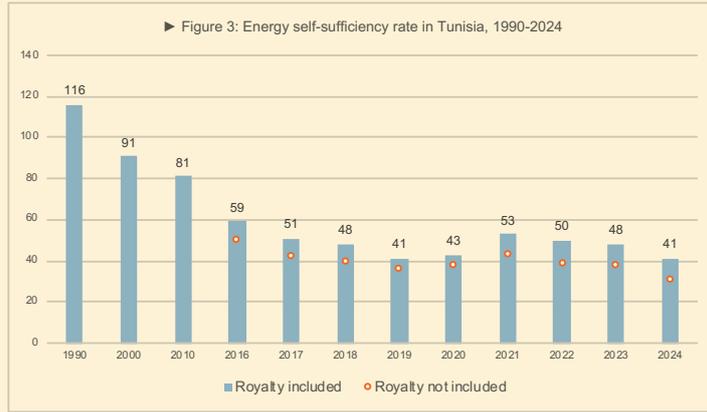
at a CAGR of 1 per cent over the same period. In absolute terms, the result is an increased primary energy deficit, estimated at 5.4 Mtoe in 2024. Without taking into account the Algerian gas royalty, this deficit rises to 6.3 Mtoe (Figure 1). In relative terms, the situation is illustrated by a decline in energy independence due to limited resources and growing demand (Figures 2 and 3), estimated at 41 per cent in 2024 compared to 48 per cent in 2023. Without factoring in the Algerian gas royalty, this level amounted to 31 per cent in 2024 compared to 38 per cent in 2023 (ONEM, 2025, p. 3).



Source: Data on the energy landscape and the national energy balance compiled by the ONEM (ONEM, n.d.).



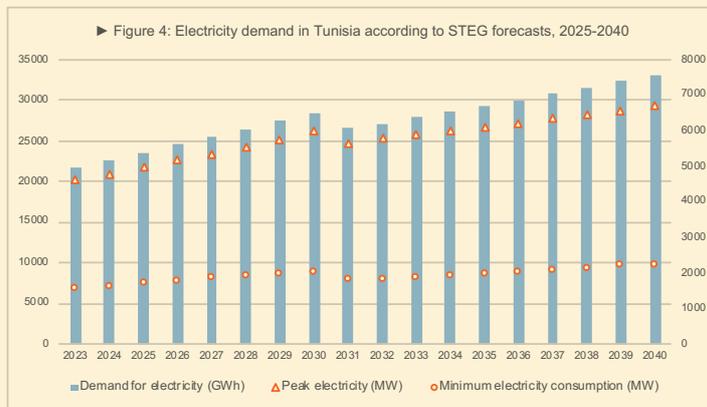
Source: (ATPG, 2024).



Source: Compiled data (ITES, 2023; ONEM, n.d.).

Tunisia’s energy insecurity is likely to increase as the country enters a new electricity era marked by rising consumption, a trend observed across the African continent, with the second fastest growing electricity market in the world (IEA, 2025, p. 179-191). In Tunisia, this trend is particularly strong due to heat stress (IPCC, 2022).

In this regard, projections reveal that, by 2030, electricity demand in Tunisia is expected to increase by a CAGR of 3.2 per cent relative to 2019 (JICA, 2022) (Figure 4). STEG estimates reveal that meeting this growing demand would require the commissioning of a new power plant every two years! (ITES, 2022, p. 32).

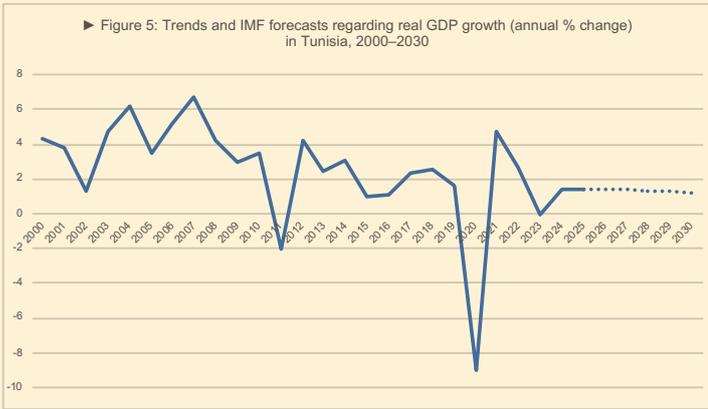


Source: (JICA, 2022).

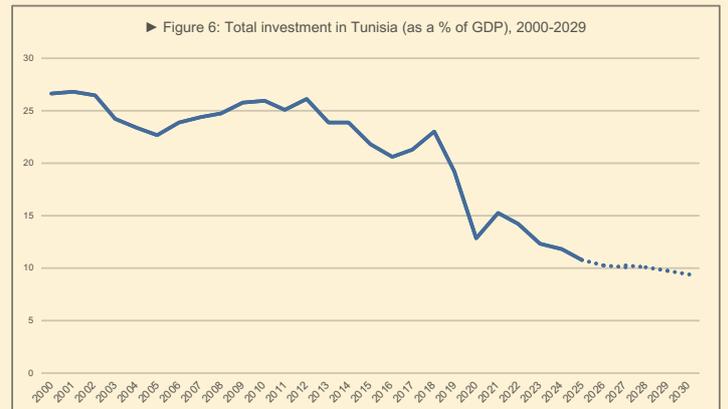
1.2. TUNISIA'S STRUCTURAL SOCIOECONOMIC LANDSCAPE

According to IMF and World Bank assessments (WB, 2023, 2024b), Tunisia's modest post-pandemic economic recovery slowed substantially in 2023, reaching a

rate of 0 per cent (Figure 5), due to severe drought, restrictive financing conditions and slow reforms. One of the most striking developments is the significant decline in investment, or a disinvestment trend. The share of investment in GDP fell from 25.8 per cent in 2010 to 12.7 per cent in 2023, and is forecast by the IMF to fall to 9.7 per cent in 2029 (Figure 6).



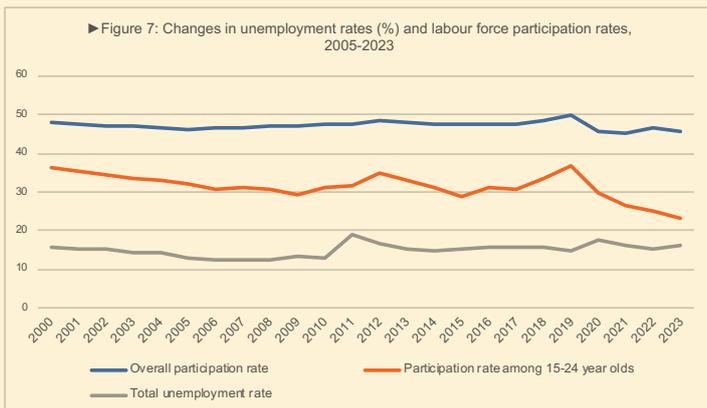
Source: (IMF, n.d.).



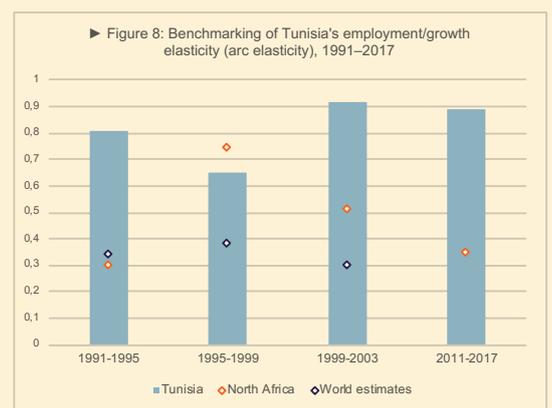
Source: (IMF, n.d.).

Furthermore, Tunisia's poor economic performance over recent years, particularly following the pandemic and its impact on labour-intensive sectors (agriculture, construction), has exacerbated the situation on the labour market, fuelling unemployment (16.4 per cent in 2023) and maintaining the status quo in terms of labour market participation opportunities (45.5 per cent in

2005 and 45.4 per cent in 2023) (Figure 7). Tunisia's employment/growth elasticity is high (estimated at 0.89 points for the period 2011–2017), and above the average for North African countries, estimated at 0.35 points for the same period (Ranzani, 2022, p. 2-10), which is putting the country under great pressure in terms of job creation, given the significant risks of a slowdown in growth and the uncertain economic outlook (Figure 8).



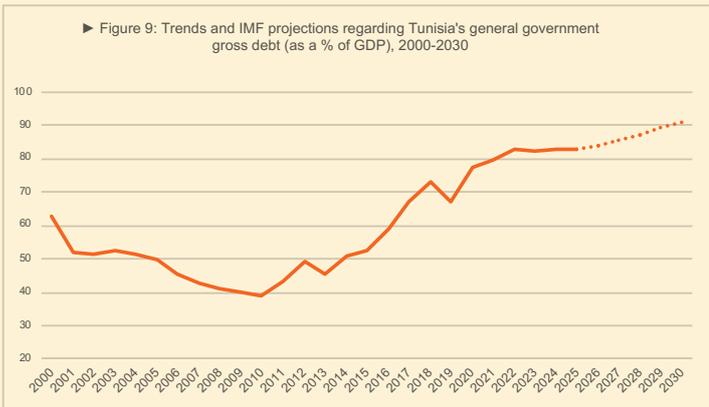
Source: (IMF, n.d.; ILOSTAT, n.d.).



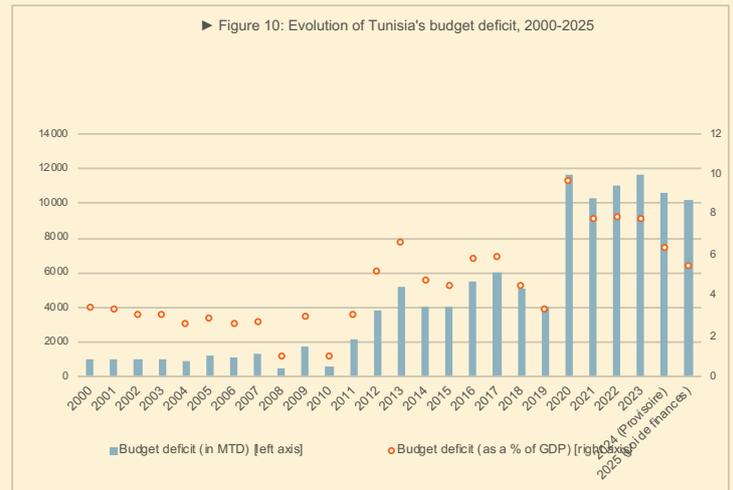
Source: (Kapsos, 2005; Ranzani, 2022).

Tunisia’s energy insecurity has increased its trade deficit (ITES, 2022, p. 19-49), and the war in Ukraine has had a negative impact on the terms of trade, further widening the energy deficit (WB, 2023, 2024b). In 2024, the energy trade deficit rose to 10.72 billion Tunisian dinars, which amounts to 56.6 per cent of the country’s total trade deficit in 2023 and is 19.4 per cent higher than the energy trade deficit in 2023. Increased dependence on energy imports has serious macroeconomic consequences, fuelling pressure on the current account, the depreciation of the country’s currency and the depletion of its foreign exchange reserves (Attig-Bahar et al., 2021; Saadaoui & Chtourou, 2023). This has inevitably

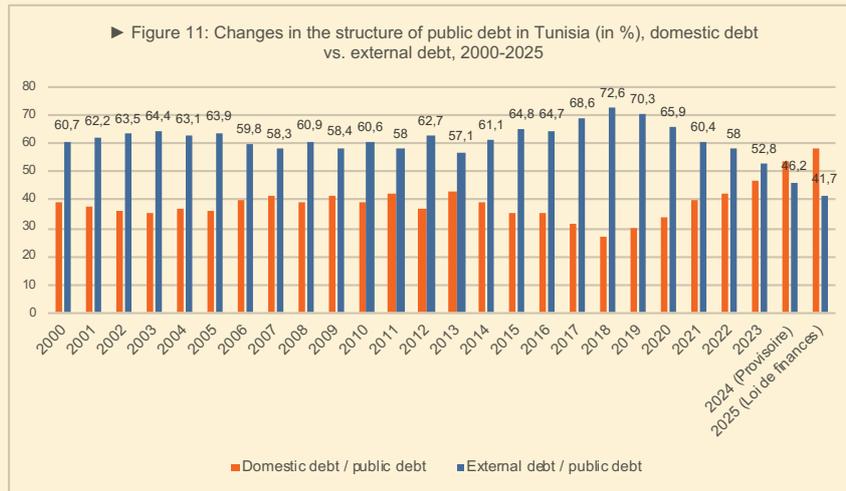
pushed up its debt and affected its public finances (ITUC, 2023; IRENA, 2021, p. 16). The outlook is challenging, given the rapid rise in public debt and the widening budget deficit during the post-revolution period, coupled with both domestic shocks (social tensions, political instability) and external shocks (COVID-19 pandemic, Russia-Ukraine war), which have severely limited the state’s ability to invest in renewable energy, compromising the country’s energy transition and long-term economic stability (ITUC, 2023, p. 4-10) (Figures 9 and 10). As a result, the development of renewable energy is suffering from a decline in public investment, and it is in this context that MDBs have a key role to play in supporting the energy transition in Tunisia.



Source: (IMF, n.d.).



Source: (MoF, n.d.).

