




Towards a just energy transition in Tunisia

How to develop a democratic energy model that breaks with the current approach to renewable energy production

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Foreword

Climate change has become a growing phenomenon in North Africa, undermining economic, social and ecological life in the region. Countries such as Algeria, Tunisia, Morocco, and Egypt suffer frequent and severe heat waves and extended droughts, all of which heavily impact agriculture and small farmers. For instance, in the summer of 2021 alone, Algeria faced unprecedented and destructive forest fires, Tunisia endured a severe heat wave with temperatures reaching up to 50 degrees Celsius, while southern Morocco was struck by a terrible drought for a third consecutive season.

The Intergovernmental Panel on Climate Change (IPCC) believes that over the next few years, the Mediterranean region will be subject to an intensification of extreme weather conditions, such as forest fires and floods, with increased levels of aridity and drought.¹

Confronting this global climate crisis requires a swift and drastic reduction in greenhouse gas emissions. As the current economic order damages the very foundation of life on the planet, the transition to renewable energies becomes inevitable. However, such transitions could simply perpetuate existing practices of exploitation and dispossession, which would reproduce inequalities and further deepen socio-economic exclusion. Thus, before discussing green projects as such, it is essential to examine the

conceptual frameworks of such an energy transition, as well as the options it provides to prevent "unjust" transformations and the problematic aspects of renewable energies that are often erased from official discourse.

The north African desert is often portrayed as a vast, empty, and sparsely populated land. As such, the desert is viewed as an Eldorado of renewable energy presenting a golden opportunity for the supply of low-cost energy to Europe, which, in turn, allows it to maintain its consumerist, expensive and excessive lifestyle. Such a narrative is misleading as it overlooks questions of ownership and sovereignty and masks ongoing global relations of hegemony and domination that facilitate the plunder of resources and the privatization of commons. Ultimately, these patterns of inequality reinforce undemocratic and monopolistic ways of managing the energy transition.

In the region, including in Tunisia, there are cases that demonstrate the ways in which energy colonialism and extractive practices are reproduced within renewable energy transition processes. This has been called "green colonialism" or "green grabbing". If what really matters to us is not simply engaging in any transition but in a "just transition" that benefits the poor, the marginalized and the workers, rather than deepening their social and economic exclusion, then these cases and dynamics are of great concern.²

"Green colonialism" and "green grabbing"

The concept of "green colonialism" refers to the continuation of colonial relations based on plunder and expropriation (along with the de-humanization of the other) and the transfer of social and environmental costs to countries and peoples on the periphery of the capitalist system. In this case, though, this is done in the name of a green transition towards renewable energies.

We are still dealing with the same system, only with a different energy source: we are shifting from fossil energies to green energies while preserving the same energy-intensive production and consumption models, along with the same political, economic and social structures that have engendered inequality, impoverishment and expropriation.

Other researchers and activists have coined the term "green grabbing" to refer to land acquisition dynamics as part of so-called green programs.³ In other words,

land and resources are seized for allegedly environmental objectives. This includes environmental conservation projects dispossessing indigenous communities of their land, the confiscation of communal land to produce bio-fuels, and to install solar and wind power plants on agricultural plots and pastures without the consent of local populations.

The uneven global transition to renewable energy, which is primarily occurring in the countries of the North, is based on the continuous extraction of base and rare metals (such as cobalt, lithium, copper, nickel) needed for the manufacture of solar panels, wind power generators, blades, and electric batteries. Where will these resources come from? From the Democratic Republic of Congo, Bolivia, Chile, and Morocco to name a few. In these countries, environmental destruction and exploitation of workers will intensify.

This profoundly unjust international division of labor has positioned the economies of peripheral countries in the South in a subordinate position: both as providers of natural resources and cheap labor, and as a market for high-tech industrial products. Therefore, moving beyond fossil fuels requires examining the connections between fossil fuels and the broader economy while addressing power relations and hierarchies in the global energy system.⁴ Such a shift also necessitates recognizing that countries of the South are still systematically exploited by a colonial and imperialist economy that relies on the plunder of resources and the massive transfer of wealth from the South to the North.

While presenting themselves as environmentally friendly by banning the use of fracking within their own borders and establishing carbon emission reduction targets, some Western governments do not hesitate to provide diplomatic support to their multinationals so that they exploit shale oil and gas resources in their former colonies. For example, France in 2013 supported Total in doing so in Algeria, which led to a popular uprising in 2014-2015.⁵ If that is not an example of energy colonialism and environmental racism, then one must wonder what it can be called.

In light of the war in Ukraine and the European Union's attempts to shift away from relying on Russian gas, the EU's

Energy privatization

Energy privatization and corporate dominance over the energy transition is a global trend. Both Morocco and Tunisia have taken this path.⁶ Currently, there is enormous pressure on the Tunisian renewable energy sector to incentivize foreign investors to produce energy, even for export. The Tunisian law of 2015 (No. 12-2015)⁷ on electricity production from renewable energy, (amended in 2019),⁸ authorizes the use of agricultural land for the establishment of renewable energy projects. This is taking place in a country already suffering severe food dependence, a pattern which both COVID-19 and the war in Ukraine have highlighted. In this context, a crucial question arises: who benefits from the energy transition?

In 2017, the TuNur company asked for the construction of a 4.5-gigawatt power plant in the Tunisian Sahara, which would provide enough electricity to power two million European homes through underwater cables. This project, which has not yet been completed, is a partnership between UK-based Noor Energy and a group of Maltese and Tunisian investors in the oil and gas sector.⁹ Until very recently, TuNur has been openly portraying itself as a solar

energy security has been once again prioritized. Now there are more gas production projects, more extractivism, and more dependence. The green transition in the countries where these projects are carried out has been interrupted.

We cannot, I would argue, dissociate the challenge of a just energy transition from issues related to the establishment of democracy and peoples' sovereignty over land, water and other natural resources. Indeed, how could people suffering under military dictatorships and corrupt regimes possibly decide on their energy future without any real democracy in their countries? Energy transition in Tunisia, as elsewhere in Africa and in the Global South, must be an inward-facing project based on sovereignty, and one that is destined first and foremost to meet local needs before addressing the prospect of exportation. We can no longer continue to produce for Europe and capitulate to its dictates in the field of energy. We cannot bow to Europe's current attempt to move away from dependence on Russian gas and diversify its sources of supply by chasing green hydrogen import projects. Our priority now is to decarbonize our economies and increase our internal energy mix to reach 70-80% of renewable energies before considering exporting to the European Union.

energy export project linking the Sahara to Europe. Given Tunisia's dependence on Algeria for its energy needs, it is outrageous that this project is focusing on export instead of producing energy for local use.

A similar situation applies to the project put forward in 2021 by an ex-CEO of Tesco (one of the largest British food and consumer retail chains), in partnership with ACWA Power in Saudi Arabia, to connect southern Morocco to the United Kingdom via underwater electric cables.¹⁰ Once again, the same extractive relations and practices of enclosure are maintained and reproduced, while the inhabitants of our region are deprived of energy autonomy. All these large renewable energy projects end up, with all the good intentions they proclaim, disguising a violent regime of exploitation. A familiar colonial scheme is unveiled: the unrestricted flow of cheap natural resources (including solar energy) from the global South to the rich North while fortress Europe builds walls and fences to prevent migrants from reaching its shores and watch them drown and die in the sea.

This study on the state of the energy sector in Tunisia (including renewable energy) is based on the key premise that energy is not a profit-making commodity, but a right. The study argues that access to energy and its production are political questions in essence, rather than purely technical ones. Drawing on a redistributive justice viewpoint, it addresses the following questions: Who owns what? Who does what? Who gets what? Who wins and who loses? Who benefits from the collective public good? Furthermore, this study also takes into account colonial and neo-colonial legacies and class issues, revealing that "just transition" and "energy democracy" are not merely subversive concepts, but rather embody a radical project for a thorough social and economic change towards popular sovereignty over all resources, including energy.

Through this important publication, the Working Group for Energy Democracy attempts to shed light on what is happening in the renewable energy sector in Tunisia and the repeated attempts to liberalize and privatize this sector, as well as to destroy the public sector. As such, this report conceptualizes a discourse based on anti-colonial

and anti-capitalist praxis. With this in mind, it not only criticizes the current capitalist neo-liberal offensive against the energy sector in Tunisia and calls for mass resistance, it also develops new proposals and visions with direct stakeholders to dismantle dominant ideas regarding the right to access energy. One of the key findings of this study is the extreme importance of engaging in new and much needed debates about the concepts that we use, in order to break the domination of discourses that are constraining us, such as "energy security" and "energy liberalization" in our region. It is also equally important to engage in local, regional, continental and international mobilizations.

It goes without saying that this publication - among many others to come - is but one contribution to the ongoing debates on a just transition in Tunisia and North Africa. Let us hope that it will pave the way for the development of sustainable and just alternatives that break with energy colonialism and the accumulation of capital through dispossession. As such, it is surely a timely and important contribution to debates on just transition(s) in the global South.

Dr. Hamza Hamouchene



Introduction

What explains the need for this document today and in this very context? What do we expect it to add to our reality? Such were the questions the Energy Democracy Working Group had in mind when preparing this study. The urge to answer them has been the catalyst for moving forward, drafting it and accelerating its release to the public.

The predominance of a one-dimensional discourse within the energy system in Tunisia and the perception of this field as a closed circle exclusively restricted to the so-called "experts" lends this paper its timeliness as a vehicle for an alternative based on the core of social and trade union resistance to the dominant narrative. While most studies and research tackle the issue of renewable energy in Tunisia only from lucrative and technical perspectives with a view to support financial "feasibility", ours is a study situated within a framework of energy democracy, resource sovereignty and the right to sustainable development.

In mainstream official discourse, pressing environmental issues of climate change have been used as a pretext to justify a process of removing the public sector from the energy field. Meanwhile, the main message the system conveys to public opinion focuses on the danger of an energy deficit and the need to overcome it by relying on exports and their foreign exchange revenues. In fact, it is on this flawed discourse that all speeches calling for the liberalization of energy, especially electrical energy, are based. After the outbreak of the war in Ukraine and under pressure from European and foreign donors, there has been a significant increase in energy sector diktats in Tunisia.

The energy crisis in Tunisia reflects the overall crisis of the economic system. Indeed, it is not so much the result of scarce resources or a weak public sector, but rather the consequence of a blind move towards free trade without any consideration of the social, environmental, and economic factors, and without the slightest concern for the priority to be given to local needs and energy sovereignty (due to the illusions of foreign investment and exports).

