



Renewable Energy in Tunisia

This updated version looks at recent developments on the market since our initial publication in July 2017.

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Historical and Political Context

Since the early 2000's, the country has made considerable efforts to bolster its renewables program



Historical and Political Context

The history of the regulatory framework for the renewables sector in Tunisia dates to the creation of the country's national electric company, la Société Tunisienne de l'Electricité et du Gaz (STEG), by decree in 1962, and later to the creation of l'Agence Nationale pour la Maîtrise de l'Energie (ANME) in 1985.

ANME, now a public entity under the supervision of the Ministry of Industry responsible for energy policy management and the promotion of renewable energy sources, saw its specific mission, organization, and functions modified by laws n°2000-1124 and n°2004-795 in May 2000 and March 2004 respectively. The latter followed on the heels of the country's first energy efficiency law (n°2004-72 of August 2004). Echoing national emphasis on environmental concerns following Tunisia's ratification of the Kyoto Protocol in the year prior, this law declared the development of renewable energy sources a national priority and authorized certain bodies to sell electricity produced through co-generation to STEG¹.

This significantly weakened STEG's monopoly on production in the country, a process that formally began with law n°1996-27 nearly eight years earlier. The applicable legal framework for renewable energy production was later amended by law n°2009-7 in February 2009, which expanded the range of producers eligible for authorization and specified the mechanism by which STEG would purchase from said producers.



Key Developments

1996

Law No. 1996-27 ends STEG monopoly on electricity production

Decree No. 1996-1125 establishes framework for IPPs

2004

Law No. 2004-72 initiates Promotion Program on Renewable Energy, lays co-gen framework

2005

Law No. 2005-82 creates Energy Efficiency Fund, framework for Clean Development Mechanisms

2009

Law No. 2009-7 amends 2004-72, expands framework for production and resell to STEG, outlines PPA, sets fines for non-compliance

Tunisia adopted in 2005 a project development strategy in line with the Kyoto Protocol's Clean Development Mechanism (CDM)² – the first renewable energy action plan. In coordination with the United Nations Environment Program, STEG and ANME launched the PROSOL residential solar water heater incentive program that same year³. The implementation of the Tunisian Solar Plan in 2009, the third of four (to date) renewable energy action plans dating back to 2005, laid out new renewable capacity targets for the period 2010-2016 in light of the newly adopted amendment to the law on energy conservation (n°2009-7). These targets included a total production capacity from renewables of 4700 MW by 2030, including 1000 MW by 2016. The announcement of the Renewable Energy Action Plan 2030 in November 2016 later modified these targets (see "Regulatory Framework" below).

Considered to be perhaps the most important source of renewable electricity production in Tunisia, wind projects have also been developed in the country since the early 2000's. STEG began its three-stage production of the 54MW Sidi Daoud wind farm in 2000 and completed the project in 2009. Three years later, the 190 MW⁴ Bizerte wind farm came online.

Regulatory Framework

The current framework for regulating the production of electricity from renewable sources was outlined by renewable energy law n°2015-12 in May 2015, effectively bringing to life the country's longstanding commitment to clean energy production. Later detailed and completed by decree n°2016-1123 in August 2016, this new framework was soon followed by the announcement in November 2016 by the Ministry of Energy, Mines and Renewables (the "Ministry") of the Renewable Energy Action Plan 2030. The Plan established a national target of 30% of total energy production from renewables, including installations of 1000 MW total capacity during the first period 2017-2020 and an additional 1250 MW during the period 2021-2030.

The projects are to be developed under four different "régimes" outlined⁵ by the 2015 law and 2016 decree:

- Large-scale projects, subject to concession ("**Tender Process**");
- Small-scale projects, subject to authorization ("**Auction Process**");
- Self-production projects, subject to authorization; and
- Export projects, subject to concession

The capacity thresholds to distinguish between large and small-scale projects are 10 MW for solar photovoltaic and thermodynamic solar energy and 30 MW for wind energy.