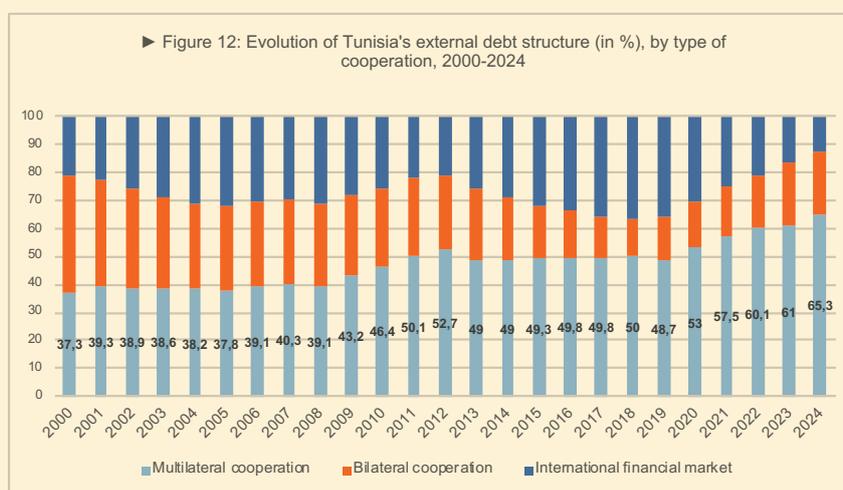


Source: (MoF, n.d.).

1.3. OVERVIEW OF MULTILATERAL COOPERATION IN TUNISIA

The trend in terms of debt in Tunisia has reversed, with increasing recourse to borrowing from the domestic market. External debt still nevertheless accounts for a significant proportion of public debt, estimated at almost 41.7 per cent according to the 2025 Finance Law (MOF, n.d.) (Figure 11). Multilateral cooperation is the main source of Tunisia’s external debt, accounting for 61 per cent in 2023 (BCT, 2024b, p. 50), reflecting its strong partnerships with MDBs and IFIs on the development front

(Figure 12). Since 2022, however, the multilateral landscape has been marked by a decline in IMF financing¹, the decline in support from the World Bank and the spectacular entry of Afreximbank. The EIB and EBRD stand out for having significantly scaled up the financing they allocate to the energy sector, as illustrated by the country’s long-term external loan drawdowns. While ET is essential for the country’s climate action (WB, 2023, 2024b) and macroeconomic stability (ITUC, 2023, p. 4-10), Tunisia, like many developing countries, should rely more on MDBs as key players in the low-carbon transition (Kim & Lee, 2021)..



Source: For 2024 (BCT, 2025); for the rest, compiled data (Banque centrale de Tunisie (BCT), n.d.; ITCEQ, 2019; MoF, n.d.).

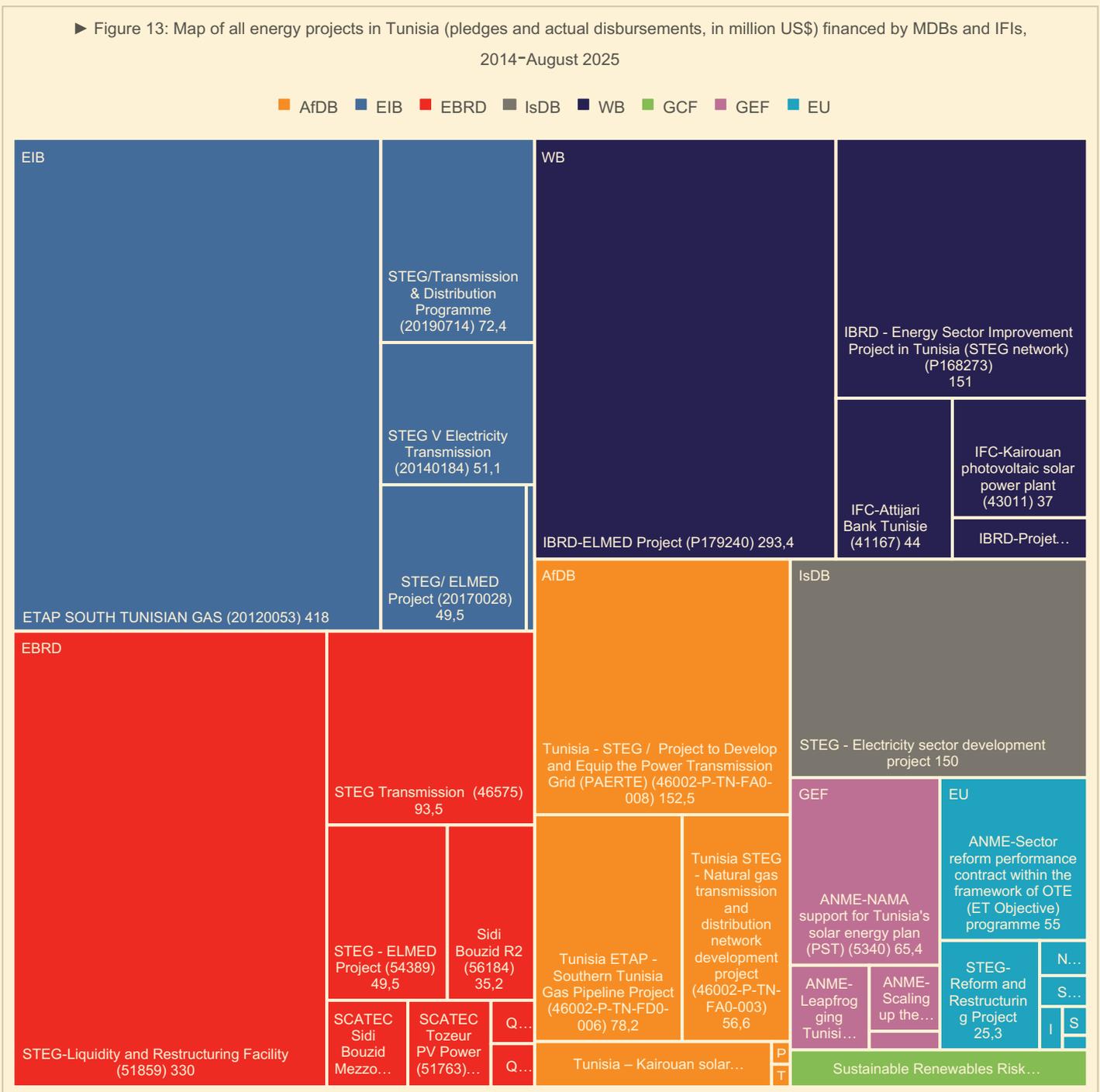
¹ Following the non-conclusion of a US\$1.9 billion loan by the IMF in 2022 (ITUC, 2023, p. 4).

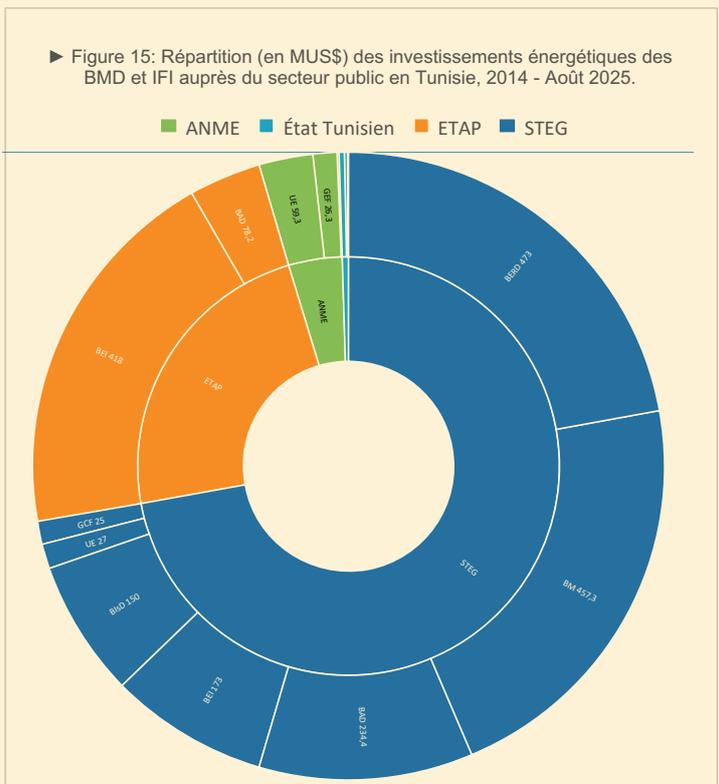
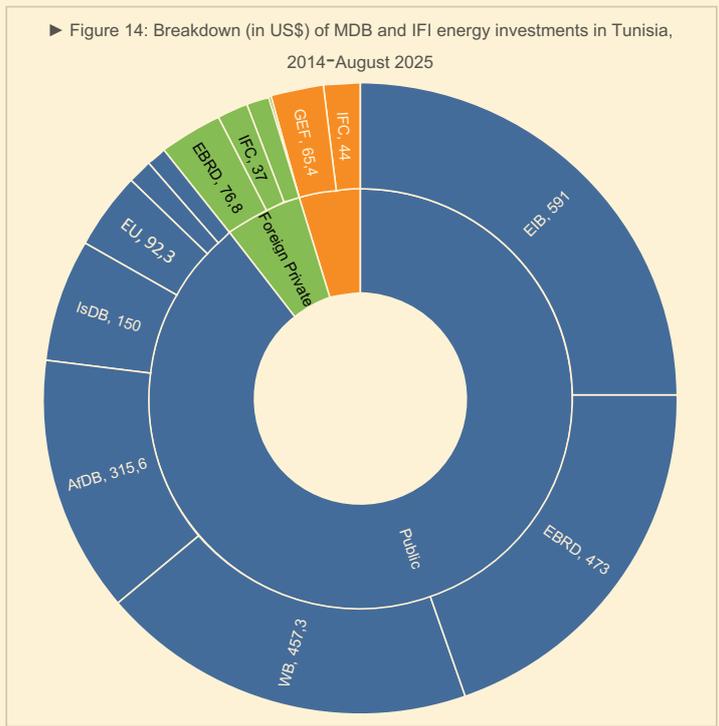
2. MAPPING OF MDB AND IFI ENERGY PROJECTS IN TUNISIA

2.1. BREAKDOWN OF MDB AND IFI ENERGY INVESTMENT ALLOCATIONS BY PROJECT, SECTOR AND ENTITY

In this section, we map the distribution of MDB energy investments in Tunisia (Figures 13, 14 and 15), with a particular focus on EBRD projects (Table 1).

► Figure 13: Map of all energy projects in Tunisia (pledges and actual disbursements, in million US\$) financed by MDBs and IFIs, 2014–August 2025





Source: (AfDB, n.d.; EIB, n.d.; EBRD, n.d.; IsDB, n.d.; WB, n.d.; EU Delegation, n.d.; Green Climate Fund - GCF, n.d.; Global Environment Facility - GEF, n.d.; IFC, n.d.; UNFCCC, 2024). Note: amounts are presented in millions of US dollars (based on an average exchange rate of €1 = US\$1.1).

2.2 IN-DEPTH ANALYSIS OF EBRD ENERGY PROJECTS IN TUNISIA

Date, title and project reference	Beneficiaries (Public/Private)	Finance pledge & total project cost (euros)	Financial instruments used & Partners and financial mechanisms (a)	Scope of the project and RE scheme	E&S impact (b)	Employment	Project status
August 2025 Sidi Bouzid R2 – (56184) 100 MW solar photovoltaic power plant in the governorate of Sidi Bouzid	Private: SCATEC KHOBNA PV POWER Jointly owned by SCATEC (50%) and AEOLUS SAS (50%), a subsidiary of the Japanese conglomerate TOYOTA	• Pledge 32 • Project cost 92,7	• EBRD: senior loan • EU: investment grant through the CEF mechanism under the NIP	ET Concession	Category B	Not indicated	Exploratory (final review passed, awaiting approval)
March 2024 Qair Solar - Project B (55027) ► 10 MW solar photovoltaic power plant project	Private: Feriana C Solar Power Plant (ad hoc entity established in Tunisia, owned by foreign operators Qair International, with 39%, and Mazarine Energy BV, with 61%)	• Pledge 3,9 • Project cost 7,3	• SEMED mechanism: loan • Subsidy	ET Authorisation	Category B	Job opportunities created, but no details provided	Execution (Disbursement)
March 2024 Qair Solar - Project A (55026) ► 10 MW solar photovoltaic power plant project	Private: Feriana C Solar Plant (an ad hoc entity incorporated in Tunisia, majority-owned by French operator Qair International, with Mazarine Energy BV also holding a stake)	• Pledge 3,9 • Project cost 7,3	• SEMED mechanism: loan • Subsidy	ET Authorisation	Category B	Job opportunities created, but no details provided	Execution (Disbursement)
October 2023 STEG - ELMED electricity interconnector / Undersea cable – Tunisia/Italy (54389) ► Project for a 200 km high-voltage direct current (HVDC) submarine cable with a renewable electricity capacity of 600 MW connecting Tunisia and Italy. The project also aims to strengthen the integration of the electricity systems in Tunisia and Italy.	Public: STEG	• Pledge 45 • Project cost 211	• EBRD: senior loan with sovereign guarantee by the state • EU: CEF mechanism under the NIP • Other co-financing in the form of sovereign loans: o EIB o WB o KfW	ET	Category A	Not indicated	Signed
March 2022 SCATEC Sidi Bouzid Mezzouna PV Power (51776) ► 50 MW solar PV power plant project	Private: SCATEC Sidi Bouzid Mezzouna PV Power (company with capital held by the Norwegian operator SCATEC and AEOLUS SAS of the TOYOTA group)	• Pledge 15 • Project cost 47,7	• EBRD: loan • SEMED: loan (from CIF-CTF and GEF) • Other co-financing: o PROPARGO (loan) o Multi-donor account for the SEMED region (grant) o Cooperation fund for the SEMED region (grant)	ET Concession	Category B	Recruitment of up to 300 workers for its construction during the most intensive on-site works phase	Execution (Disbursement)
March 2022 SCATEC Tozeur PV Power (51763) ► 50 MW solar PV power plant project	Private: SCATEC Tozeur PV Power (limited liability company owned by the Norwegian operator SCATEC and AEOLUS SAS of the TOYOTA group)	• Pledge 15 • Project cost 47,7	• EBRD: loan • SEMED: loan (from CIF-CTF and GEF) • Other co-financing: o PROPARGO (loan) o Multi-donor account for the SEMED region (grant) o Cooperation fund for the SEMED region (grant)	ET Concession	Category B	Recruitment of up to 300 workers for its construction during the most intensive on-site works phase	Execution (Disbursement)
May 2020 Liquidity and restructuring facility for the STEG (51859)	Public: STEG	• Pledge 300 • Project cost 300	• EBRD: senior loan with sovereign guarantee by the state • EU: investment grant through the CEF mechanism under the NIP	Financial stabilisation	Category B	-	Execution Repayment
February 2016 STEG Transmission (46575) ► The project aims to strengthen the STEG electricity transmission grid in north-eastern Tunisia and prepare it for the integration of additional renewable energy capacity in the future.	Public: STEG	• Pledge 85 • Project cost 170	• EBRD: senior loan with sovereign guarantee by the state • Other co-financing: o EIB (sovereign loan)	Technical capacity building	Category A	Local job opportunities created on the construction sites	Execution Repayment