This study is intended primarily to serve as a starting point for reflection and a basis for struggle, in order to achieve a just energy transition in Tunisia and to design alternative energy policies based on the following imperatives:

- **Re-establishing energy as a public good and as a right**
- **Meeting the demands of the environmental and climate crises**
- **Breaking with the current energy model in favour of a socially just and ecologically sustainable one.**

A fundamental objective is to bring together as many skills and competencies as possible to achieve these aims and promote their implementation on the ground, to which we hope this paper will make a strong contribution as soon as it is published. We strive to convince and change public opinion towards a critical interaction on current questions such as those we are addressing here.

The report covers three main areas. The **first** is the global context of energy transition, which is essentially based on the shift from fossil fuels to renewable energies. To explain this shift, the report draws on objective data and figures that disrupt the dominant discourse. It also addresses the dynamics of investment in renewable energies particularly characterizing countries of the global North.

The **second** focus is on the Tunisian case, outlining the reality of electricity production and explaining the transition to renewable energies, whose usage is primarily based on the exclusion of the public sector and openness to the private sector. Further, this argument helps uncover the actors and mechanisms used to strengthen this regime of energy exploitation.

This is where the main controversy lies: government propaganda considers those who reject this mode of exploitation as opposed to inexpensive renewable energy. The truth, however, is that the government is trying to conceal the capitalist logic and inequality shaping privatized renewable energy projects in Tunisia: profit interests, benefits and other incentives for the private sector on the one hand, and a cumulation of negative effects on the national community as a whole on the other. These assertions are based on data and studies which the capitalist system itself produces; they are therefore weapons with which to fight this system. They also can provide alternative narratives on renewable energies in Tunisia.

The Working Group for Energy Democracy was created within the framework of trade unionism, later expanding

to include a wide range of progressive civil society actors, coming together to produce a discourse based on trade union activism and broader struggles for environmental and socio-economic justice. These unconventional and alternative dynamics of struggle are outlined in **the third part** of the argument, which highlights the nature of the current model and puts forward ideas and visions for implementing a new model to achieve a real and just energy transition.

The desired energy transition may seem very distant, but it is possible and initial steps must be taken to make it a reality. The balance of power is uneven, and the burden of deception, lies and neoliberal propaganda is so heavy that the only solution is to unite and resist in order to win new supporters and adjust the balance of power. We have nothing to lose but our chains, but we have a new world to win.

Ilyes Ben Ammar

The Global Context

Renewable energies represent one of the most promising economic sectors in the world and it is seeing significant yearly growth. This growth has spread to all related sectors and has received backing from governments, both at the international level, such as the Conference of the Parties (COP) and at the national level, through legislation and incentive support.

This is mainly due to the following factors. First, the climate crisis and growing voices, especially in countries of the North, calling for necessary and urgent action against

the negative effects of climate change resulting mainly from the use of fossil energy materials that cause greenhouse gas emissions.¹¹ For example, the energy sector accounted for 75% of total CO2 emissions in 2021. Second, the energy deficit of many countries and their need to seek alternatives to end energy dependence through the exploitation of their renewable energy stock. In 2019, the European Union, for example, covered 60% of its energy needs through imports, most of which were from Russia.

Table 1: Extent of Europe's energy dependence¹²

	2000	2005	2010	2015	2018	2019
Share of imported energy in total consumption (%)	56.3	57.8	55.7	56.0	58.2	60.7

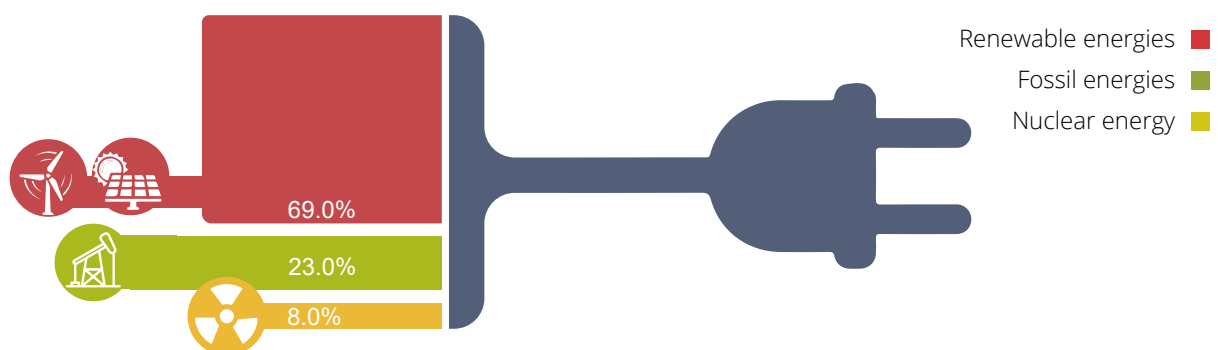
Third, the desire of capital to expand in a new field of investment and to accumulate surplus profit amid accelerating global energy consumption and shrinking fossil fuel zones (oil, gas, etc.). An additional important factor is the desire of countries such as Germany to achieve extra revenues through the development of manufacturing industries related to renewable energy. As Stefan Kaufmann et Tazio Muller argued back in 2012:

“Technologies and processes intended for CO2 emissions reduction do not have the sole objective of reducing the economic costs of climate change, reducing the costs of

imports for industrialized countries or securing supply to these countries. They also represent a direct source of profit for those who own them, control them, and can offer them at the best prices. Global efforts - or rather those that need to be made - to achieve a reduction in the concentration of greenhouse gases in the atmosphere constitute the core of giant business operations.”¹³

Investments in renewable energy have increased to \$366 billion in 2021, exceeding investments in other sectors (fossil, nuclear) by more than 66% of the total value of investments in electric energy.

Figure 1: Volume of investment in power generation equipment (2021)¹⁴



These investments are mainly aimed at increasing the total capacity, which has already been growing steadily for years, given that the volume of renewable energy capacity for electricity generation has reached 3,146 gigawatts in 2021, representing an annual increase of 314.5 gigawatts.¹⁵

However, despite this growth, which has centred mainly on solar photovoltaic and wind energy, the contribution of renewable energies to electricity generation at the global level has only exceeded 10% of total electricity production in 2021. Their contribution remained nevertheless lower than the contribution of hydropower, which represents 15%.¹⁶

This is mainly due to the intermittent nature of renewable energies, linked to the availability of wind or sun. Similarly, the volume of investment in renewable energies is linked to the volume of support granted to them, which explains the concentration of their growth in northern countries, where various mechanisms exist to encourage investment.

These mechanisms come in various forms, such as:

- Obligations for public bodies that have historically contributed to the production of electricity to purchase under long-term contracts (of up to 20 years). This ensures that the private investor in renewable energies is granted an almost permanent income despite the impossibility of really predicting the amount of energy that will be produced
- The adoption of a unified tariff (Feed-In-Tariff). This is how in many countries (France, Germany, Spain, etc.), the purchase price is largely higher than the average price of electricity on the market. In this case, the state pays the balance by introducing taxes for electricity consumers.

For example, in France, the CSPE (contribution to the public service of electricity) is a tax generally paid by the consumer, most of which goes into the pockets of private investors in renewable energy. According to the Court of Auditors' July 2013 report on renewable energy development policy¹⁷, this tax accounted for 16% of consumers'

bills. In this regard, reference can also be made to the article published in *Le Monde* newspaper on 23 July 2018, which analysed the way in which this tax increases electricity bills in France and demonstrated that by 2025, that increase will be at least 10% per year.¹⁸

These and other mechanisms have indeed led to an increase in production capacity, but have they achieved the stated goals? The answer can be found in the 2019 United Nations Environment Programme (UNEP) report on the reality of reducing emissions. The report concludes that emissions are still increasing despite efforts made to reduce them, and that 78% of these are from rich countries (the G20), i.e., countries that spend generously to invest in renewable energy, mainly through the private sector.

Further, 2021 figures on electricity generation support the findings of the UNEP report. These figures showed a record increase in emissions caused by the sector reaching 7%, being the highest rate since 2010. This has been caused by the record increase in coal-fired electricity generation, which reached 9%, its highest proportion since 1985.¹⁹

In addition, countries that have committed to support private investment in renewable energy have not achieved their goals with respect to building their technical capacity and consequently increasing their industry's revenues. An illustrative example is France, where the rate of imports of renewable energy equipment is climbing year after year despite being a country with great industrial potential, as indicated by the March 2018 Court of Auditors' report on renewable energy promotion in France.²⁰

Thus, a situation presents itself in which the drive of capital, as an investor in electricity production from renewable energies, accumulates as much profit as possible by importing equipment at the lowest cost. The opportunism of capital does not stop there, as investment in this field has become dependent on state and government support. In this regard, Spain stands out as an example, since the government's decision in 2012 to stop the incentive and support mechanisms has simply led to a halt in investment in renewable energy.²¹

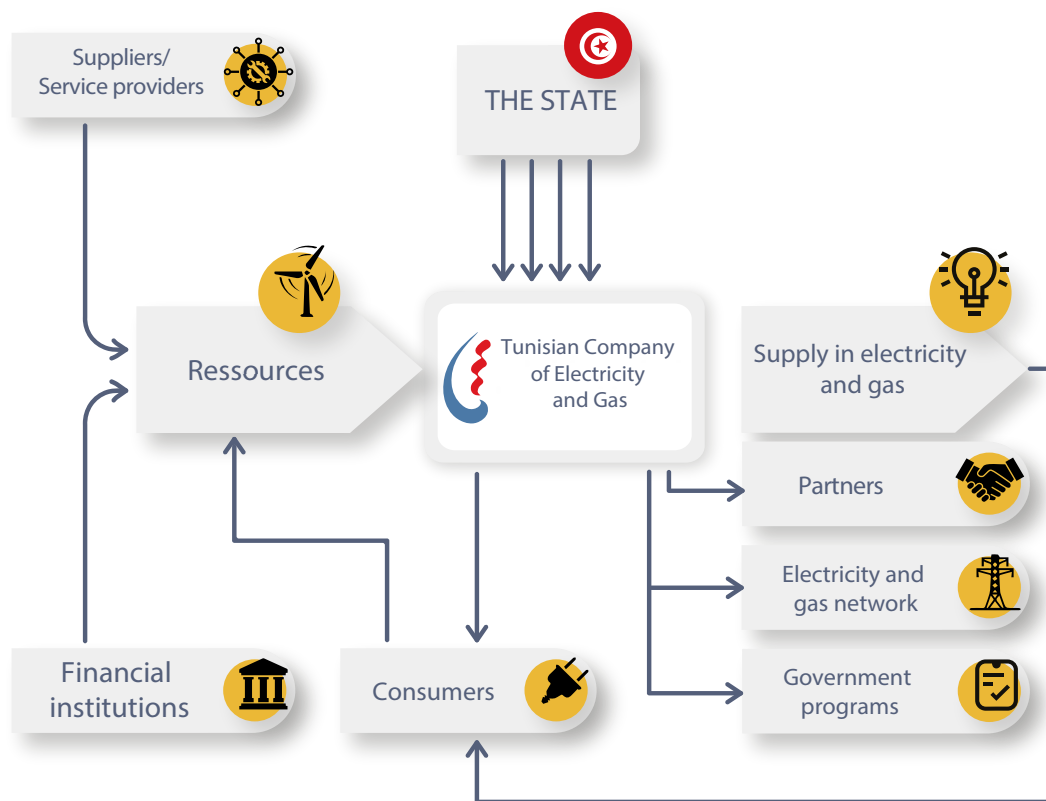
The local context

1 - The reality of electricity production in Tunisia

The history of electricity production in Tunisia dates back to the colonial era. It was indeed with a view to consolidating its exploitation of the country's wealth that the French colonizer established electricity production stations through contracts with companies belonging, in most cases, to the private sector (seven large companies owned the production and distribution networks during the 1950s). But with independence in March 1956 and the beginning of the implementation of a new economic plan

for a nascent state, the scene started to change from 1962 with the nationalization of all electricity production and distribution facilities and the creation of a public company under the name of the Tunisian Company of Electricity and Gas (STEG). Since then, STEG had a monopoly on the production, transport and distribution of electricity and gas until 1996, when private individuals were allowed to produce electricity and to exclusively sell it to the company.