Source: (EBRD, n.d.). Notes: (a) The EBRD draws on other financial mechanisms: (i) SEMED: a lending facility for private sector renewable energy production in the southern and eastern Mediterranean region (EBRD, 2024b), (ii) CEF: the Connecting Europe Facility used to provide funding through the European Neighbourhood Instrument (ENI) under the EU Neighbourhood Investment Platform (NIP). (b) According to the EBRD (EBRD, 2024a), the projects' environmental and social (E&S) impact is classified into environmental and social categories (A, B, C or F). (i) Category A: projects with potentially significant and extensive adverse E&S impacts, requiring a participatory and detailed impact assessment. (ii) Category B: projects with site-specific, limited adverse E&S impacts.

2.3. MAIN FINDINGS EMERGING FROM THE MAPPING OF MDB ENERGY PROJECTS IN TUNISIA

The four main findings that emerge from the mapping of MDB energy projects in Tunisia are as follows:

- Over the period studied, the portfolio of MDB and IFI energy projects is estimated at around US\$2.5 billion, mainly financed by non-concessional debt, which is nevertheless counted as climate finance². The MDBs' main priority is to strengthen the STEG grid, with a total investment of \$670.5 million. The second is the renewable electricity interconnector project between Tunisia and Italy (ELMED), supported by the EIB, EBRD, World Bank, GCF and KfW (with bilateral cooperation funding in the case of the latter). Finally, the EBRD has allocated €300 million (approximately US\$330 million), its largest intervention, to the financial stabilisation of the STEG.
- The public sector receives the lion's share of MDB funding compared to the private sector. Most of the funds are allocated to the STEG, followed by the Tunisian Petroleum Activities Company (ETAP) and, finally, the National Agency for Energy Management (ANME). Although the latter is one of the most influential strategic players in Tunisia's energy transition, it has received limited funding from the EU, AfDB and GEF. The partnerships with the ANME are more significant at bilateral level (with AFD, GIZ and KfW).
- The only energy transition project in Tunisia involving the STEG³, is, in principle, the ELMED project. All other ET projects in Tunisia are exclusively geared towards foreign IPPs. The EBRD stands out as the MDB with the largest portfolio of ET projects in Tunisia (with four projects benefiting international IPPs), while the AfDB and IFC are financing just one solar project for the Emirati consortium AMEA POWER.
- Tunisia has very limited access to multilateral climate funds (GEF, GCF, and CIF-CTF), which offer substantial financial resources on favourable terms.

² See OXFAM, 2023.

³ Under bilateral cooperation, the STEG has received funding from the German bank KfW for two renewable energy projects (KfW, n.d.).

3. ANALYSIS AND EVALUATION OF THE DIRECT IMPACT OF MDB ENERGY INVESTMENTS IN TUNISIA

The report aims to analyse and assess the impact of MDB energy investments in Tunisia from two multi-level perspectives. The first considers the direct impact of these interventions in the national context over the period 2014 to 2024. The second is based on a critical review of past experiences, international energy trends, and strategic thinking.

3.1. THE EFFECT OF MDB INVESTMENTS ON THE STEG'S CAPACITIES

Funding from MDBs (AfDB, EIB, EBRD, IsDB, and WB) has focused on strengthening the STEG grid and improving energy efficiency to optimise the integration of renewable energy sources. The grid loss indicator, however, continues to raise concerns. Since 2010 (when the loss rate was estimated at 11.4 per cent), the indicator has continued to rise significantly above the 2015 average for non-OECD countries (estimated at 9.6 per cent) (IEA, 2017). This is partly owed to electricity diversion, but also to grid inefficiencies. These losses highlight the growing need for major transformation geared towards energy efficiency (ITES, 2022, p. 20).

From another perspective, and given that the focus of the EBRD's most significant intervention was on the financial stabilisation of the STEG, the report also provides a ratio-based analysis (for the period 2017-2022). In this context, the profitability ratios, GMR (gross margin ratio), OMR (operating margin ratio) and ROA (return on assets ratio) are often negative or mediocre, reflecting structural operating deficits caused by the subsidy policy (JICA, 2022), which points

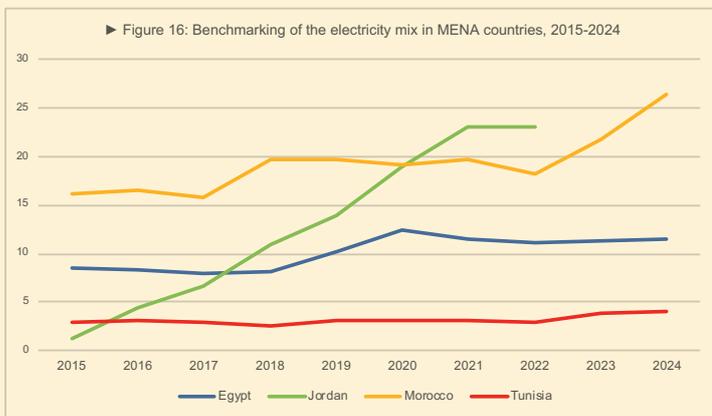
not only to financial distress (Whitaker, 1999) but also economic distress (Andrade & Kaplan, 1998, p. 1444). As regards financial leverage ratios, the STEG's ICR (interest coverage ratio) is below the 80 per cent threshold (the only exception was in 2021). This confirms (according to Asquith et al., 1994) that the STEG is in a critical state of financial distress (exacerbated by excessive external debt, exposure to exchange rate risks, and a heavy financial burden). The STEG is plagued by problematic governance, with political laxity regarding the subsidy gap, the abolition of preferential pricing for gas purchases from ETAP following the agreement between Tunisia and the IMF in 2013, the abolition of indirect subsidies in 2015, and the purchase of the Algerian gas royalty quota in foreign currency. The STEG is heavily in debt, with a debt ratio estimated at 110 per cent in 2022. In terms of liquidity ratios, the STEG's financial difficulties remain ongoing, with a general liquidity ratio of no more than 55.2 per cent (in 2017), when should reach 100 per cent, revealing a reduced capacity to meet short-term commitments using assets that can be easily converted into cash. The STEG's cash ratio was 6.7 per cent in 2022, reflecting a severely strained cash flow situation (MoF, 2024, p. 36). In short, analysis of the STEG's ratios shows structural value destruction arising from poor governance, accumulated deficits, increased dependence on external debt, the risk of insolvency, and questionable financial restructuring.

3.2. THE IMPACT OF MDB INVESTMENTS ON RENEWABLE ENERGY DEVELOPMENT

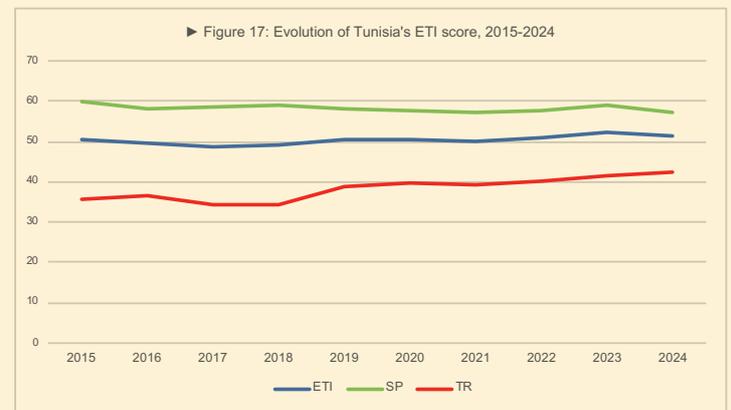
Despite the plethora of initiatives related to the development of renewable energy in Tunisia (the 2009 and 2015 Tunisian Solar Plans, or the creation of STEG Renouvelables in 2010), its energy transition goals remain largely unmet (ITES, 2022, p. 19). And while significant progress has

been made in renewable energy capacity, reaching 1,084 MW in 2024, thanks to the solar sector, the renewable wind and hydro capacity installed by the STEG has been at a standstill since 2018 (245 MW for wind power and 66 MW for hydropower) (IRENA, 2025). This progress remains below the 2020 target of 1,225 MW of renewable capacity, as set out in the Tunisian Solar Plan (PST). The slow pace of the energy transition in Tunisia is illustrated by the low share of renewable energy in the Tunisian

electricity mix (estimated at 3 per cent) compared to other countries in the MENA region (Morocco: 18.2 per cent) (Figure 16). This stagnation is also confirmed by Tunisia's ETI score – the Energy Transition Index developed by the World Economic Forum (WEF) – which provides a holistic view of the energy landscape based on two criteria: system performance (SP) and transition readiness (TR) (Singh et al., 2019, p. 1-3). The index reveals a lower than desired TR level (42.6 per cent in 2024) (Figure 17). These findings confirm that Tunisia is still a long way from achieving energy transition.



Source: (Our World in Data, n.d.).



Source: (WEF, n.d.).

3.3. DEVELOPMENTAL IMPACTS OF MDB ENERGY INVESTMENTS IN TUNISIA

The energy sector in general, and renewable energy in particular, is characterised by limited employment prospects that are tied to other sectors (construction, maintenance, and above all the manufacture of solar panel components, which is virtually unfeasible given China's position as the global leader in this industry)⁴. As a result, and with each

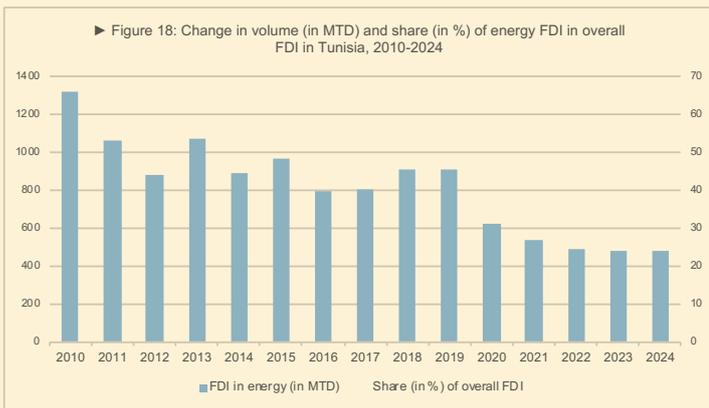
MW generating five temporary jobs in construction and two permanent jobs in maintenance, renewable energy projects are unlikely to create many direct jobs (Schafer, 2016, p. 8). Documentary analysis of agreements on energy financing by the EBRD and the AfDB in Tunisia seems to confirm this observation, with their fleeting references to temporary job opportunities concentrated in construction. The same applies to green hydrogen (H2V), where employment opportunities are limited to temporary jobs in construction (GIZ, 2021, p. 109). The report notes that foreign direct investment

⁴ Interview no. 3.

(FDI) in energy could support a just green transition in Tunisia, where more jobs were created by EU greenfield investors between 2003-2012 and 2013-2022 (OECD, 2024, p. 22-25). This potential, however, contrasts with the sharp decline in energy FDI in the country, which fell from 970 MTD in 2015 (41 per cent of total FDI) to just 479 MTD in 2023 (20 per cent). This downward trend has become particularly marked since 2019 (BCT, 2024a, p. 38) (Figure 18).