Figure 2: STEG's relations to its environment



Since the sales prices of electricity and gas did not cover the costs of production, transportation and distribution, the company benefited from state support, which took on two different forms before 2014. The first is an in-kind (indirect) subsidy covering the difference between the baseline reference prices of natural gas used to produce electricity and its actual cost. By virtue of a ministerial decision dated 8 October 1993, STEG is in fact supplied with natural gas at a preferential price by the Tunisian Company for

Petroleum Activities (ETAP), instead of acquiring it at the standard international price. This subsidy also includes the value of natural gas quantities consumed arising from the royalties related to the passage of Algerian gas through Tunisian territory. The second form of state support is direct aid. This is embodied in the institution of an operating subsidy allocated from the budget of the supervisory authority as compensation for the difference between the actual production cost and the selling price.

After 2014 and following a government decision based on donors' recommendations, the company began sourcing natural gas directly from abroad — mainly from Algeria — without going through ETAP. This led to the removal of the indirect subsidy and forced STEG to rely solely on direct support since there was still a gap between the production

cost and the selling price. Thus, since 2016, financial costs have become the greatest cause of financial instability of the Tunisian Company of Electricity and Gas, especially with the continuous fall of the Tunisian dinar and the damage the decline of its exchange rate against the Dollar and Euro causes, as the table below demonstrates.

Figure 3: The company's financial budgets (unit: 1 million Tunisian dinars, 1 TD = 0.33 €)

Data	2015	2016	2017	2018
Income	3814	3451	4067	4534
Turnover	-4403	-3343	-4647	-6115
Operating subsidy	858	0	539	1200
Indirect support	0	0	0	0
Operating income	129	310	-151	-552
Financial expenses + exchange losses	-145	-636	-1037	-1526
Net income	-16	-354	-1193	-2093

Source: STEG annual reports 2015-2018

Thus, the lack of sufficient state funds to cover the structural deficit of the annual budget and the financial constraints have compelled the company to resort to borrowing to fund the purchase of natural gas in foreign currency and to guarantee the volume of investment necessary for the development of electricity and gas infrastructure, such as the implementation of major electricity generation projects and the development of transmission and distribution networks.

As a result, the STEG crisis worsened. Besides, it is worth noting that STEG is also required to implement government policies, through investments that are also funded by external loans. This involves ensuring the implementation of the program for natural gas supply to municipal areas and projects to consolidate the national network with electricity generated from renewable energy within the framework of concessions and authorizations.

2 Renewable energies in Tunisia

a - General context

The situation of the electricity sector in Tunisia has led policy makers to mobilize their attention towards renewable energy, besides the excessive interest of foreign investors in the large energy capacities of the country.

The National Agency for Energy Management (ANME) estimates the potential of solar energy in Tunisia at 280 gigawatts and those of wind energy at more than 10 gigawatts.

The public company (STEG) has tried to take advantage of these capacities over the past two decades by creating wind power plants in the north of the country (specifically in El Haouaria, in the governorate of Nabeul, Metline and Khabta in the governorate of Bizerte), as well as a solar

plant in the south (in the governorate of Tozeur). According to STEG's annual reports, the contribution of all these projects did not exceed 3% of total electricity production in 2021, which makes their impact on the energy mix in Tunisia very low.

After the 2011 revolution and given the reliance of successive governments on international financial institutions through a series of agreements with the International Monetary Fund (IMF) in 2013-2016, a plan for privatizing the production of electricity from renewable energy sources has been launched, to meet the requirements needed to access funding from these international institutions.

Indeed, the instable post-revolutionary climate has also provided a new opportunity for these institutions to implement their programs with greater flexibility and ease. As IMF Managing Director Christine Lagarde stated during her visit to the region during the "Arab Spring" (Nouakchott, 9 January 2013):

"So the Arab Awakening must also lead to a 'private sector awakening'—unleashing the productive potential of the

Maghrebi people and creating an environment that supports innovation, entrepreneurship, creativity, and jobs,"

adding that

"foreign direct investment is a vital part of this strategy".²²

As such, after the 2011 revolution, legislative measures were developed to encourage private sector investment in renewable energy.

b - The 2015 law on the production of electricity from renewable energy

This law was passed on 11 May 2015 after a long debate by members of the Provisional Authority for the Control of Draft-laws' Constitutionality. In its first version, the bill gave the supervisory authority, i.e., the Ministry of Energy, the possibility to examine authorizations (for small-capacity power stations) as well as concessions (for large plants) for renewable energy projects.

However, some articles of the draft law were revised following trade union pressure on the basis of article 13 of the 2014 Tunisian Constitution, which gives the power to dispose of natural resources to the Assembly of Representatives of the People (ARP, Parliament). Approval of major renewable energy projects, as national wealth belonging to the Tunisian people, was then granted to the House of Representatives.

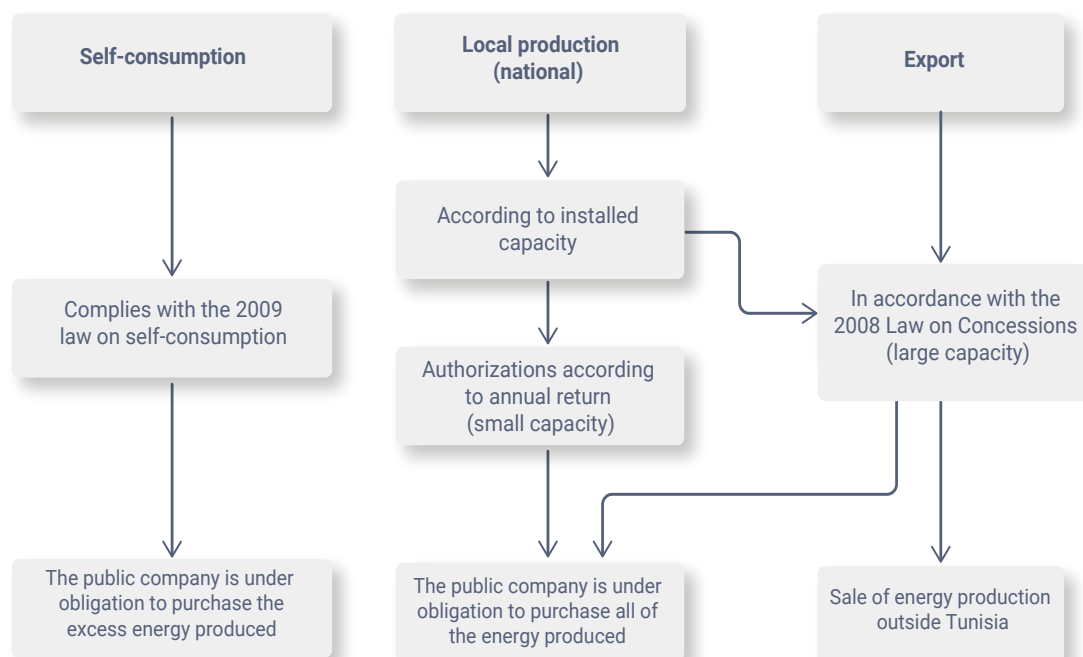
The law comprises three elements: production for self-consumption (self-production), production for local

consumption (national production) and production for export, in addition to some other details related to the overseeing structures and procedures for the allocation of projects (see the diagram below).

Apart from production for self-consumption (the terms of which are almost identical to the 2009 law on energy efficiency), which aims to encourage companies to provide for their own energy needs, the production by other projects was mainly intended to be purchased by the public body (Tunisian Company of Electricity and Gas - STEG). In this sense, STEG has become the mediator between producers and consumers, since it is the company that manages the national electricity network.

As for exports, prospects are currently lacking given the absence of an electrical connection between Tunisia and Italy and the impossibility at present of investing in exports to destinations other than Europe (such as Libya or Algeria).

Figure 4: Summary of the 2015 law



Additionally, on 29 May 2019, this law was revised by another law on the improvement of the investment climate, and now includes the following provisions:

The first one is the cancellation of provisions contained in Article 9 relating to self-production and their substitution by a new article explicitly allowing the establishment of self-production companies whose functions are limited to the production and sale of electricity produced from renewable energy. This means that these companies are allowed to sell electricity directly to industrial consumers through the national electricity network, and thus compete with state-owned STEG.

In the absence of a renewable energy source generating electricity, public bodies are still required to provide electricity to the beneficiary companies at the public rate defined by the supervisory authority, regardless of whether a contractual relationship with self-producing companies is in place. Moreover, self-producing companies can produce electricity in areas far from where it is consumed. In turn, this means that the populations in the production areas do not benefit from the exploitation of their natural wealth, while companies established elsewhere will.

The second provision of the 2019 Law is the addition of a new article to the 2015 law (Article 11a), which removes the obligation to change the agricultural character of the

land on which these projects are set to be located. This measure represents a real threat to agricultural resources and places them at risk of disappearing under the search for profit, which further aggravates Tunisia's food dependence, especially with the global food crisis resulting from the war in Ukraine.

Therefore, the revisions to the law on the improvement of investment climate have not only turned electricity into a commodity like any other, subject to the principle of "pay to get it", they also limit the benefits of renewable energy to private companies.

In other words, public bodies have become superfluous: their task is to provide electricity in the absence of a renewable energy source and at a higher cost to citizens. In short, this means turning renewable energy into a means through which private companies can reduce production costs while accumulating profit. Meanwhile, citizens remain subject to fluctuating fuel prices and are deprived of their natural resources. This is especially the case for those who live in areas with a high potential for electricity production from renewable energy. Further, there is a systemic exploitation of public infrastructure, such as the national electricity network to the benefit of the private sector.

c- The Tunisian Solar Plan:

Echoing the 2018 Mediterranean Solar Plan, the Tunisian Solar Plan (TSP) was published in its final version in 2015 (2012 saw the publication of its the first version).

The main objective of this plan is to reach a rate of 30% of electricity production from renewable energy by 2030 (this percentage was raised to 35% in June 2022). Its

implementation relies primarily on private investment and the "creation" of a market for electricity produced from renewable energy, with public bodies represented by the STEG bearing the heaviest burden as it is obliged to purchase the energy produced and upgrade the infrastructure to integrate this production into the national network.²³

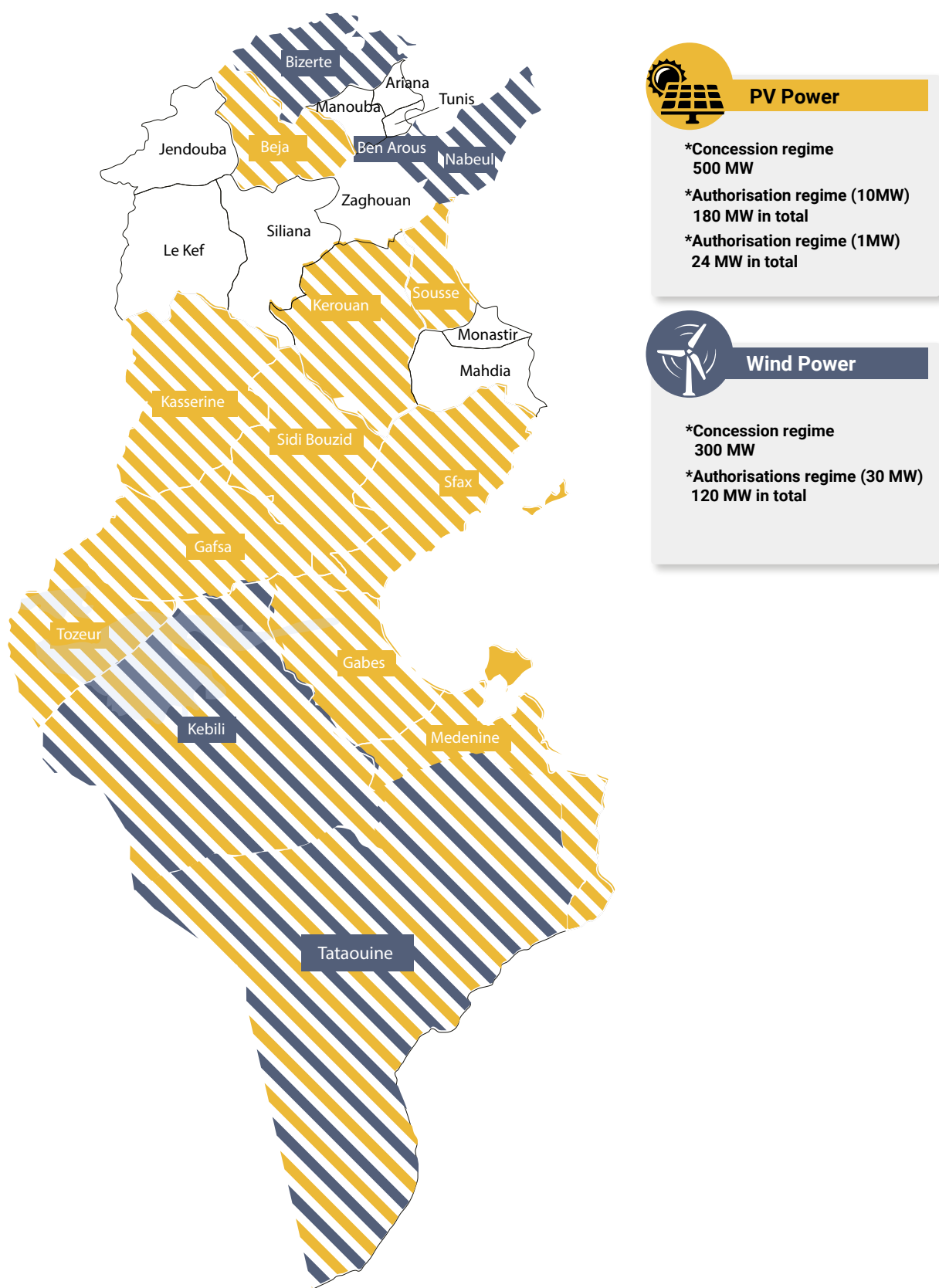
Table 2: Summary of the Tunisian Solar Plan (September 2015)

Goals	30% of electricity produced from renewable energies by 2030
Concentrated capacity scheduled for 2030	3815 megawatts: Wind power: 1755 megawatts Photovoltaic power: 1510 megawatts Solar thermal energy: 450 megawatts Bioenergy: 100 megawatts
Access mechanisms	Net billing Self-production Independent production at a pre-determined rate Request for concession offers for private individuals Public investment from STEG
Legal implementation mechanisms	The 2015 law for electricity production from renewable energies and its regulatory texts
Investments required	The total cost is 8017 million euros broken down as follows: Renewable energy projects: 6342 million euros Improvement of network capacities: 1675 million euros
Funding	Public sector: 2693 million euros Private sector (including households): 5379 million euros
Expected effects	A total energy saving of 16 megatons of oil equivalent A reduction in CO2 emissions equal to 38 megatons of CO2 equivalent Energy consumption savings of 16.5 billion euros Creation of approximately 10,000 jobs
Cost of support measures	7 million euros spread over 5 years

Since 2015, project applications and proposals have been announced according to the type of energy and the expected capacity of facilities. A renewable energy

power generation plan for 2017-2020 has also been published (see Figure 5).

Figure 5: Planned projects, 2020-2025



d- Mechanisms:

Alongside the legislative reforms outlined above, several mechanisms have been introduced to encourage private investment in renewable energy and to accelerate projects in order to achieve the objectives of the Tunisian Solar Plan. The most significant mechanisms in this regard are:

- **The Energy Transition Fund** which was established under Article 67 of the 2013 Finance Law. Its aim is to encourage investments related to energy efficiency and to allow industrial companies to benefit exclusively from renewable energy by funding and supporting self-production projects. This fund is financed by collecting levies from all electricity consumers, regardless of category.
- **The Tunisian Investment Fund:** Law No. 71 of 2016 on investment provides private investors with a range of benefits including in renewable energy. A summary of these benefits is presented in the table below.
- The Tunisian Solar Plan Acceleration Program, which was set up in 2018 with the aim of overcoming hindrances to private investment in the renewable energy sector. The program addresses many issues, the most important of which are land questions and infrastructure development for the integration of the energy produced, besides issues related to funding and easing procedures.

Table 3: Subsidies and incentives to support renewable energy projects

	Investment allocations**	Participation in capital	Tax benefits
Regional Development Zone 1 *	<ul style="list-style-type: none"> • 15% of the investment, with a ceiling of 1.5 million dinars • 65% of infrastructure expenses, if this does not exceed 10% of the project cost, with a ceiling of 1 million dinars • 50% of intangible investment expenses, with a ceiling of 500 thousand dinars 	<ul style="list-style-type: none"> • For projects whose cost is less than 2 million dinars: Participation up to 40% of the total capital • For projects whose cost is higher than 2 million dinars: Participation up to 30% of the total capital. 	Tax exemption and coverage of rental expenses for 5 years
Regional Development Zone 2 *	<ul style="list-style-type: none"> • 30% of the investment with a ceiling of 3 million dinars • 80% of infrastructure expenses, if this does not exceed 10% of the total cost of the project, with a ceiling of 1 million dinars • 50% of intangible investment expenses, with a ceiling of 500 thousand dinars 		Tax exemption and coverage of rental expenses for 10 years
Priority Sectors	<ul style="list-style-type: none"> • 15% of the investment with a ceiling of 1.5 million dinars • 50% of intangible investment expenses with a ceiling of 500 thousand dinars 		Tax exemption and coverage of rental expenses for 5 years

* Zones in Tunisia are listed in two categories, based on unemployment and development rates

** 1 Tunisian dinar = €0.33

	Concession scheme	Authorization scheme	Self-consumption Regime	Tunisian solar plan Funding	Land issue	Tunisian solar plan Governance	Technical measures
Measures 1 and 2	Increase capacity expressed in requests for tenders and secure land developed for the projects						
Measure 3		Revision of the electricity purchase contract					
Measure 4		Revision of authorization modes					
Measure 5			Facilitate procedures				
Measure 6			Revise rates				
Measures 7 and 8			Revise the billing system and develop a social regime for solar energy				
Measure 9				Plan to strengthen capacities of the financial sector			
Measures 10 and 11				Restructure and develop a guide of benefits provided by the Energy Transition Fund and the Tunisian Investment Fund			
Measure 12				Prepare a program for access to Green Climate Fund financing			
Measure 13					Facilitate access to land for the benefit of investors		
Measure 15						Establish the independent regulatory body	
Measures 14 and 16						Set up a help desk as well as a planning and programming framework	
Measure 17						Develop the renewable energy and legal compliance code	
Measure 18							Plan and accelerate projects to facilitate the integration of renewable energies into the electricity network

Table 4: Summary of the Tunisian Solar Plan Acceleration Program modalities (March 2018)

e- Foreign influence

All existing legislation and incentives complementing renewable energy investments in Tunisia are the product of numerous studies and recommendations which foreign organisations and international financial institutions have made. Indeed, these studies promote the access of private capital to the energy sector. Two examples of these organisations and institutions are particularly salient.

First is the **German Agency for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit - GIZ)**, which is now an integral decision maker in the field of renewable energy in Tunisia. It has set up offices in the Ministry of Energy and some national bodies such as the National Agency for Energy Management, which allow it to access data relating to the sector and to take the necessary measures to facilitate entry to capital, particularly German capital.

The GIZ carries out and funds several studies on renewable energy, as it prepares recommendations for the development of legislation conducive to the privatization of renewable energy in Tunisia, all of which take place under the umbrella of technical assistance.

Second is **RES4MED/AFRICA**: This Italian institution also works to encourage private investment in renewable energy in the southern Mediterranean and Africa. It has

conducted studies on ways to encourage the private sector to invest in this field in Tunisia. The latter are mainly addressed to the Tunisian authorities in the form of recommendations based primarily on the feedback of Italian investors (see Table 5 for a sample of some reports and studies published by GIZ and RES4MED/AFRICA).