At the same time, documentary analysis of EBRD financing reveals that the ELMED project is classified as Category A, while the five other projects financed by the same MDB for foreign PPIs are classified as Category B, which points to significant environmental and social (E&S) risks. The E&S impacts are likely to increase with the shift towards green hydrogen (H2V) production in Tunisia, where the EBRD and the EIB are to finance infrastructure projects to export 6.3 million tonnes of H2 to the EU by 2050, under the National Strategy for the

Development of Green Hydrogen and its Derivatives (MIME, 2024, p. 9-40). Despite the adverse E&S impacts of green hydrogen (GH) production, the strategy in question – developed using a non-participatory and non-representative approach at sector level – has pushed the potentially disastrous impact of desalination on local communities and ecosystems into the background⁵ (El Amine, 2023; Villagrasa, 2022). In a context marked by Tunisia’s ambitious energy goals but lenient environmental standards, the pollution haven hypothesis (PHH) is borne out in Tunisia (Ghandri & Soltani, 2024; Sadik-Zada & Gatto, 2023)⁶. Similarly, the assessment of transition quality (ATQ) index established by the EBRD reveals that Tunisia’s 2024 green transition scores declined relative to 2023, falling below those of other MENA countries and the SEMED average (Figure 19). It can therefore be affirmed that few arguments are presented in favour of renewable energy FDI, be it in terms of job creation, social inclusion or environmental sustainability. These findings highlight the problematic impact of MDB interventions, underline a lack of sensitivity to overall performance and reinforce the concerns regarding green extractivism.



Source: For 2024 (BCT, 2025), from 2019 to 2023 (BCT, 2024); from 2010 to 2018 (PBR Rating, 2020).



Source: (EBRD, 2024b).

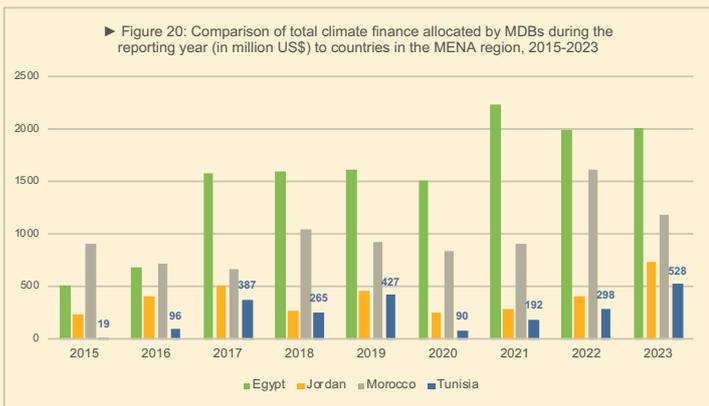
⁵ The production of green hydrogen requires large quantities of water, which represents a challenge in an arid country such as Tunisia. Desalination is proposed as an option for increasing production.

⁶ Interview no. 3.

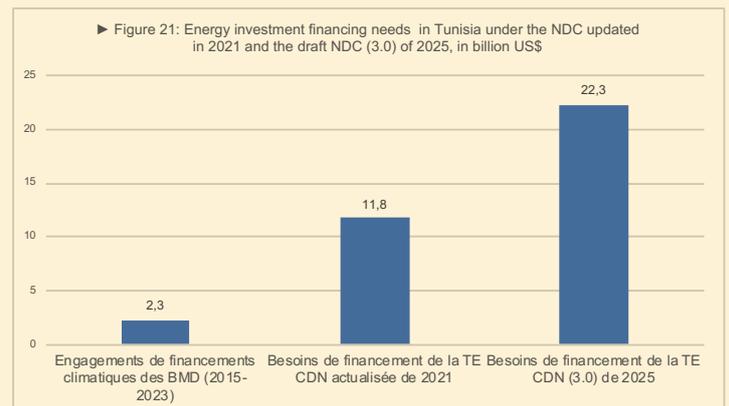
3.4. SCOPE OF MDB CLIMATE FINANCING IN TUNISIA

Climate finance is essential for reducing energy poverty (Njangang et al., 2024) and promoting the ET (ITES, 2022, p. 93), in energy-vulnerable developing countries. Yet the climate finance allocated to Tunisia by its financing partners (multilateral, bilateral and philanthropic) remains very limited, with low disbursement rates, as explicitly acknowledged by the World Bank (WB, 2023, p. 59). Similarly, according to the joint MDB report in 2023, and as illustrated in Figure 20, climate finance pledges for Tunisia for the period 2015-2023 are estimated at US\$2.3 billion (EIB, 2024,

p. 62). These amounts fall short of the energy transition needs announced in the updated NDC of 2021 (estimated at US\$11.8 billion) (MENV, 2021, p. 14) and in the draft NDC (3.0) of 2025 (estimated at US\$22.3 billion, Figure 21), and all the more so given that they only represent funding intentions (Houzir & Alaoui, 2018, p. 52). Tunisia’s share remains relatively modest compared to other countries in the MENA region (such as Egypt, Morocco and Jordan), which face similar climate and energy challenges (Figure 20). In light of all these findings, the structural slowness of the ET in Tunisia can be interpreted as the result not only of these financial constraints but also the lack of strategic vision and a blatant deficit in institutional capacities hindering access to multilateral climate funds⁷.



Source: (EIB, 2024).



Source: (EIB, 2024; UNFCCC, n.d.; MENV, 2021).

⁷ Interviews no. 7, 8 and 9.

4. CRITICAL REVIEW OF MDB INVESTMENTS IN THE ENERGY TRANSITION IN TUNISIA

4.1. DIFFERENT PERSPECTIVES ON THE IMPACT OF ELECTRICITY SECTOR REFORMS ON WORKERS, BASED ON INTERNATIONAL BENCHMARKING AND TUNISIA'S EXPERIENCE WITH LIBERALISATION AND PRIVATISATION

Impelled by multilateral institutions (particularly the World Bank and the IMF), the climate and energy policies of developing countries have been rooted in a doctrine linking ET to the liberalisation and privatisation (L&P) of the electricity sector (TUED, 2021). This has resulted in the emergence of “green structural adjustment”, implicitly replicating the logic of the old structural adjustment programmes (SAPs) using new rhetoric based on the concepts of sustainable development and just transition (TUED, 2023a, p. 42-55). This situation appears to be particularly marked in Tunisia, which is constrained by limited public funding and where MDBs continue to push the narrative of a private sector-led energy transition. Highlighting Tunisia’s experience with liberalisation and privatisation under SAPs is therefore particularly important for our critical analysis of the energy transition process in Tunisia, in the form promoted by MDBs. Tunisia turned to the IMF and the World Bank at two crucial moments in its history: the first, during the SAPs of the 1980s and 1990s and the second, after the revolution, through IMF loan programmes (Friedrich-Ebert-Stiftung, 2020, p. 2). With their widely contested economic effectiveness (Görmüş & Akçalı, 2021; Pfeifer, 1999), the outcomes of the SAPs (in 1986 and 1995) clearly highlighted the failure of neoliberal therapy, as illustrated by unsustainable growth, high debt, declining FDI and capital flight (Chamkhi,

2000; Pfeifer, 2016). The social cost was the most decisive factor, with massive job losses, structural unemployment, the collapse of the social contract, and the decline of the state’s role as a guarantor of social justice (Pfeifer, 1999, p. 449-450). IMF loans accompanied World Bank programmes, laying the foundations for the consolidation of L&P policies, which led to increased social tensions (Friedrich-Ebert-Stiftung, 2020, p. 2). It is from this perspective, and given that the reforms in Tunisia did not target the electricity sector, that our study examines international experiences with L&P in the sector, following the standard reform model under the structural adjustment programmes promoted by the IFIs in developing countries during the 1980s.

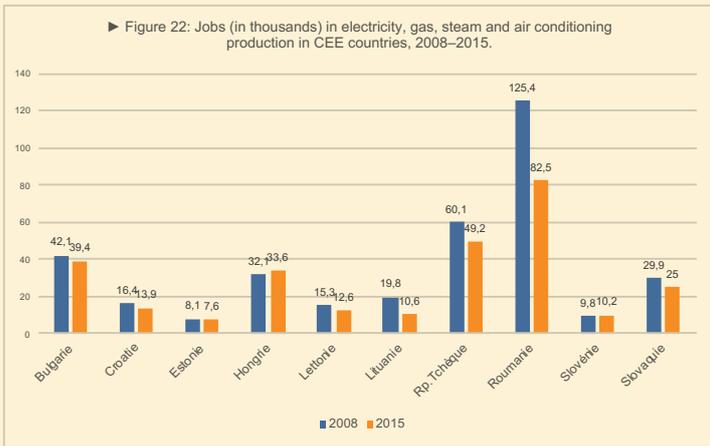
In line with the Washington Consensus, the World Bank, through its standard reform model, together with other IFIs, encouraged developing countries participating in SAPs to liberalise the electricity sector by splitting up production, transmission and distribution activities and adopting a market-based approach (Hall & Nguyen, 2017). Although recent literature has tended to temper the impacts of the reform (Estrin & Pelletier, 2018), this model was a failure (Yi-Chong, 2005), resulting in job losses, poorer working conditions and weaker trade unions. These observations are backed by empirical evidence in sub-Saharan Africa, Latin America and Asia (Andrès et al., 2006; Bayliss, 2002; Hall, 2005), in transition countries (Central and Eastern European – CEE – countries: countries where the EBRD’s first interventions began) (Hall et al., 2011; Papajorgji, 2014; Williams & Ghanadan, 2006), and even in the advanced economies of the EU (Flecker & Hermann, 2011; Hermann & Atzmüller, 2008), and the impacts have been explicitly acknowledged by the European Parliament (European Parliament, 2017) (Box 1). In Africa, Latin America and Asia, the reforms have mainly benefited foreign investors, while labour standards have been violated, contributing to the weakening of trade unions and the disruption of social dialogue (Ekanade, 2014; Hall, 2005; Laha & Dutta, 2024; Sikwebu & Aroun, 2021). In short, and contrary to the thesis put

forward by reform advocates, who argued that the restructuring of public enterprises would improve performance and stimulate employment, history has shown that the

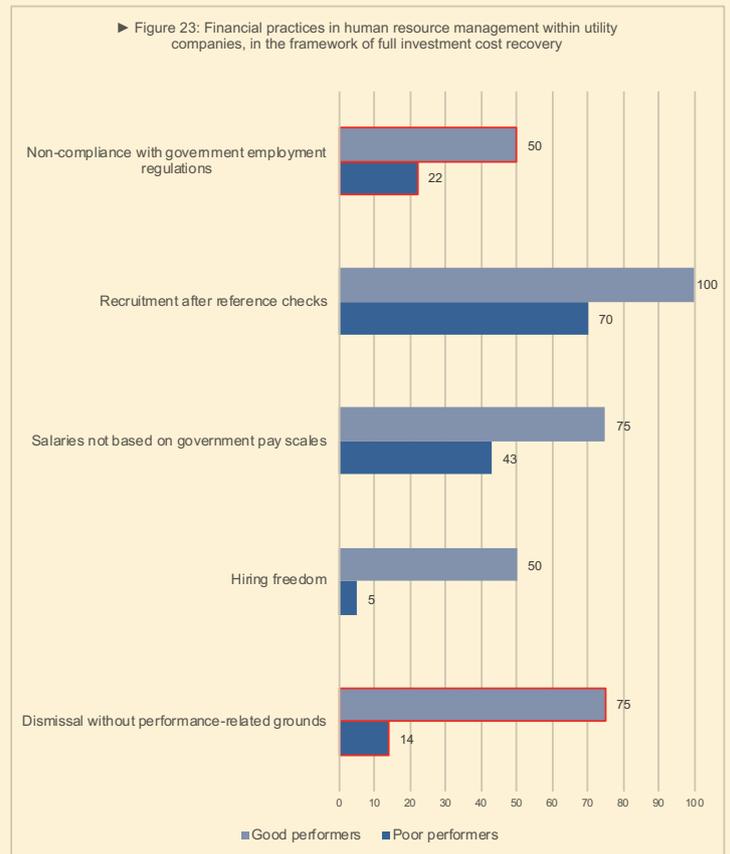
gains in performance have been achieved at the expense of workers (Foster & Rana, 2020; Gassner et al., 2009) (Box 1).

BOX 1. IMPACT ON EMPLOYMENT OF L&P REFORMS IN THE ELECTRICITY SECTOR IN EU COUNTRIES

- The European Parliament study (European Parliament, 2017, p. 28) noted significant job losses in most CEE countries (Figure 22). In the advanced economies of the EU, the rate of job losses exceeded 30 per cent (Hermann & Atzmüller, 2008, p. 184). The reforms were also accompanied by a deterioration in working conditions and a reduction in the scope for trade unions to operate (union organising, activities and collective bargaining) (Hermann & Atzmüller, 2008; Leschke & Keune, 2008; van der Meer, 2008).
- In 2020, a report (Foster & Rana, 2020, p. 287) revealed that the World Bank implicitly acknowledged the failure of the standard reform model when it admitted that dismissals were among the management practices of companies considered to be ‘good performers’. As illustrated in Figure 23, 75 per cent of the good performers are firms in which managers are free to dismiss employees at will. Furthermore, non-compliance with government employment regulations is among the good human resource management practices in 50 per cent of the firms with good performance ratings.



Source: (European Parliament, 2017).



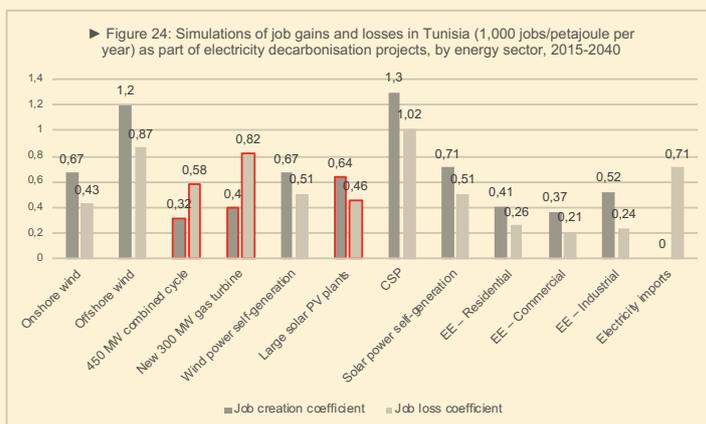
Source: (Foster & Rana, 2020).