Moreover, international law firms have already produced reports on how to reform the legislative system in order to facilitate private sector access to renewable energy projects in Tunisia. Below is a list of some of the most important reports:

- The law firm **ALEXANDER AND PARTNER** in Paris, which produced a study entitled "Renewable energies in Tunisia: the self-production system" (in French).²⁴ This study aims to give foreign investors an idea of the legislative reality in the field of renewable energies in Tunisia and to provide an opinion on the revisions introduced in 2019.
- The law firm **ADAMAS AVOCATS** in Paris, which published a report under the title "Legal frameworks for the promotion of renewable energy in Tunisia and Morocco" (in French).²⁵ This report provides a critical look at the legal framework for investment in renewable energy in both countries.

Table 5: A sample of studies and reports on renewable energy in Tunisia

Institution	Document
The German Agency for International Cooperation GIZ	<ul style="list-style-type: none"> • Feasibility study for photovoltaic energy development in the agricultural field in Tunisia²⁶ • Strategic study of the energy mix for electricity production in Tunisia²⁷ • Funding means for solar energy projects in Tunisia²⁸ • Study for the establishment of a wind power plant for internal use in Tunisia²⁹ • The photovoltaic energy market in Tunisia³⁰ • Note on the renewable energy pricing system in Tunisia³¹
Res4med/Africa	<ul style="list-style-type: none"> • Study on renewable energy tendering mechanisms / Tunisian case study³² • Presentation on employment prospects in renewable energies / Tunisian case study³³

(All of these documents are in French)

And finally, **the World Bank**. Since the 1990s, this international financial institution, known for its neoliberal character, has been pushing the Tunisian state to liberalize electricity production through reports and studies carried out for this purpose, which it funded. After the 14 January 2011 revolution, the World Bank began to set out its conditions for liberalizing electricity production from renewable energy and to undertake appropriate measures to facilitate this development. This was evident in the revisions made in 2019 to the 2015 law which it had recommended as one of a series of conditions required to access funding.

The World Bank also produced a report in 2021 on the reforms needed in Tunisia (see figure 6), putting renewable

energy at the top of the list of urgent measures that the government must take.

Those recommendations not only came from neoliberal financial institutions and organizations, but also included input from companies, which in turn made several proposals to the Tunisian government. An important example of these proposals is the leaked 2017 letter of the **American company UPC NORTH AFRICA RENWEABLES** to the President of the Tunisian government. In it, the company made various comments on the legal framework, contracts as well as land issues, calling for them to be revised as soon as possible to make the investment process easier.

Figure 6: Extract from the World Bank’s recommendations in its report issued on 29 November 2021



Strengthen "soft" and "hard" infrastructure services

Immediate reforms (ready to be signed)

- Ratify the 500 MW of solar energy concessions
500 MW of solar energy concessions already signed.
- To make operational the self-generation of renewable energy for industrial users.
- Unblock the problem of connecting renewable IPP plants that have been pending for over a year.
- To make operational the self-generation of renewable energy for industrial users.
- Signing the Personal Property Security Development and Utilization Act of securities.
- Improve access to credit, especially for new businesses and entrepreneurs, by signing the Organic Law on Credit Bureaus and the Law on Collective Investment Organizations.

Complementary reforms

- Strengthen banking supervision to mitigate risk risks.
- Improve the framework for the resolution and prevention of non-performing loans.
- Strengthen payment and settlement systems and digitize public payments.
- Create an independent regulator for the electricity and electricity and gas sector.
- Create an enabling framework and substantial incentives to develop the renewable energy sector.
- Implement water rate increases for non-poor households.
- Implement an Open Skies agreement and strengthen competition in the port sector.

3 - Problems of renewable energy use in Tunisia

a - The question of property: Land

Renewable energy projects require large areas to establish equipment specific to their activities. Since areas suitable for this purpose are particularly available in the interior of the country and in rural areas, the property problem arises strongly, especially with regard to land cooperatives subject to tension between inhabitants and the state. Indeed, the Tunisian authorities themselves confirmed this tension over land in the March 2018 Tunisian Solar Plan Acceleration Program, which, on page 29, stated:

"Renewable energy projects require very large areas. For example, 1 megawatt of photovoltaic energy requires an area of 2 hectares, while 2.5 megawatts of wind power require 1 hectare. So, land is the starting point and a key issue for every wind or photovoltaic project..."

In this context, the government's solution is to establish a tripartite committee bringing together the Ministry of Industry and Energy, the Ministry of Agriculture and the Ministry of State Domains and Land Affairs. Its mission will be to find legal loopholes to facilitate access to land for investors in renewable energy (see page 29 of the Tunisian Solar Plan Acceleration Programme, 2018).

b - Energy commodification and the destruction of a public service:

Private investment in the field of renewable energy primarily turns electricity into a source of profit, which will subsequently set the stage for the development of a market for this energy. The public service is therefore under grave threat after decades where electricity was a right for everyone without any exception in Tunisia since 1962. In fact, the framing of electricity as a public good in the past encouraged the state to undertake massive investment in order to increase the country's electrification rate, which has reached about 99% today, compared to less than 50% in sub-Saharan Africa.³⁴

The public sector's renewable energy projects are being disrupted and its share of the Tunisian Solar Plan is being reduced under the pretext that there is a need, on the one hand, to accommodate private investment in the sector, and on the other, to prioritize its relentless quest for land acquisition in areas with high profitability. For example, the public company STEG has issued a call for tenders for the creation of a wind power plant in Jebel Tbaka in Kébili Governorate in southern Tunisia. And Although the French Development Agency had committed to provide funding

While awaiting the implementation of appropriate legal loopholes, investors have already begun to operate on agricultural land claimed or seized by the state, for the benefit of renewable energy projects, under the pretext of their low agricultural yield. This was the case for concessions granted in 2021 in several regions of the country, including Segdoud (Gafsa) for investors Engie (France) and Nareva (Morocco), or El Moutbasta (Kairouan) for the benefit of Emirati and Chinese investors, as well as for other projects.

Moreover, we cannot overlook the way in which land was seized in the village of Borj Essalhi, in the region of El Haouaria in north-east Tunisia, where the public body (STEG) installed the first wind power plant of the country in 2000. The way in which the authorities are dealing with land confiscation from the local population and the transformation of the nature of social relations pertaining to land is an indication of what could happen in the future, especially since investors are exerting great pressure in this respect.

for this project, the Tunisian Ministry of International Cooperation and Foreign Investment, which was of a different opinion, sent a request to the French Agency to withdraw the funding to STEG and turn the project into a Public-Private Partnership (PPP). Ironically, this means that a private investor will be awarded with the project and will resell the electricity produced to the public company.

Moreover, as public bodies are responsible for providing electricity, they must invest in alternative means in the absence of renewable energy, which will entail additional costs, which the private investor has been exempt from. Public bodies of the state are also expected to bear the costs of setting up the infrastructure necessary for the distribution of electricity produced by the private sector from renewable energies, or for its storage through the creation of pumped-storage projects (see the document below).

All these projects will force STEG to go into debt despite its difficult financial situation, which would mean a gradual increase in electricity prices and the final removal of subsidies for all consumers, since the state will not pay for the losses incurred in STEG's financial budgets.

Excerpt from a World Bank document entitled “Project appraisal document on a proposed loan in the amount of us\$151 million to the Société Tunisienne de l’Electricité et du Gaz for an energy sector improvement project” (3 June 2019)

Rationale for the bank’s involvement and partners’ role

39. Relying on public resources is one of the most appropriate ways to finance electricity transmission infrastructure in order to remove the barriers that may prevent private investors from engaging in generation activities. Also, transmission activities, given their nature, are not compatible with private investment because their characteristics are similar to those that govern monopolistic markets. In Tunisia, the Tunisian Company of Electricity and Gas, considering its vertical integration, is the only party responsible for the expansion of transmission capacity, and access to the funding offered by the Bank is essential to make the necessary investments. Private investment in power generation activities is limited to a single independent power producer, aside from the fact that the new renewable energy market in Tunisia brings additional risks to new entrants in the Tunisian market. Securing an easy distribution of privately generated energy is one of the most important measures for mitigating these risks. Accordingly, the availability of a transmission network with sufficient capacity is a key condition for opening the way for private investment in generation activities, reducing the risks that independent power producers may face, and improving their ability to access banking funds. This in turn will result in an improvement of STEG’s contractual conditions and a more equitable distribution of risks.

c - Reinforcing the international division of labour:

The international division of labour makes countries of the global North exporters of high value-added products, while Southern countries remain limited to providing raw materials and assembly industries with low value.

Exploiting renewable energy in the South, including Tunisia, reinforces this division, since the equipment and technology for producing electricity from renewable energy is imported from industrialized countries to be installed in high potential areas of developing countries. It should also be noted that the use of land for renewable energy has reached its maximum in northern countries,

so there is pressure to liberalize the southern markets to provide opportunities for foreign capital to make surplus profit in these countries.

It is also noticeable that most of the regulations for the South (which are mostly the product of the dictates of global financial institutions and international lobbies) focus on stimulating renewable energy generation and neglect promoting investments in the manufacturing of equipment needed for the generation process, so that the North maintains its leadership in this field.

Table 6: Example of a solar energy project and the share that goes to foreign capital (imported equipment)

Investment size for a 1 MW project – 3000 panels on an area of 2 ha		
	1000 euros	%
Equipment (imported)	600	78.3
Studies	17	2.2
Land	34	4.3
Installation work	117	15.2
Total project value	768	100.0

d - Increased dependence of rural areas on urban centres:

The current model of investment in renewable energy reflects a desire to subjugate the countryside to the city. As we know, the major centres of electricity consumption are urban areas (cities) while most of the projects producing electricity, especially from renewable energy, are located in rural and agricultural areas. Hence, the city is making use of the countryside's resources to meet its energy

needs by exploiting its land and natural resources, while the countryside does not benefit. This contradicts the official discourse on the advantages for the rural population and their territories.