4.2. PROJECTIONS REGARDING THE IMPACT ON EMPLOYMENT OF FOSSIL FUEL PHASE-OUT AND ENERGY TRANSITION: JUST AND INCLUSIVE TRANSITION PROSPECTS IN TUNISIA

There is considerable debate over whether the current energy transition process is aligned with the interests of Tunisia and its workers. The significance of this issue is highlighted by two key factors influencing the situation in Tunisia: firstly, the marginalisation of social dialogue and the exclusion of the UGTT trade union confederation⁸ (ITUC, 2025; DED, 2024), which systematically compromises the prospects for a just transition and, secondly, the financing of ET projects, which is often based on concession agreements⁹. The concerns raised are all the more serious given that the so-called ‘green’ reforms in the electricity sector threaten to implicitly replicate the negative experiences of the standard reform model, by transitioning to a hybrid model based on renewable electricity production by foreign IPPs through PPPs and the exploitation of state-owned companies’ grids, leading to ‘green’ structural adjustment (TUED, 2023b, 2023c). More worryingly, the limited employment potential of ET projects contrasts with the overestimated projections appearing in most policy reports (Stavropoulos & Burger, 2020). It should be noted, in this respect,

that employment prospects in the renewable energy sector are quite limited, given that such investments are more capital intensive than labour intensive (Schafer, 2016, p. 8-32). This is particularly true in the Tunisian context, as confirmed by quantitative research conducted by Saadaoui & Chtourou (2023).

Similarly, the rare quantitative studies simulating the impact of decarbonisation projects on employment in Tunisia point to adverse effects. One such study (by Robertson & Lopez Acevedo, 2024, p. 16) highlights that rising carbon prices are associated with a significant decline in employment in fossil fuel intensive sectors, and according to BloombergNEF (2024), this scenario is highly likely in the EU. Likewise, simulations (Gardumi et al., 2021; Howells et al., 2021) on the impact of electricity decarbonisation on employment in Tunisia reveal that while the energy transition should create jobs by 2040 in all renewable energy sectors, particularly large-scale photovoltaic power plants (usually operated under concession agreements), it is also expected to lead to much greater job losses in public units (combined cycle power plants, new gas turbines) (Figure 24). The crux of the matter is that, given the high number of public sector employees, job creation in the private sector is insufficient to offset job losses in the public sector (Gardumi et al., 2021; Howells et al., 2021). Furthermore, according to the same authors, job creation in solar PV projects is likely to decline gradually, all the more so given that this sub-sector lacks competitiveness and its development is viewed with caution by private investors in Tunisia (WB, 2024a, p. 46-62).



Source: (Howells et al., 2021)

⁸ Interviews no. 1, 2, 6, 7 and 8.

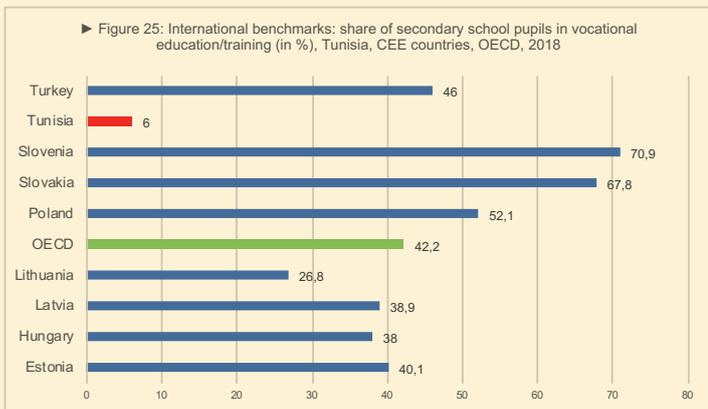
⁹ Interviews no. 1, 2, 4, 6, 12 and 14.

In Tunisia, labour market policies and regulations limit the creation of formal jobs and weaken the match between supply and demand. At the same time, education and vocational training systems operate in isolation from the market, preventing workers from acquiring the skills required (OECD, 2022). This comes on top of the already glaring shortage of on-the-job training, reskilling and upskilling programmes. The concerns are all the more serious given that the potential green jobs

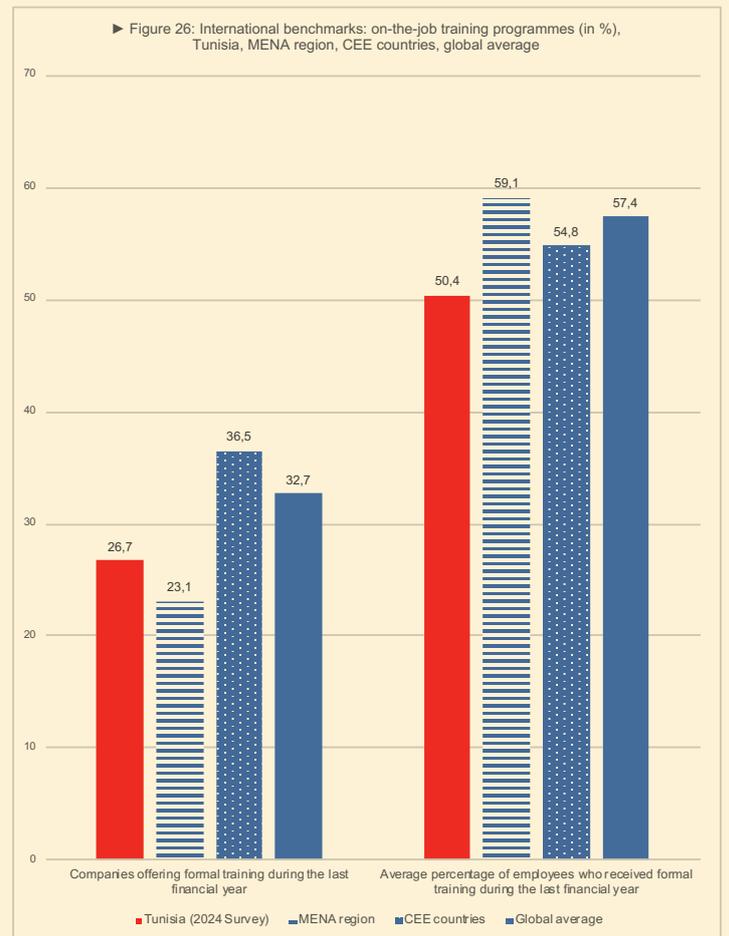
to be created through the ET (and even existing conventional jobs, the requirements of which may change) call for new skills (World Bank, 2023, 2024a), advanced skills, based on a combination of formal education, professional experience and on-the-job training, as well as strong cognitive and interpersonal skills. A key feature of emerging green jobs is the urgent need for on-the-job training (Consoli et al., 2016). These constraints further complicate the ET process and jeopardise the prospects for a just transition in Tunisia (see Box 2).

BOX 2. VOCATIONAL TRAINING IS OUT OF STEP WITH THE CHALLENGES OF DECARBONISATION: LACK OF GREEN SKILLS AND POOR PROSPECTS FOR EMPLOYMENT IN THE ENERGY TRANSITION

Although vocational training plays a crucial role in workforce upskilling from a technological and organisational perspective (WB, 2024a, p. 24), the Tunisian education system appears to neglect the medium and low green skills required for the ET, which are primarily taught through technical education and vocational training (WB, 2023). This is compounded by the very low share of young people enrolled in vocational education or training (OECD, 2022, p. 107) (Figure 25). The most significant challenge, however, continues to be the delay in planning and implementing green skills training throughout the ET value chain (ITES, 2022, p. 67-144); there is also a widespread lack of on-the-job training opportunities in Tunisia (Figure 26) and, more importantly, Tunisia is failing to take a proactive approach to renewable energy related skills development (African Union & OECD, 2024, p. 210).



Source: (OECD, 2022).



Source: (WB, n.d.-a).

The ET process also raises issues of inclusion. Women continue to face gender-related barriers, both in low-skilled training programmes for technical occupations and in accessing management positions, which limits their chances of integration. Young graduates, for their part, face unemployment and declining prospects for stable employment in a training system that does not provide them with the practical skills they need. The attitude of companies operating in renewable energy and energy efficiency reflects two obvious problems: firstly, the inadequate preparation of graduates for current jobs and, secondly, employers' preference for versatile candidates who are able to move between the conventional energy sector and the ET, excluding those who lack this versatility. For young people who have not acquired these skills during their initial training, the high costs of retraining are an additional obstacle, limiting their chances of finding employment within the framework of the energy transition (WB, 2024a, p. 1).

4.3. WHAT IS THE ET PROCESS PROMOTED BY THE MDBS REALLY ACHIEVING IN TUNISIA?

Despite the promises of climate justice and a just transition, the MDBs' practices continue to promote market logic in a vital sector such as electricity, with green structural adjustment replicating the same L&P reforms of the SAPs of the 1980s and imposing conditions that diminish the capacity of developing countries to formulate energy policies that serve their development interests (TUED, 2023c, p. 25). This long-dominant policy framework is based on at least two fallacies: the energy transition is inevitable and already well underway, and the private sector is the lever for the transition through profit-driven PPPs (TUED, 2023a, p. 20-21). What we are seeing today is not 'energy transition' but 'energy expansion', with the simultaneous

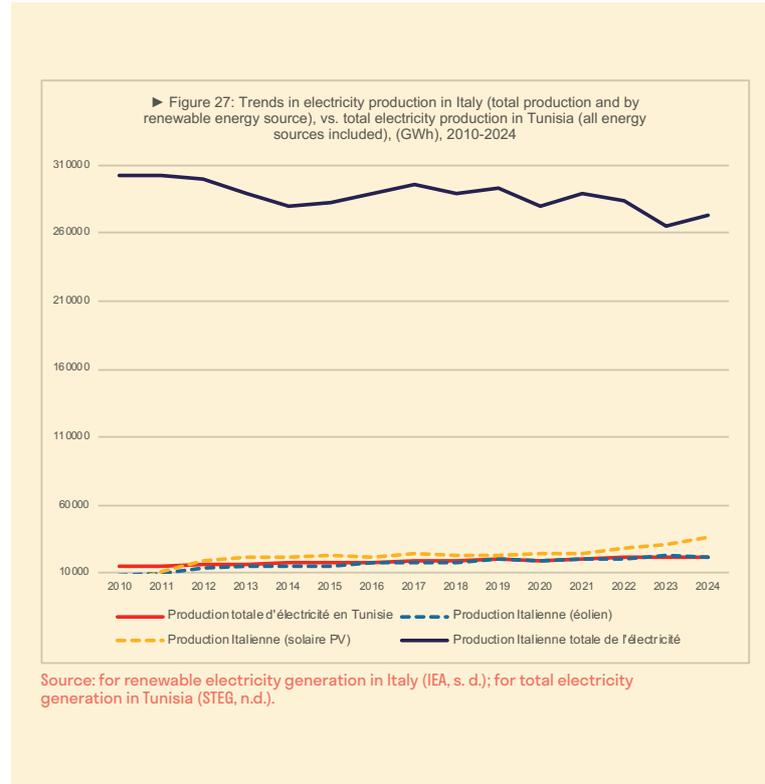
growth of all forms of energy (TNI & TUED, 2021, p. 8). This trend is particularly marked in Tunisia, spurred by two drivers. The first is the proliferation of concessions granted to foreign IPPs financed mainly by the EBRD. In this context, noting the increasingly obvious abandonment of ET projects under the authorisation regime, the EBRD, with four projects, and the AfDB and IFC with a single project (all under concession arrangements) appear to have turned their attention towards exports or large-scale commodification, supported by generous and unprecedented incentives, rather than towards promoting energy transition in Tunisia. The second is linked to the ELMED project, presented as an initiative to promote energy integration and trade between Tunisia and Italy. But how a country as vulnerable as Tunisia, which imports more than two-thirds (2/3) of its energy needs and struggles to meet rising local demand, can afford to export renewable electricity is a mystery¹⁰. Furthermore, the ELMED project's capacity is estimated at 600 MW and can only generate a negligible share of Italy's electricity needs (estimated at 273,294 GWh in 2024, where solar photovoltaic and wind power alone contribute 35,993 and 22,306 GWh respectively, exceeding Tunisia's total production estimated at 21,956 GWh in the same year) (Figure 27). This analysis is strongly supported by IRENA projections (IRENA, 2023, p. 64), which reveal the true direction of flows by 2040, when Tunisian exports to Italy are expected to be limited to 649 GWh, while Tunisia's imports from Italy will reach 3,496 GWh. Accordingly, the most likely outcome appears to be large-scale imports of renewable electricity from Italy. The ELMED project is therefore not about energy exchange, integration or cooperation between the two countries, but an import project designed to serve Italy's interests¹¹. In view of all these considerations, it can be said that there are currently no ET projects that truly serve Tunisia's interests, which completely refutes any hypothesis of an energy transition being underway in the country.

The idea promoted by the EBRD that reforms in the electricity sector will pave the way for the success of the energy transition in Tunisia is simply erroneous, or misleading. In the EU, for example, the limited success achieved has been thanks to government

¹⁰ Interviews no. 3 and 4.

¹¹ Focus Group and interviews no. 3, 4, 5, 6, 11, 13.

support and non-market agreements, not market mechanisms (Wegmann, 2019, p. 5). In most developing countries in the South, the chronic underinvestment in ET is widely recognised, but the response remains limited to increased public support to guarantee significant profits for foreign IPPs, and this approach still falls short of the investments needed to meet the challenges of the energy transition (TUED, 2023c, p. 22). In the Tunisian context, the L&P-based approach taken by the EBRD and MDBs has seemingly sought to resolve perceived performance issues within the STEG, despite the latter having demonstrated irreproachable expertise in energy transition solutions, as evidenced by its wind power projects in Tozeur, in southern Tunisia (Ben Rouine & Roche, 2023), which leaves open the question of why these institutions have dismissed any public pathway, despite the considerable reduction in costs (Seel et al., 2024, p. 22) and the unwavering commitment offered by public enterprises, while incorporating broader developmental objectives (Prag et al., 2018, p. 37). The answer is simple: the MDB doctrine excludes any viable public alternative, favouring PPPs driven by foreign private interests, without any reliable technical or economic arguments. The EBRD's strategy, which stands out as the MDB most involved in promoting private ET projects (Piroska & Schlett, 2024), supports this unbalanced approach to risk sharing, with a profit-driven



logic focused on regulatory guarantees, carbon credits, and greed for government subsidies, rather than on efficiency (Leigland, 2018; Tan, 2011). The Tunisian context is a prime example of the poor credibility of the 'privatise to decarbonise' narrative, as evidenced by the lack of investment in the energy transition and the mediocre results achieved in the quest for decarbonisation, making the private sector-led energy transition not only an untenable hypothesis but also an outdated approach (TUED, 2023c, 2023a).

CONCLUSION AND RECOMMENDATIONS

The energy transition is far from underway in Tunisia, owing to multilateral development bank (MDB) interventions rooted in the ‘privatise to decarbonise’ doctrine and a rejection of any public alternatives without any serious consideration of the potential benefits they could bring. In this context, the analyses conducted confirm that there are currently no transition projects contributing to Tunisia’s energy independence, be it EBRD projects or the ELMED project, the design of which is highly ambiguous. While MDBs are using controversial techno-market approaches to reconfigure Tunisia’s energy landscape, the EBRD’s energy projects warrant particular scrutiny, given its strictly market-oriented mandate (Piroska & Schlett, 2024), often prioritising interests other than those of the countries in which it is intervening (Shields, 2020, p. 243), and where it has managed to put capital before workers (Shields, 2019, p. 14).

Based on past experiences and the analyses conducted for this study, the MDBs appear to be replicating the same old logic of structural adjustment, but under the labels of ‘decarbonisation’ and ‘just energy transition’. They are, in other words, promoting ‘green structural adjustment’ by advocating the privatisation of renewable electricity projects, granting concessions to foreign companies and dismantling public services – an approach that history has proven to be ineffective and unfair. As a result, the energy transition as currently promoted by the EBRD and other MDBs in Tunisia appears to be systematically undermining the sustainability of the public electricity company (STEG) and dissipating any prospect of a just energy transition. The pathway financed by the MDBs is an unjust transition that serves interests other than those of Tunisia and its workers, compounded by an ecosystem marked by widespread power

games, a perceived lack of transparency, and poor governance. Note should be taken, in this respect, of: (a) the failure to comply with the provisions of Article 40 of Law 12-2015 regarding the national plan for electricity generated from renewable energy sources, (b) the attempt to transfer the STEG’s rights to carbon credits to foreign operators, and (c) questionable decisions depriving this institution of renewable investments in 2016. This governance deficit and the preservation of the current approach appear likely to perpetuate and exacerbate the country’s energy insecurity, irreversibly compromise its strategic interests and long-term macroeconomic stability, and ultimately trigger a slide towards non-sovereign perils.

The energy transition represents a major challenge that can neither be left to the market nor to technocratic decisions. It requires a collaborative approach that combines the efforts of trade unions, workers, the government, financial institutions and civil society, to build an energy model that promotes Tunisia’s resilience and prosperity. **By highlighting the limitations of the current approach, while recognising the role of multilateral development banks as key players in the transition, this report aims to pave the way for constructive cooperation, based on equitable benefit sharing and social justice, for a truly just and inclusive transition that places the interests of Tunisia and its workers at the heart of the process. This report therefore makes the following recommendations:**

i. Strengthen governance, especially in light of the profound influence of transparency, clear and communicated political vision, coordination, and institutional efficiency on the choices and outcomes in the pursuit of a just energy transition (Evensen & Sovacool, 2024; Meckling et al., 2022). A just energy transition and climate justice can only be achieved through bold participatory democracy (Ben Rouine & Roche, 2023; Hamouchene, 2023; Rignall, 2023), **which necessarily implies the firm establishment of energy citizenship** by means of social dialogue and strict political oversight, with a view to ensuring inclusive, transparent and

accountable decision-making, as well as informed strategic choices in this area.

ii. Social dialogue must be at the heart of the energy transition in Tunisia. To achieve this, a National Committee for Just Transition (CNTJ) should be established, as a key body that would facilitate tripartite consultations between trade unions (UGTT), employers and the government, with the participation of civil society and experts from various disciplines. **Regional social dialogue platforms (PRDS) should also be established to ensure that the energy transition process is tailored to specific regional and local circumstances. The CNTJ and PRDS represent an original institutional innovation that is in line with the bottom-up approach of the Paris Agreement, enabling a just energy transition that is context-specific and grounded in inclusion and citizen participation** (DED, 2025). The EBRD and other MDBs should make their financing conditional not only on compliance with this fundamental principle, but also on: (a) consistency with national strategies (the NDC, the country's energy strategy); (b) strengthening national institutional capacities (the STEG, ANME, the Tunisian financial ecosystem) rather than directing incentives towards foreign IPPs; (c) regional industrial development, whereby MDBs must direct their financing towards technology transfer and the development of a Tunisian value chain; (d) territorial integration through projects geared towards reducing regional disparities, via mechanisms that guarantee tangible benefits for local communities, such as employment and the reinvestment of returns.

iii. Tunisia's energy insecurity, macroeconomic constraints and the necessity of the transition mean that the only structuring approach that is plausible and suited to the Tunisian context is a PPP with a public pathway approach led by the STEG, with openings to the

private sector within clearly defined parameters.

The structure of this PPP must be tripartite, with the first third allocated to the STEG, the second partner being the Tunisian private sector and local banks and **the third being a foreign IPP that must ensure a significant degree of technology transfer and reinvestment. This balanced approach, combined with revenues from sales of other energy sources sold in foreign currency (gas and oil), would enable the STEG to ease the burden of electricity purchase agreements and stimulate investment in infrastructure projects in a way that keeps added value in Tunisia and supports the development of a national green value chain. The establishment of this partnership must be the subject of detailed social dialogue involving the various stakeholders, such as the UGTT and workers within the framework of the CNTJ and PRDS, and should focus on the following areas:** (a) Participatory financing through a fund dedicated to just transition (DED, 2025); (b) the systematic inclusion of binding social clauses guaranteeing decent work; (c) training plans to develop green skills, on-the-job training, reskilling and upskilling, all of which are considered essential for building green human capital capable of leading the transition; (d) the development of a collective agreement specific to green sectors.

iv. The UGTT is urged to incorporate the green transition into its strategic guidelines through the adoption of demands for a fair process in its motions, trade union structuring, organising, communication on the subject, and the building of public awareness about the risks of the current approach as it is being promoted and the governance deficit identified. It is essential that the UGTT strengthen its trade union influence by incorporating the issue into its motions and organising the new green sectors. As much as possible must be done to ensure social dialogue at all levels (micro, meso and macro), to communicate and develop trade union advocacy capable of steering the current energy transition towards energy security – national sovereignty – and ultimately towards a worker-centred approach via a public pathway led by the STEG. In this respect, the UGTT should **engage in a broader trade union and progressive alliance with other countries in**

the Global South, to formulate a common position capable of competing with the evasive concept of energy transition promoted in the international arena.

v. Taking a public pathway to energy transition requires improved energy efficiency throughout the value chain, considering it a potentially key mandate for public policy development and energy transition (DED, 2024). **Impeccable energy planning is also essential.**

vi. Noting the growing importance of multilateral climate funds, which provide substantial resources on concessional terms, efforts are needed to strengthen the country's institutional, organisational,

technical and managerial capacities and to promote a deliberate knowledge management strategy within the Tunisian financial ecosystem so as to accelerate the accreditation needed by national institutions to access the Green Climate Fund (GCF), which is to become the main multilateral entity for public climate finance in developing countries (according to Watson et al., 2022, p. 4). Similarly, **non-concessional financing must be excluded from climate contributions** and gradually replaced by grants and concessional financing. **Furthermore, in the absence of clear and binding definitions of climate finance, it should be emphasised that this is a distinct resource and should not be used as a substitute for official development assistance (ODA) (OXFAM, 2025).**

REFERENCES

- AfDB. (n.d.). MapAfrica—Tunisia projects.
<https://mapafrica.afdb.org/en/projects>
- African Union, & OECD. (2024). *Africa's Development Dynamics 2024: Skills, Jobs and Productivity*. OECD Publishing, Paris,
<https://doi.org/10.1787/df06c7a4-en>.
- Andrade, G., & Kaplan, S. (1998). How Costly is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions that Became Distressed. *The Journal of Finance*, 53(5), 1443-1493.
<https://doi.org/10.1111/0022-1082.00062>
- Andrès, L., Foster, V., & Guasch, J. (2006). *The Impact of Privatization on the Performance of the Infrastructure Sector: The Case of Electricity Distribution in Latin American Countries*. World Bank Policy Research Working Paper 3936, June 2006.
- Asquith, P., Gertner, R., & Scharfstein, D. (1994). Anatomy of Financial Distress: An Examination of Junk-Bond Issuers. *The Quarterly Journal of Economics*, 109(3), 625-658.
<https://doi.org/10.2307/2118416>
- ATPG. (2024). *Les annales de l'énergie 2023*. Association tunisienne du pétrole et du gaz, juillet 2024.
http://www.atpg.org.tn/assets/files/atpg_annales_2023_final.pdf
- Attig-Bahar, F., Ritschel, U., Akari, P., Abdeljelil, I., & Amairi, M. (2021). Wind energy deployment in Tunisia: Status, Drivers, Barriers and Research gaps—A Comprehensive review. *Energy Reports*, 7, 7374-7389.
<https://doi.org/10.1016/j.egy.2021.10.087>
- Banque Centrale de Tunisie (BCT). (n.d.). Archives.
<https://www.bct.gov.tn/bct/siteprod/page.jsp?id=77>
- Basílio, M. (2025). The support of Multilateral Development Banks to renewable energy projects in developing countries. *Journal of Environmental Planning and Management*, 68(3), 585-611.
<https://doi.org/10.1080/09640568.2023.2263904>
- Bayliss, K. (2002). Privatization and Poverty: The Distributional Impact of Utility Privatization. *Annals of Public and Cooperative Economics*, 73(4), 603-625.
<https://doi.org/10.1111/1467-8292.00207>
- BCT. (2024a). *Balance des paiements et position extérieure globale de la Tunisie*. Banque centrale de la Tunisie (BCT), décembre 2024.
<https://www.bct.gov.tn/bct/siteprod/documents/Balance.pdf>
- BCT. (2024b). *Rapport statistique de la dette extérieure 2023*. Banque centrale de la Tunisie (BCT), juin 2024.
<https://www.bct.gov.tn/bct/siteprod/documents/dette.pdf>
- BCT. (2025). *Rapport annuel 2024*. Banque centrale de la Tunisie (BCT), juin 2025.
- Ben Rouine, C., & Roche, F. (2023). Renewable energy in Tunisia: An unjust transition. In *Dismantling Green Colonialism: Energy and Climate Justice in the Arab Region* (Hamza Hamouchene & Katie Sandwell, p. 201-214). Pluto Press.