Here is an example of return on investment in renewable energy for rural and urban areas:

Table 7: Example of a solar energy project and the share of the city and the countryside *

Average annual revenue for a 1-megawatt project - selling price €0.076/kWh		
	Thousand Euros	%
Overall cost of transactions	126	100
Operating and maintenance costs	40	31.8
Loan Repayment	32.4	25.7
Taxes	2	1.5
Profits	51.63	41.0
The share of the rural area, assuming that the investor relies on local skills, and that all taxes benefit the region		33.3
The share of the city, taking into account that the owner of the project is based there as well as the banks that finance it (99% of cases)		66.7

* These figures are taken from one of the documents that the Tunisian Ministry of Local Affairs and Environment delivered during a presentation to Tunisian municipalities in April 2020.

e - A dwindling energy sovereignty

Aside from what has been mentioned above, the most worrying consequence of renewable energy privatization and its ongoing management is undoubtedly the threat to the country's energy sovereignty. Indeed, Tunisia is one of the countries that managed, during its independence, to get rid of a heavy colonial legacy exemplified in the domination of French companies over the electricity sector. The nationalization process and the establishment of the Société Tunisienne de l'Electricité et du Gaz (STEG) put this sensitive sector under the control of Tunisian officials and allowed the country to gain much knowledge and know-how. It also contributed to GDP growth and reduced dependence on foreign countries, despite a continued dependence on imported technology.

Besides, and despite the need to import hydrocarbons from abroad, the Tunisian state did manage the electricity sector: it was the state that planned and found solutions to the various problems thanks to local skills. However, with the emergence of privatization trends and the so-called "liberalisation" process, the sector is going to end up in the hands of foreign companies who will exploit and control the country's natural wealth, especially its renewable energies. When we look at the size of the projects planned and the bidding results, we can deduce that foreign companies are dominant in the large solar and wind power plants (see Tables 8 and 9). Even medium and small power plants are carried out in partnership with local and foreign companies. The role of Tunisian investors is limited

to monopolizing authorizations for units whose capacity is only 1 megawatt. Since all these companies are called upon to sell the energy they produce to the public body, the latter will be under their influence, since the 2015 law obliges it to buy the energy produced. Thus, the current scheme will reproduce the one that dominated during the

French colonial era in Tunisia, where foreign companies led the sector, taking advantage of the same incentives and resources. This will also lead to the loss of the technical knowledge and expertise Tunisians acquired over recent decades, and to dependence on foreigner companies to produce electricity.

Table 8: Concessions planned for photovoltaic solar energy³⁵

Project owner	Region	Maximum capacity
TBEA (China) Amea (Emirates)	Kairouan (Moutbasta)	100 megawatts
Engie (France) Nareva (Morocco)	Gafsa (Segdoud)	100 megawatts
Scatec (Norway)	Sidi Bouzid (Mazzouna)	50 megawatts
	Tozeur	50 megawatts
	Tataouine (Borj Bourguiba)	200 megawatts

Table 9: Authorizations planned for wind energy³⁶

Project owner	Region	Maximum capacity
ABO Wind AG (Germany)	Ben Arous (Mornag)	30 megawatts
Lucia Holding (France)	Bizerte	
UPC Tunisia Renewables BV (The Netherlands)	Bizerte (Kchabta)	
VSN New Energies (France)	Bizerte (Mateur)	

These companies will also further drain the country's foreign currency resources, which are supposed to be allocated for the purchase of essential commodities for Tunisians, such as cereals, fuel, medicines, and so on, given that these companies will transfer their profits abroad. This is especially the case as the Tunisian state is required to pay for the energy produced in foreign currency, even for projects of medium capacity (10 MW).

The establishment of these large foreign companies will also accelerate the dismantling of the Tunisian industrial fabric, which is mainly made up of small and medium-sized enterprises, by depriving them of a share of the "renewable energy market" due to the unequal competition. In the absence of adequate support mechanisms, such a situation would lead to the disappearance of the small Tunisian companies.

Alternatives

4 - Issues related to the current model

The current global energy model has reached its limits and has become an enormous burden for humanity because of its disastrous climate change ramifications, environmental degradation and all kinds of exploitation, namely labour abuses, and capitalism's endless and horrendous exploitation of resources.

It is a one-dimensional model that is only interested in economic outcomes: growth rates, investment volumes and profits. It is a model that focuses on results and ignores methods and means and their impact on the population, the environment and local economy. It is also a model that is subject to market fluctuations and geopolitical power struggles; and controlled by a minority that sees the world only from its own position.

"The European Union, which accounts for only 7% of the world's population, has spent nearly half of all the money dedicated to renewable energy in the world. This amount would have been enough to provide electricity to 1.2 billion people who do not have it. Renewable energy is primarily a European phenomenon."⁵⁷

A wide range of features shape this capitalist model of global energy:

- **Top-down relations:** at the level of structures, whether the property is public or private, the relations that command the current model are those of the master and the subject. The worker is responsible for carrying out the orders of their boss, who justifies this relationship either by a scientific degree (an authority of knowledge) or by the ownership of the establishment (authority of capital). Moreover, decisions on all energy issues have remained the prerogative of a certain group linked to influential circles at the international and national levels. The peoples and inhabitants have only to accept and execute. The opinions of the human groups that will be affected by the energy projects are dismissed, justified by their lack of knowledge and by the dissemination of a technical discourse that only specialists understand, in order to complicate the issue and make it the exclusive arena of "experts".
- An approach which is based on **endless growth and production subject to consumption:** given the huge development of the consumerist model and the expansion of production mechanisms to meet this development, the current energy model is based on the idea that economic growth is infinite. This perspective, however, ignores

the limits of our planet's natural resources, even though the search for alternatives, such as renewable energies, is becoming frantic and requires, in turn, the use of non-renewable resources, such as metals and semi-insulating materials, to manufacture these alternative industries

- **Opting for an infinite growth approach** automatically leads to subjecting energy production to the accelerated pace of consumption (especially in developed countries), which in turn leads to increased competition to grab areas with the raw materials necessary for the manufacture of equipment and technologies. Consequently, this leads to the predominance of a logic based on war and imperialist conflicts. The subordination of production to consumption and the economic imperatives of capitalism, without taking into account the potential exhaustion of the necessary raw materials, means that this model is not only a generator of crises, but also the cause of its own annihilation, once all forms of life on earth have been destroyed
- **The passive consumer:** the present energy model is dominated by two main categories; producers and consumers. Since production is monopolized by the state or a minority with means and privileges, the rest are all energy consumers (especially citizens), and their role is to pay energy bills. In a system that sees itself as a public service (and despite the dysfunctions and the shortcomings), the consumer's role is to mobilize resources in order to contribute to the supply of energy; while in a system where the logic of the market is dominant, the consumer's role is reduced to securing profits for large energy companies
- **Private property versus public property:** The current energy model is framed by contradictions between two systems: the public system vs. the market system. This means either the domination of a public institution held by the state, which subjects it to its influence and visions, or the control of a small group of private companies, belonging to a privileged minority that monopolizes the means of production, in addition to advertising, media, and even political power, which, in turn, provides it with various incentives, privileges and funding. This polarized system perpetuates a consumerist logic, reducing the citizen to a mere consumption figure or quantity. It thereby excludes the human groups living in areas where natural resources are present.

5 - Features of the new model

a - Breaking away from the old model

The suggested new energy model must overcome the shortcomings of the current model and take advantage of technological developments, especially in the field of information and communications. This requires developing new features that ruptures with the visions of capitalism and make it obsolete.

Reality has demonstrated the failure of profit-driven investment logic in the implementation of a just energy transition. The partnerships and alliances that can determine a new energy model must be founded on features such as:

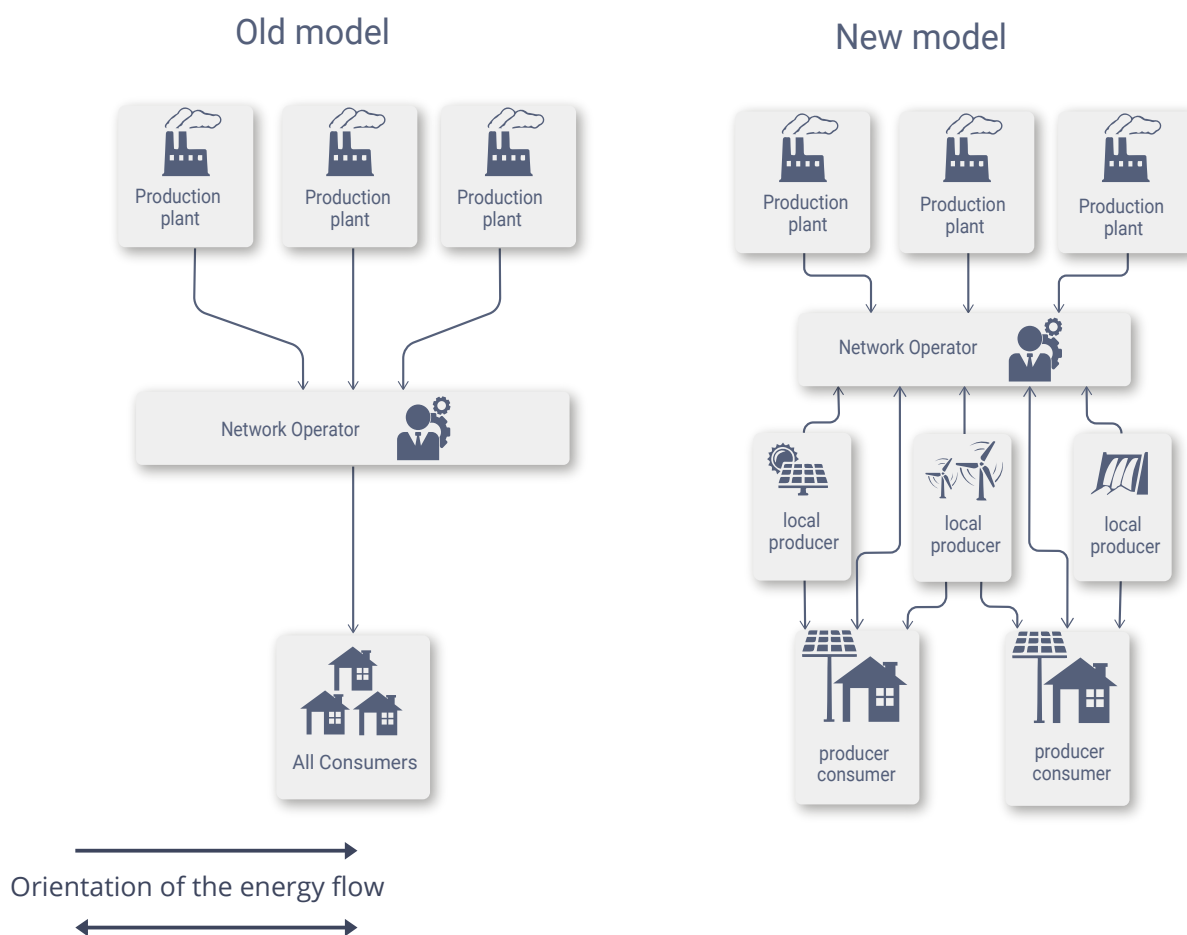
- **Changing the nature of relationships within organizations so that they become horizontal** with all people being equal, so that only their position in the process will make a difference. Complementary relationships between producers and consumers, who in turn will become producers, must prevail and rupture with the vertical relationships that prevail today. The consumer, who will at the same time be a producer, a contributor to decision-making and to financing, will be the pillar of this new paradigm. The Danish experience, launched in the 1970s, can serve as a model in this regard, while paying attention to the reality and specific socio-economic conditions of each country and region
- It is also necessary **to break with a system that requires production to be governed by the pace of consumption**. New technologies make it possible to adopt an approach based on adjusting consumption to the demands of resource exploitation, rather than sticking to the idea that we should rely on production to achieve the balance of energy in a given production and distribution network. This same network must abandon excessive centralization and allow consumers to express their own visions in their local contexts
- **Re-establishing collective systems of energy production such as cooperatives**, that break with the binary regime of public/private competition. These systems

will primarily emanate from consumers, as well as from social classes that have been marginalized from production (the unemployed, etc.) as well as from the populations living in areas where natural wealth (sun or wind in the case of renewable energies) is found. These systems will allow for the redistribution of wealth, and the involvement of collectives established in the production process, who would ultimately benefit from it. Such a transformation in energy production would constitute a form of energy democratization