- BloombergNEF. (2024). EU ETS Market Outlook 1H 2024: Prices Valley Before Rally. <https://about.bnef.com/blog/eu-ets-market-outlook-1h-2024-prices-valley-before-rally/>
- Chamkhi, F. (2000). La politique de privatisation. *Confluences Méditerranée*, 35, 103-109.
- Consoli, D., Marin, G., Marzucchi, A., & Vona, F. (2016). Do green jobs differ from non-green jobs in terms of skills and human capital? *Research Policy*, 45(5), 1046-1060. <https://doi.org/10.1016/j.respol.2016.02.007>
- DED. (2024). Position de l'Union générale tunisienne du travail (UGTT) relative à la réalisation des ODD en Tunisie : Pour un avenir durable, résilient et prospère. Département des études et de la documentation (DED) – l'Union générale tunisienne du travail (UGTT), décembre 2024.
- DED. (2025). CDN (3.0) alternative de l'Union générale tunisienne du travail (UGTT). Auteurs: Kadhkadh MF & Smaili M, Département des études et de la documentation (DED) – l'Union générale tunisienne du travail (UGTT), octobre 2025.
- Délégation de l'Union européenne (DUE). (n.d.). Site des projets officiels de la Délégation de l'Union européenne (DUE) en Tunisie. <https://ue-tunisie.org/projetsAdvancedSearch.html>
- EBRD. (n.d.). EBRD - Tunisia Projects. <https://www.ebrd.com/home/what-we-do/projects.html#customtab-70eec7766a-item-4654c5d413-tab>
- EBRD. (2024a). Sustainability Report 2023. European Bank for Reconstruction and Development.
- EBRD. (2024b). Transition Report 2024-25. European Bank for Reconstruction and Development.
- EIB. (n.d.). EIB - Financed projects. <https://www.eib.org/en/projects/loans/index.htm?q=&sortColumn=loanParts.loanPartStatus.status-Date&sortDir=desc&pageNumber=0&itemPerPage=25&pageable=true&la=EN&deLa=EN&loanPart-YearFrom=1959&orLoanPartYearFrom=true&loanPartYearTo=2024&orLoanPartYearTo=true&orCountries.region=true&countries=TN&orCountries=true§ors=1000&orSectors=true>
- EIB. (2024). 2023 Joint Report on Multilateral Development Banks' Climate Finance. European Investment Bank, September 2024. https://www.eib.org/attachments/lucalli/20240150_2023_joint_report_on_mdbs_climate_finance_en.pdf
- Ekanade, O. (2014). The Dynamics of Forced Neoliberalism in Nigeria Since the 1980s. *Journal of Retracing Africa*, 1(1), 1-24.
- El Amine, Y. (2023). Tunisia's Energy Sector: A Just Transition Analysis. Arab Reform Initiative, Environmental Politics Series.
- Estrin, S., & Pelletier, A. (2018). Privatization in Developing Countries: What Are the Lessons of Recent Experience? *The World Bank Research Observer*, 33(1), 65-102. <https://doi.org/10.1093/wbro/lkx007>
- European Parliament. (2017). Employment in privatised utilities : A higher risk of precariousness? European Parliament, June 2017. [https://www.europarl.europa.eu/RegData/etudes/STUD/2017/602061/IPOL_STU\(2017\)602061_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2017/602061/IPOL_STU(2017)602061_EN.pdf)
- Evensen, D., & Sovacool, B. (2024). Political economy of low-carbon electricity : Governance effects across 198 countries. *Renewable and Sustainable Energy Reviews*, 189, 114016.
- Flecker, J., & Hermann, C. (2011). The liberalization of public services: Company reactions and consequences for employment and working conditions. *Economic and Industrial Democracy*, 32(3), 523-544. <https://doi.org/10.1177/0143831X10389201>

Foster, V., & Rana, A. (2020). Rethinking Power Sector Reform in the Developing World. Sustainable Infrastructure Series. Washington, DC: World Bank. doi:10.1596/978-1-4648-1442-6. License: Creative Commons Attribution CC BY 3.0 IGO.

<https://openknowledge.worldbank.org/server/api/core/bitstreams/7bd370a9-3aaa-5705-a18f-233293fed4e3/content>

Fragkos, P., & Zisarou, E. (2022). Energy System Transition in the Context of NDC and Mitigation Strategies in Tunisia. *Climate*, 10(11), Article 11.

<https://doi.org/10.3390/cli10110166>

Friedrich-Ebert-Stiftung. (2020). L'impact et l'influence des institutions financières internationales sur le Moyen-Orient et l'Afrique du Nord—Périphérie perpétuelle : Les IFI et la reproduction de la dépendance économique de la Tunisie. Auteur: Fadil Aliriza, Friedrich-Ebert-Stiftung.

<https://library.fes.de/pdf-files/bueros/tunesien/16248.pdf>

Gardumi, F., Mhiri, N., Howells, M., Bock, F., Necibi, T., & Bouden, C. (2021). A scenario analysis of potential long-term impacts of COVID-19 on the Tunisian electricity sector. *Energy Strategy Reviews*, 38, 100759.

<https://doi.org/10.1016/j.esr.2021.100759>

Gassner, K., Popov, A., & Pushak, N. (2009). Does Private Sector Participation Improve Performance in Electricity and Water Distribution? World Bank Publications - Books, Trends and Policy Options No. 6, The World Bank Group.

<https://documents1.worldbank.org/curated/en/102161468160178940/pdf/461320PUB0Box3101OFFICIAL0USE0ONLY1.pdf>

Ghandri, M., & Soltani, H. (2024). Is the Relationship between FDI and Environmental Degradation Nonlinear? Evidence from Tunisia and Morocco. *Journal of Ecohumanism*, 3(8), 5948-5956.

<https://doi.org/10.62754/joe.v3i8.5205>

GIEC. (2022). Cross-Chapter Paper 4 : Mediterranean Region. (p. 2233-2272). In: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)*. Cambridge University Press, Cambridge, UK and New York, NY, USA. doi:10.1017/9781009325844.021

GIZ. (2021). Étude sur les opportunités en matière de “Power-to-X” (hydrogène vert et ses dérivés) en Tunisie.

https://www.giz.de/en/downloads_els/GIZ%20PtX%20Tunisia%20report%20FR-WEB.pdf

Görmüş, E., & Akçalı, E. (2021). Variegated forms of embeddedness: Home-grown neoliberal authoritarianism in Tunisia under Ben Ali. *Journal of International Relations and Development*, 24(2), 408-429.

<https://doi.org/10.1057/s41268-020-00196-7>

Gratwick, K., & Eberhard, A. (2008). Demise of the standard model for power sector reform and the emergence of hybrid power markets. *Energy Policy*, 36(10), 3948-3960.

<https://doi.org/10.1016/j.enpol.2008.07.021>

Global Environment Facility -GEF. (n.d.). GEF-Tunisia Projects.

https://www.thegef.org/projects-operations/database?f%5B0%5D=project_country_national%3A164&page=0

Green Climate Fund - GCF. (n.d.). Tunisia—Green Climate Fund [Text]. Green Climate Fund.

<https://www.greenclimate.fund/countries/tunisia>

Hall, D. (2005). Electricity privatisation and restructuring in Latin America and the impact on workers, 2005. Discussion Paper. PSIRU.

<https://core.ac.uk/download/pdf/67089.pdf>

- Hall, D., & Nguyen, T. (2017). Electricity Liberalisation in Developing Countries. *Progress in Development Studies*, 17(2), 99-115.
<https://doi.org/10.1177/1464993416688824>
- Hall, D., Popov, V., & Thomas, S. (2011). *Impact of 2020 strategy on energy, water and waste sectors in eastern neighbourhood and enlargement countries*. London, PSIRU.
<https://www.gre.ac.uk/docs/rep/faculty-of-business/impact-of-2020-strategy-on-energy,-water-and-waste-sectors-in-eastern-neighbourhood-and-enlargement-countries>
- Hamouchene, H. (2023). The Energy Transition in North Africa: Neocolonialism Again! In *Dismantling Green Colonialism: Energy and Climate Justice in the Arab Region* (Hamza Hamouchene & Katie Sandwell, p. 29-48). Pluto Press.
- Hermann, C., & Atzmüller, R. (2008). Liberalisation and privatisation of public services and the impact on employment, working conditions and labour relations. In *Privatisation and liberalisation of public services in Europe: An analysis of economic and labour market impacts* (Keune M, Leschke J & Watt A, p. 175-193). European Trade Union Institute for Research, Education and Health and Safety (ETUI-REHS).
https://www.etui.org/sites/default/files/Privatisation_liberalisation_public_services_print.pdf#page=176
- Houzir, M., & Alaoui, Z. (2018). *Transparence dans la finance climat au Maroc*. Heinrich-Böll-Stiftung Afrique du Nord, Rabat, Maroc.
https://ma.boell.org/sites/default/files/transparence_dans_la_finance_climat_au_maroc_.pdf
- Howells, M., Necibi, T., Laitner, J., Gardumi, F., & Bock, F. (2021). *Integrated Input-Output and Systems Analysis Modelling: The case of Tunisia. Part 2-A systems model with IO multipliers*. Research Square.
<https://doi.org/10.21203/rs.3.rs-337003/v2>
- IEA. (n.d.). *Italy—Countries & Regions—Electricity*. IEA.
<https://www.iea.org/countries/italy/electricity>
- IEA. (2017). *Electricity Information 2017*. IEA, Paris, <https://doi.org/10.1787/electricity-2017-en>.
- IEA. (2025). *Electricity 2025 Analysis and forecast to 2027*. IEA, Paris
<https://www.iea.org/reports/electricity-2025>, Licence: CC BY 4.0.
- IFC. (n.d.). *International Finance Corporation (IFC)—Project Information & Data Portal: Disclosure—Kairouan Solar Plant*.
https://disclosures.ifc.org/enterprise-search-results-home?f_region_description=Africa
- ILO. (2015). *Guidelines for a just transition towards environmentally sustainable economies and societies for all*. International Labour Organization (ILO), First edition 2015.
- ILOSTAT. (n.d.). *ILOSTAT Data Explorer*.
https://rshiny.ilo.org/dataexplorer40/?lang=en&id=TUN_A
- IMF. (n.d.-a). *Tunisia and the IMF*. IMF.
<https://www.imf.org/en/Countries/TUN>
- IMF. (n.d.-b). *World Economic Outlook Database, April 2025*. IMF.
<https://www.imf.org/en/Publications/WEO/weo-database/2025/april>
- IRENA. (2021). *Renewables Readiness Assessment: The Republic of Tunisia*. International Renewable Energy Agency (IRENA), Abu Dhabi.
- IRENA. (2023). *Planning and prospects for renewable power: North Africa*. International Renewable Energy Agency.

- IRENA. (2025). Renewable capacity statistics 2025. International Renewable Energy Agency, Abu Dhabi.
https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2025/Mar/IRENA_DAT_RE_Capacity_Statistics_2025.pdf
- IsDB. (n.d.). IsDB to Finance US \$184m Projects in Tunisia.
<https://www.isdb.org/news/isdb-to-finance-us-184m-projects-in-tunisia>
- ITCEQ. (2019). Revue de la conjoncture économique. Institut tunisien de la compétitivité et des études quantitatives (ITCEQ), octobre 2019.
<http://www.itceq.tn/files/tableaux-de-bord/conjoncture/revue-economique-octobre-2019.pdf>
- ITES. (2022). La Transition énergétique et écologique en Tunisie à l’horizon 2050. Institut tunisien des études stratégiques (ITES), Auteurs : Khaled Kaddour, Amel Jrad, Noura Laroussi, Adel Ben Youssef & Asma Dhakouani, Mars 2022.
https://www.admin.ites.tn/api/uploads/6232fc201aec643c30de515f_2.pdf
- ITES. (2023). Préserver et renforcer notre sécurité énergétique. Institut tunisien des études stratégiques (ITES), Auteurs : Mustapha El Haddad & Bechir Nahdi, octobre 2023.
https://www.admin.ites.tn/api/uploads/65c0dbcf66de33898e743636_0.pdf
- ITUC. (2023). Sovereign debt, sustainable development goals and trade unions in Tunisia. International Trade Union Confederation (ITUC), Author: Mongi Boughzala, December 2023.
- ITUC. (2025). ITUC Global Rights Index 2025: The worst countries in the world for workers. International Trade Union Confederation (ITUC-CSI-IGB).
- JICA. (2022). Data Collection Survey on Power Sector in Tunisia: Final Report. Japan International Cooperation Agency (JICA), March 2022.
- Kapsos, S. (2005). The Employment Intensity of Growth: Trends and Macroeconomic Determinants. ILO, Employment Strategy Working Papers 2005-12.
- KfW. (n.d.). Projektdatenbank | KfW Entwicklungsbank.
<https://www.kfw-entwicklungsbank.de/Internationale-Finanzierung/KfW-Entwicklungsbank/Projekte/Projektdatenbank/index.jsp>
- Kim, J. W., & Lee, J.-S. (2021). Greening Energy Finance of Multilateral Development Banks : Review of the World Bank’s Energy Project Investment (1985–2019). *Energies*, 14(9), Article 9. <https://doi.org/10.3390/en14092648>
- Klinsky, S., Waskow, D., Northrop, E., & Bevins, W. (2017). Operationalizing equity and supporting ambition: Identifying a more robust approach to ‘respective capabilities’. *Climate and Development*, 9(4), 287-297.
<https://doi.org/10.1080/17565529.2016.1146121>
- Laha, S., & Dutta, M. (2024). Working conditions of subnational government workers in selected South and South-east Asian countries. ILO Working Paper 120. Geneva: International Labour Office, 2024.
https://www.ilo.org/sites/default/files/2024-08/wp120_web.pdf
- Leigland, J. (2018). Public-Private Partnerships in Developing Countries: The Emerging Evidence-based Critique. *The World Bank Research Observer*, 33(1), 103-134.
<https://doi.org/10.1093/wbro/lkx008>
- Leschke, J., & Keune, M. (2008). Precarious employment in the public and private service sectors : Comparing the UK and Germany. In *Privatisation and liberalisation of public services in Europe: An analysis of economic and labour market impacts* (Keune M, Leschke J & Watt A, p. 197-231). European Trade Union Institute for Research, Education and Health and Safety (ETUI-REHS).