- **Considering energy as a primarily political issue** linked to our conceptions of the type of societies we want to build based on a set of principles and not on interests. This will lead us to move away from debates in which energy is only dealt with from a technical (or profitability) point of view, thus denying the role of politics. It will also lead us to reformulate the notion of public service and public interest, which is referred to as "public establishment" in neoliberal literature
- **Putting an end to seeing energy as a mere commodity** subject to the law of supply and demand and framing it instead as a right that not only enables humans to fully live in the 21st century, but one which also enables access to other rights such as education, health and adequate housing. This issue is therefore much more significant than markets located here and there; it is a social need that has become closely linked to our biological needs, behaviour and perspectives.

"The issue is not just about technology or economics. It is a fundamentally political question. It is the business of the citizen - of all citizens - and in this sense it is also, radically, an ethical question..."³⁸

Figure 7: Energy production and distribution network Organization according to each model



b - Towards a real sovereignty over energy resources

Energy sovereignty in Tunisia requires several conditions, without which the country's energy dependency gap will widen further, turning it into a mere number of transactions in the accounts of large foreign companies. These conditions include mainly:

- **Revisiting the role of the public sector in the electricity production system** and no longer viewing it only as a network manager. The Tunisian Company of Electricity and Gas (STEG) is indeed called upon to invest more in renewable energy and build a production system based on an integrated and global energy mix. To do so, it must find the necessary funds through recourse to participatory financing, or perhaps by relying on a national contribution. This type of funding would give the company a degree of independence in planning and decision-making and help it avoid the dictates of international financial institutions
- **Mobilizing all available resources to reduce dependence on fossil fuels** and provide for energy needs by encouraging production for self-use and energy independence.

This would concern, not only companies but also residential communities, small-scale farmers, public institutions, etc., particularly in areas with significant consumption. The success of this mobilization will depend on redirecting funding and other current incentives allocated to private investors

- Not only promoting renewable energy but also **urging Tunisian companies to manufacture the associated equipment, mainly for the domestic market**, in order to reduce imports. This process obviously requires specific legislation, special attention to scientific training and technical achievements in related fields and facilitating access to funding

These are, in our opinion, the basic principles that Tunisia must adopt to achieve energy sovereignty, overcome the domination of large companies, and create local added value through renewable energy.

c - The concept of energy democracy: An extract from the founding document of the Working Group for Energy Democracy - Tunisia.

Over the last decade, the concept of energy democracy has been widely used within climate justice circles. This concept has been linked primarily to the need to change the current energy production and consumption model to alternative models based on clean and renewable energy through collective and democratic use.

Trade unions have played a key role in developing this concept: they emphasized the pressing need to resist the neoliberal model of energy use and to build a new alternative. This alternative must allow peoples and communities to recover their right to take control of their natural resources and to reshape energy systems. In turn, this alternative would be geared to meet the challenges of the current reality, plagued by climate change and the domination of large monopolistic companies owned by a privileged few.

In this sense, the concept of energy democracy converges with the concept of climate justice in its emphasis on the need to break away from fossil fuels and to use energies that preserve nature to mitigate the impacts of climate change caused mainly by the global capitalist system.

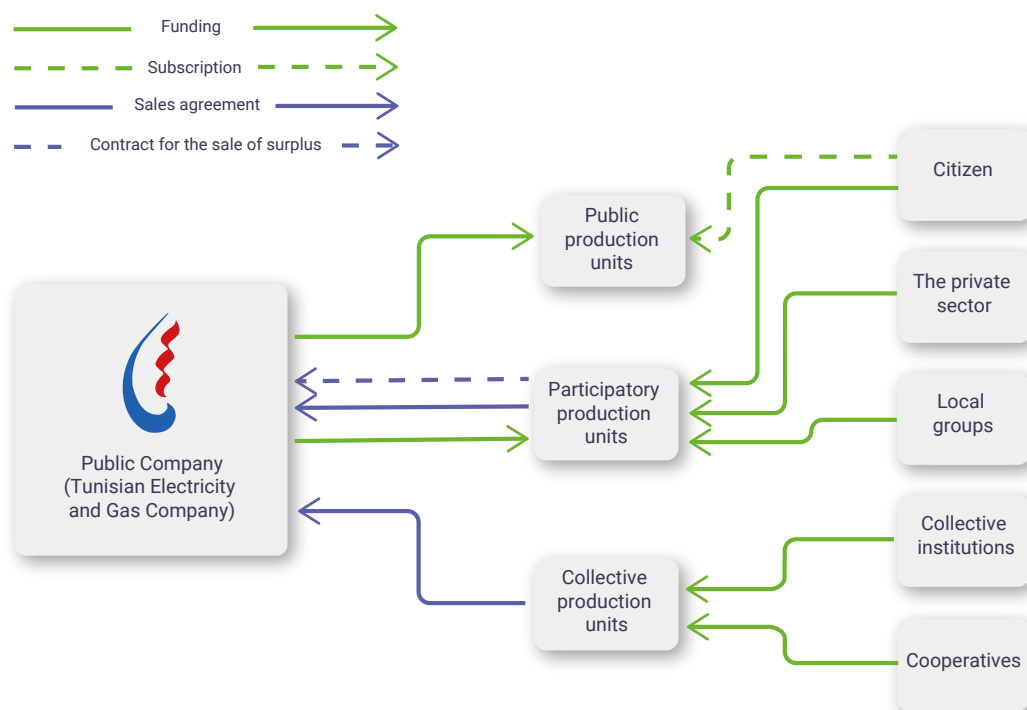
If energy democracy is in opposition to the concept of energy security, which is limited to satisfying needs without delving into the why and how, it remains in perfect coherence with the objectives of energy sovereignty: The first objective being to free energy from the stranglehold of neo-colonialism and the new imperialism of monopolistic companies, regardless of their nationality, so that peoples can finally enjoy their right to harness their wealth and make use of it without external oversight.

d - A draft of a model project for renewable energy in Tunisia

In the following, we outline a draft model designed by the Working Group for Energy Democracy for the exploitation of renewable energy in Tunisia, based on the features of the new model illustrated above. The current Tunisian reality lacks clear legislative and regulatory texts that would support

the potential alternatives for a better use of renewable energies. However, this will not be a barrier because the design of a new project necessarily involves appropriate practical and legislative measures, which the Working Group will strive to disseminate and implement:

Figure 8: An alternative electricity production model in Tunisia



6 - The struggle for energy democracy: forms and actors

In the face of a global neoliberal offensive and the domination of a market ideology within the current approaches as well as the subordination of states to the dictates of international financial institutions, resistance is the only way towards achieving a new energy model. This resistance should be built on convergence, disobedience, and debates, so that it can then lay the foundations for the creation of an anti-colonial and anti-capitalist alternative.

Thus, carrying out this work requires a clear definition of the roles of actors who can shift the balance of power and mobilize the masses:

- **Public sector trade unions**, as they have the advantage of being the first to have achieved professional gains for their members. They also possess a level of awareness which makes them able to go beyond making purely professional demands, to making demands at public policy level. In most countries, at different levels of course, maintaining a productive and efficient public sector is one of the priorities of trade union work in public companies.

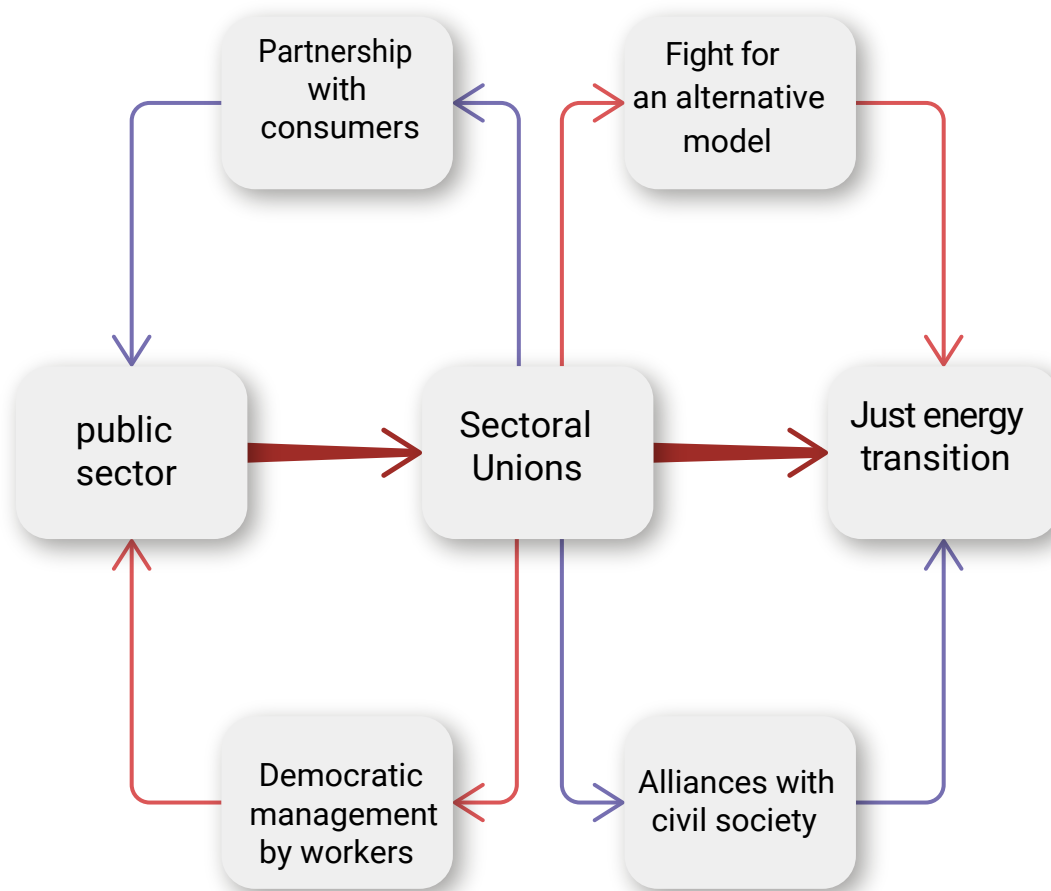
However, in order to go beyond the narrow objective of defending public institutions and preserving them in the face of restructuring programs, privatization and the liquidation of projects and activities, trade unions need to deepen their understanding and move beyond the traditional circle of trade union work to more creative work, such as formulating new avenues of struggle. This effort

can lead them to a new approach based on partnership with citizens, alliances with civil society and the acknowledgment of self-managed collective organizations, independent of the state apparatus.