- McCauley, D., & Heffron, R. (2018). Just transition: Integrating climate, energy and environmental justice. *Energy Policy*, 119, 1-7.
<https://doi.org/10.1016/j.enpol.2018.04.014>
- MDF. (n.d.). Indicateurs des finances publiques/ Le ministère des finances.
<http://www.finances.gov.tn/fr/les-indicateurs/synthese-des-resultats-des-finances-publiques-budget-de-letat>
- Meckling, J., Lipsy, P., Finnegan, J., & Metz, F. (2022). Why nations lead or lag in energy transitions. *Science*, 378(6615), 31-33.
<https://doi.org/10.1126/science.adc9973>
- MENV. (2021). Accord de Paris sur le climat : CDN actualisée—TUNISIE. Ministère de l'Environnement (MENV), octobre 2021.
<https://unfccc.int/sites/default/files/NDC/2022-06/Tunisia%20Update%20NDC-french.pdf>
- MIME. (2024). Stratégie nationale pour le développement de l'hydrogène vert et de ses dérivés en Tunisie. Ministère de l'Industrie, des Mines et de l'Énergie (MIME), synthèse - mai 2024.
https://www.energiemines.gov.tn/fileadmin/docs-u1/Re%CC%81sume%CC%81_strat%C3%A9gie_Nationale_MIME_Franc%CC%A7ais___V_11-2024_.pdf
- Ministère des Finances (MoF). (n.d.). Réparation des dépenses financières-Les indicateurs économiques.
<https://www.finances.gov.tn/fr/les-indicateurs/depenses>
- MoF. (2024). Rapport sur les entreprises publiques (Ar), projet de loi de finances pour l'année 2024—Annexe (09). Ministère des Finances (MoF), 16 janvier 24.
<https://www.finances.gov.tn/sites/default/files/2024-09/rapport1.pdf>
- Njangang, H., Padhan, H., & Tiwari, A. (2024). From aid to resilience: Assessing the impact of climate finance on energy vulnerability in developing countries. *Energy Economics*, 134, 107595.
<https://doi.org/10.1016/j.eneco.2024.107595>
- OECD. (2022). OECD Economic Surveys : Tunisia 2022. OECD Publishing, Paris,
<https://doi.org/10.1787/7f9459cf-en>.
- OECD. (2024). FDI Qualities Review of Tunisia: Boosting Productivity and Creating Better Jobs. OECD Publishing.
https://www.oecd.org/en/publications/fdi-qualities-review-of-tunisia_d8a28bca-en.html
- ONEM. (n.d.). Ministère de l'Énergie, des Mines et des Énergies renouvelables : publications.
<https://www.energiemines.gov.tn/fr/tc/publications/>
- ONEM. (2025). Conjoncture énergétique décembre 2024—Version provisoire. Observatoire national de l'énergie et des mines (ONEM), février 2025.
https://www.energiemines.gov.tn/fileadmin/docs-u1/Conjoncture_%C3%A9nerg%C3%A-9tique_%C3%A0_fin_d%C3%A9cembre_2024.pdf
- Our World in Data. (n.d.). Tunisia: Energy Country Profile.
<https://ourworldindata.org/energy/country/tunisia>
- OXFAM. (2023). Climate Finance Shadow Report 2023: Assessing the delivery of the \$100 billion commitment.
https://www.oxfam.org.tw/tc/f/news_and_publication/96599/172506/bp-climate-finance-shadow-report-050623.pdf
- OXFAM. (2025). Climate Finance Shadow Report 2025: Analysing progress on climate finance under the Paris Agreement.
<https://doi.org/10.21201/2025.00008>

- Papajorgji, E. (2014). A Critical Analysis of the Strategic Sector Privatization in Albania. *Academic Journal of Interdisciplinary Studies*, 3(4).
<https://doi.org/10.5901/ajis.2014.v3n4p319>
- PBR Rating. (2020). Note macroéconomique—Économie tunisienne 2020 : état des lieux et perspectives. Pronoia By Reckon (PBR Rating), septembre 2020.
https://www.atc.org.tn/wp-content/uploads/2021/08/Note-Macroeconomique-_TUN-2020_.pdf
- Pfeifer, K. (1999). Parameters of economic reform in North Africa. *Review of African Political Economy*, 26(82), 441.
<https://doi.org/10.1080/03056249908704411>
- Pfeifer, K. (2016). Neoliberal Transformation and the Uprisings in Tunisia and Egypt. In R. Bahramitash & H. Esfahani (eds.), *Political and Socio-Economic Change in the Middle East and North Africa* (p. 21-73). Palgrave Macmillan US.
https://doi.org/10.1057/9781137481429_2
- Piroska, D., & Schlett, B. (2024). Mandate management: A field theory approach to the EBRD's adaptive practice in Egypt. *Review of International Political Economy*, 31(1), 47-73.
<https://doi.org/10.1080/09692290.2023.2169739>
- Prag, A., Röttgers, D., & Scherrer, I. (2018). State-Owned Enterprises and the Low-Carbon Transition. *OECD Environment Working Papers*, No. 129, OECD Publishing,
<https://doi.org/10.1787/06ff826b-en>.
- Ranzani, M. (2022). Tunisia's Jobs Landscape.
<http://documents.worldbank.org/curated/en/099230112052280062>
- Rignall, K. (2023). What Can an Old Mine Tell Us about a Just Energy Transition ? Lessons from Social Mobilization across Mining and Renewable Energy in Morocco. In *Dismantling Green Colonialism: Energy and Climate Justice in the Arab Region* (Hamza Hamouchene & Katie Sandwell, p. 88-104). Pluto Press.
- Robertson, R., & Lopez Acevedo, G. (2024). Decarbonization in MENA: Energy Transition, Trade, and Labor Markets. Policy Research Working Paper; 11005. World Bank.
<http://hdl.handle.net/10986/42565>
- Saadaoui, H., & Chtourou, N. (2023). Does improvement in capital intensity facilitate the transition to renewable energies? Evidence from Tunisia. *Environmental Science and Pollution Research*, 30(18), 54059-54072.
<https://doi.org/10.1007/s11356-023-26093-3>
- Sadik-Zada, E., & Gatto, A. (2023). Grow First, Clean Up Later? Dropping Old Paradigms and Opening Up New Horizons of Sustainable Development. *Sustainability*, 15(4), Article 4.
<https://doi.org/10.3390/su15043595>
- Schafer, I. (2016). The renewable energy sector and youth employment in Algeria, Libya, Morocco and Tunisia. African Development Bank Group (AfDB).
https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/The_Renewable_Energy_Sector_and_Youth_Employment_in_Algeria__Libya__Morocco_and_Tunisia-1.pdf
- Seel, J., Mulvaney Kemp, J., & Berkeley, L. (2024). Utility-Scale Solar, 2024 Edition: Empirical Trends in Deployment, Technology, Cost, Performance, PPA Pricing, and Value in the United States. October 2024.
https://eta-publications.lbl.gov/sites/default/files/2024-10/utility_scale_solar_2024_edition_slides.pdf

- Shields, S. (2019). Defining, censuring, and resolving: The EBRD, collective organic intellectuals and the global financial crisis in Eastern Central Europe. *Globalizations*, 16(6), 819-837.
<https://doi.org/10.1080/14747731.2018.1560185>
- Shields, S. (2020). The EBRD, fail forward neoliberalism and the construction of the European periphery. *The Economic and Labour Relations Review*, 31(2), 230-248.
<https://doi.org/10.1177/1035304620916652>
- Sikwebu, D., & Aroun, W. (2021). Energy Transitions in the Global South: The Precarious Location of Unions. In N. Rätzzel, D. Stevis, & D. Uzzell (Éds.), *The Palgrave Handbook of Environmental Labour Studies* (p. 59-81). Springer International Publishing.
https://doi.org/10.1007/978-3-030-71909-8_3
- Singh, H., Bocca, R., Gomez, P., Dahlke, S., & Bazilian, M. (2019). The energy transitions index: An analytic framework for understanding the evolving global energy system. *Energy Strategy Reviews*, 26, 100382.
<https://doi.org/10.1016/j.esr.2019.100382>
- Stavropoulos, S., & Burger, M. (2020). Modelling strategy and net employment effects of renewable energy and energy efficiency: A meta-regression. *Energy Policy*, 136, 111047.
<https://doi.org/10.1016/j.enpol.2019.111047>
- STEG. (n.d.). *Rapports annuels d'activité de la STEG sur la période 2005-2024*.
<https://www.steg.com.tn/fr/publications>
- Tan, J. (2011). Infrastructure Privatisation: Oversold, Misunderstood and Inappropriate. *Development Policy Review*, 29(1), 47-74.
<https://doi.org/10.1111/j.1467-7679.2011.00513.x>
- TNI, & TUED. (2021). *Energy Transition or Energy Expansion*. Authors: Sweeney S, Treat J & Chavez D, Trade Unions for Energy Democracy (TUED) & Transnational Institute (TNI), October 2021.
- TUED. (2021). *Beyond Disruption: How Reclaimed Utilities Can Help Cities Meet Their Climate Goals*. Authors: Sweeney S & Treat J, TUED Working Paper 14, Rosa Luxemburg Stiftung, New York Office, November 2021.
- TUED. (2023a). *Beyond Recovery: The Global Green New Deal and Public Ownership of Energy*. Author: Sweeney S, TUED Working Paper 16, Rosa Luxemburg Stiftung, August 2023.
<https://www.tuedglobal.org/tued-working-papers>
- TUED. (2023b). *Recover and Restore: Preparing a Public Pathway to Combat Energy Poverty and Energy Transition in sub-Saharan Africa*. TUED South Position Paper, May-July 2023.
https://www.tuedglobal.org/tued-working-papers?d74cf752_page=1
- TUED. (2023c). *Towards a Public Pathway Approach to a Just Energy Transition for the Global South*. TUED South Framing Document, Final Version, January 2023.
https://www.tuedglobal.org/tued-working-papers?d74cf752_page=1
- UNFCCC. (n.d.). Preliminary draft elements of Tunisian's new NDC (NDC 3.0). Republic of Tunisia, United Nations Framework Convention on Climate Change (UNFCCC).
<https://unfccc.int/sites/default/files/2025-09/Republic%20of%20Tunisia-Draft%20preliminary%20elements%20of%20the%20NDC%203.pdf>
- UNFCCC. (2024). *Report of the Green Climate Fund to the Conference of the Parties*. United Nations Framework Convention on Climate Change (UNFCCC), November 2024, FCCC/CP/2024/3/Add.1.
https://unfccc.int/sites/default/files/resource/cp2024_03a01.pdf

van der Meer, M. (2008). Liberalisation, privatisation and employment conditions – the evidence of public utilities, public transport and home care in the Netherlands. In *Privatisation and liberalisation of public services in Europe: An analysis of economic and labour market impacts* (Keune M, Leschke J & Watt A). European Trade Union Institute for Research, Education and Health and Safety (ETUI-REHS).

Villagrasa, D. (2022). *L'hydrogène vert : critères de réussite d'un commerce et d'une production durables*. Brot für die Welt, Heinrich-Böll-Stiftung.
https://tn.boell.org/sites/default/files/2023-12/rapport-hbs-fr_final.pdf

Watson, C., Schalatek, L., & Evéquo, A. (2022). *Architecture du financement climatique mondial*. Overseas Development Institute (ODI), Heinrich Böll Stiftung (HBS), février 2022.
https://climatefundsupdate.org/wp-content/uploads/2022/04/CFF2-Architecture-FC-mondiale_FR-2021.pdf

WB. (n.d.). World Bank Maps—Projects/ wb/ sector / Energy and Extractives / country / TN / Tunisia.
<https://maps.worldbank.org/projects/wb/sector/Energy%20and%20Extractives/country/TN/Tunisia?status=active>

WB. (2023). *Tunisia Country Climate and Development Report*. CCDR Series. Washington, DC: World Bank.
<http://hdl.handle.net/10986/40658>

WB. (2024a). *The Disruptive Energy Transition and Opportunities for Job Creation in the Middle East and North Africa: Case Study—Tunisia*. World Bank.
<http://documents.worldbank.org/curated/en/099011524131520481>

WB. (2024b). *Tunisia Economic Monitor—Renewed energy to the Economy: Spring 2024*. World Bank Group.
<http://documents.worldbank.org/curated/en/099740005072417820>

WEF. (n.d.). *Energy Transition Index (ETI)/ Country Overview—World Economic Forum*. World Economic Forum.
<https://www.weforum.org/publications/fostering-effective-energy-transition-2024/country-profiles-8dad724ce3/>

Wegmann, V. (2019). *Going Public: A Decarbonised, Affordable and Democratic Energy System for Europe—The failure of energy liberalisation*. PSIRU, University of Greenwich, July 2019.
https://www.vd.hu/documents/1574326908558031Going%20Public_EPSU-PSIRU%20Report%202019%20-%20EN.pdf

Whitaker, R. (1999). The early stages of financial distress. *Journal of Economics and Finance*, 23(2), 123-132. <https://doi.org/10.1007/BF02745946>

Williams, J., & Ghanadan, R. (2006). Electricity reform in developing and transition countries: A reappraisal. *Energy*, 31(6-7), 815-844.
<https://doi.org/10.1016/j.energy.2005.02.008>

Xu, J., & Gallagher, K. P. (2022). Transformation Towards Renewable Energy Systems: Evaluating the Role of Development Financing Institutions. *Studies in Comparative International Development*, 57(4), 577-601.
<https://doi.org/10.1007/s12116-022-09375-8>

Yi-Chong, X. (2005). Models, templates and currents: The World Bank and electricity reform. *Review of International Political Economy*, 12(4), 647-673.
<https://doi.org/10.1080/09692290500240370>

Mohamed Faical KADHKADHI
Coordinator of the Research and
Documentation Department at the UGTT

ITUC
International Trade Union Confederation

info@ituc-csi.org

www.ituc-csi.org

Phone: +32 (0)2 224 0211

Boulevard du Jardin Botanique, 20
1000 Brussels, Belgium

Publisher responsible in law:
Luc Triangle, General Secretary