Public sector unions, being relatively safe from private sector abuse of workers, have a great opportunity to influence discourse and introduce their alternatives. They can take advantage of the position they occupy within public institutions, strengthened by years of struggle shaping the social welfare system in post-independence countries in the South, such as Tunisia. Their representation on boards of directors of public institutions and the plethora of agreements that have made the unions a significant "power", which the authorities take into consideration before making any decision, are accomplishments that allow them to expand their role, not only to develop a model but also to "impose" it and to compel authorities to make concessions for a just energy transition.

All these factors may enable public sector trade unions to stand firm against neoliberal energy projects in many countries in the future. Perhaps the clearest evidence of fear arising from this pioneering role played by trade unions is the relentless campaigns waged against them, especially when privatization and restructuring projects are to be launched, since trade unions represent the most powerful bodies for resisting these policies.

Figure 9: Network of public sector union relations to achieve the desired transition



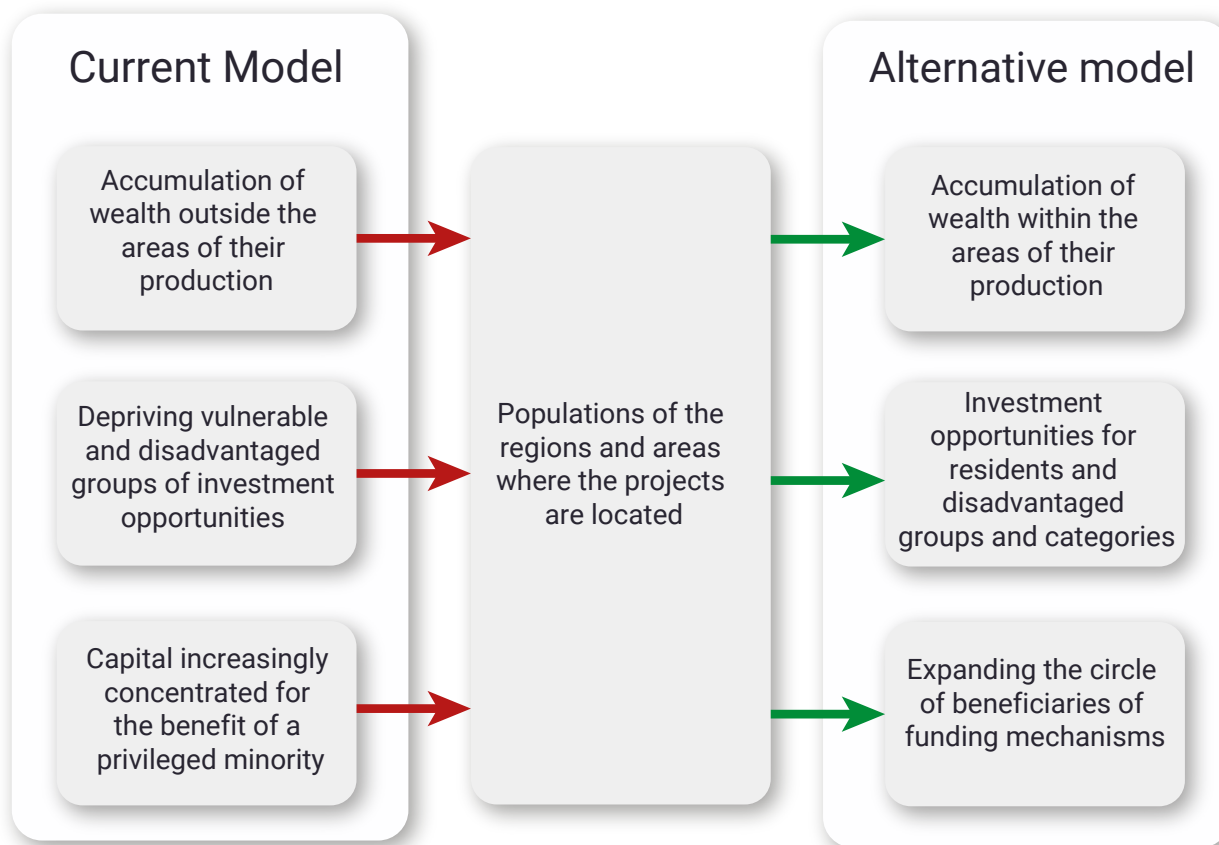
- Communities:** Those living in areas where renewable energy projects will be located are the ones who are most impacted by the current energy model. It is therefore necessary to reach out to these populations, to discuss with them and to understand the dynamics of the projects implemented, in order to broaden and deepen resistance

The current energy operation scheme in general and that of renewable energies in particular treats local production elements as a simple "cost" that is evaluated according to what guarantees the continuation of production processes. However, the accumulation of wealth takes place outside these localities and regions, to the benefit of groups that have no connection with them (as explained above). It is thus necessary to uncover the misinformation and falsehoods of the Tunisian regime and the capitalist system about the benefits of these projects.

Given that land is of paramount importance to this form of enterprise, small-scale farmers and community land management organizations will serve as the first defence force against investors who only care about their own profit, regardless of means.

Furthermore, resistance requires finding an alternative to the current renewable energy usage in these areas, in which the populations will be the most influential parties. This can only be achieved through the development of collective operation schemes, be they in the shape of cooperatives or collective enterprises, which will be the backbone of mass resistance and the rock against which the waves of capitalist exploitation will crash, allowing a real and just energy transition.

Figure 10: The role of communities in achieving a just energy transition.



- **Civil society:** If the communities represents the backbone of resistance in remote and rural areas, civil society organizations and associations represent a great pressure force in the cities, where most of them are located. They will serve as a main base for fighting the current energy model.

Environmental and climate justice organizations, consumer and national community rights organizations, and youth organizations will be the primary basis for grassroots work to bring about a just energy transition. They will reach out to their constituencies and create long-term alliances that will provide a space for debate and reflection on the proposed model.

Similarly, the easy access of these organizations and associations to meetings and forums that promote the

dominant model in urban centres will give them the opportunity to denounce the lies and discredit voices hostile to a just energy transition.

It is important not to overlook the role of political movements and progressive parties with a revolutionary spirit in promoting a new model and denouncing the flaws of the current one. Indeed, political action represents a tremendous force that facilitates demolishing the old and building the new. However, a significant problem remains: how can we convince these political parties and movements of the importance of the energy issue? Indeed, they are often rather preoccupied with party politics and are not interested in sectoral and local struggles, even though these are of primary importance in the fight against neoliberalism.

7 - Recommendations:

(An extract from the founding document of the Working Group for Energy Democracy -Tunisia)

The rising universal wave that generated the concept of energy democracy is now resonating all over the world. This wave has also found its way to Tunisia, where the first revolution of the 21st century emerged and where the struggle between the wealthy and the dispossessed keeps escalating despite the upheavals of the anti-capitalist forces and the frustration engulfing the entire population. Nonetheless, the fire of hope will certainly blaze from the ashes of anger reminding us that:

"If, one day, a people desires to live, then fate will answer their call.

And their night will then begin to fade, and their chains break and fall."³⁹

The Working Group for Energy Democracy - Tunisia, which adheres to the enlightened, progressive, and revolutionary path in its various forms, advocates for:

- 1 Resisting the capitalist model and its consequences due to the imbalance of forces and the domination of neoliberalism in the energy sector in Tunisia
- 2 Regaining the rights of citizens in every category - especially workers - to have and manage energy resources in Tunisia and to make relevant decisions, either through institutions voicing their will in a centralized manner or directly through regional or local bodies
- 3 Restructuring institutions involved in the Tunisian energy sector in order to ensure collective participation in decision making, prevent the manipulation of the populations' opinions in the regions that generate wealth, and give priority to the public interest over the private interest. This goes hand in hand with the commitment to respect the environment, protect nature, ensure the sustainability of natural resources, and ensure a rational use that contributes to addressing the climate crisis and preserving life on our planet

- 4 Being in accordance with the objectives of energy sovereignty to liberate energy from the neo-colonialist domination of monopoly companies that represent the new imperialist order. This should be in support of the peoples' right to make use of their wealth and to use it without external oversight
- 5 Protecting agricultural land from nebulous exploitation and forced expropriation for energy purposes and defending the right of small-scale farmers to access it
- 6 Breaking with the extractivist pattern of energy production which ignores social and environmental issues
- 7 Replacing the current consumption pattern that depletes nature with a consumption pattern based on good governance of energy resources
- 8 Relying on energy efficiency standards in the design of urban development models
- 9 Promoting cooperative alternatives for energy investment
- 10 Communicating with the population to simplify concepts and trigger debates on the energy issue at the grassroots level, while developing civic education and promoting direct interaction in regions and communities

These objectives, that constitute the main program of grassroots work of the Working Group for Energy Democracy – Tunisia, establish a new approach in dealing with the energy issue and create interconnections with all local initiatives aiming to prioritize human value and respect for nature over profit.



Endnotes

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مجموعة العمل من أجل ديمقراطية الطاقة
Working Group for Energy Democracy
Groupe de Travail pour la Démocratie Énergétique

The Working Group for Energy Democracy - Tunisia is a grassroots dynamic linking trade unionists with community groups, social movements and civil society organisations in the struggle for energy democracy.



The Tunisian Platform for Alternatives is an organisation that works on the Tunisian economy and society with a research-action approach. It focuses its work on food sovereignty, the informal sector, energy and economic systems.

<https://altertunisia.org/>



The Transnational Institute (TNI) is an international research and advocacy institute committed to building a just, democratic and sustainable planet. For nearly 50 years, TNI has served as a unique nexus between social movements, engaged scholars and policy makers.

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