The following table outlines the breakdown of planned installed capacity during the period 2017-2020 by energy source and production regime:

Table 1: Production Capacity 2017-2020 (MW)

	Concession	Authorization	STEG	Auto-Consumption
Solar	100	120	300	130
Wind	100	90	80	80



Key Developments

2015 | Law No. 2015-12 establishes framework for electricity production from renewables

2016 | Decree No. 2016-1123 completes 2015-12, sets terms of sale to STEG. Ministry of Energy, Mines, and Renewables announces RE Action Plan 2030

2017 | Ministry releases technical docs and PPA in February, call for projects for 210 MW in May

2018 | **May 3rd 2018:** Ministry released the results of the first round of tenders launched in May 2017.

May 23rd, 2018: Ministry launched a call for pre-qualification applications for the development of 500 MW solar PV power plants and 500 MW of wind farms across the country under the Tender Process.

May 30th, 2018: Ministry officially launched the second phase of the Auction Process by releasing a call for projects for the development of 200 MW from solar PV and wind

July 27th, 2018: Ministry extended the deadline for submissions for the projects under the authorization regime to 18 October 2018.

October 9th, 2018: Ministry in charge of Energy extended the deadline for submissions to 18 December 2018.

On February 9, 2017, the Ministry published application texts for projects, including PPA's for the sale of renewable energy to STEG, transmission contracts, and grid connection codes. In May 2017, the Ministry proceeded to officially launch the first phase of the 2030 plan by releasing a call for projects for the development of 210 MW from both solar PV and wind under the Auction Process.

This call for projects was published alongside a procedures manual (*Manuel de Procédures*) that describes the technical information to be submitted with project proposals, the bidding and selection process, and additional regulatory information. As outlined in this document, the projects for this first phase of the 2030 plan fell under the "authorization" regime (*régime des autorisations*) and are to be built under a Build, Own, Operate (BOO) scheme⁶. All produced electricity will be sold exclusively to STEG under the terms of a PPA specific to the authorization regime.

On the 11th of May 2018, the Ministry released the results of the winning projects selected in respect of first round of the Auction Process. According to the document issued by the Ministry, a total of six 10 MW solar parks and four 1 MW ground-mounted PV installations were retained.

This announcement was followed a few days later by a call for pre-qualification for the development of 500 MW solar PV power plants and another 500 MW wind farms across the country under the Tender Process.

The solar tender is for five projects -- 50 MWc in the governorate of Tozeur, 50 MWc in the governorate of Sidi Bouzid, 100 MWc in the governorate of Kairouan, 100 MWc in Gafsa governorate and 200 MWc in Tataouine governorate. The sites for the projects have been provided by the state.

The wind tender covers three projects -- 200 MW at Jbel Abderrahmane in Nabeul governorate, 100 MW at Jbel Tbagha in the governorate of Kebili, and 200 MW of capacity at sites proposed by the developers. The sites for the first two projects are provided by the state.

The projects will be developed under the Build Own Operate (BOO) model under the Tender Process. Interested developers or contractors have been invited to submit their pre-qualification offer by the 19th of July 2018. Offers are evaluated based on developer experience in development, financing, construction, and operation of similar projects.

Finally in May 2018, the Ministry officially launched the second phase of the Auction Process by releasing a call for projects for the development of 200 MW from solar PV along with an increased wind capacity for the tender announced last year. The initial deadline for submissions was initially set for 15 August 2018. It has then been extended a first time to 18 October 2018 and recently to 18 December 2018.

It should also be noted that on August 31st 2018 the Ministry was dissolved and responsibilities for matters relating to energy, mines and renewables transferred to the Ministry of Industry. The former Minister of Energy, Mines, and Renewable Energies Khaled Gadour was also dismissed along with the CEO of Tunisian National Oil Company and other ministry senior officials.

According to the official statement of the Tunisian government, these actions will not have any negative impact on the Renewable Energy projects which are proceeding as originally intended.

The below table sets forth a breakdown of revised project capacity limits and application deadlines

Table 2: 2030 Action Plan Phase 2 - Authorization Regime Project Capacity

Source	Total Capacity	Individual Capacity	Deadline
Wind	120	30	18 December 2018
	10	5	
Solar	60	10	18 December 2018
	10	1	

Source: Call for Projects, Ministry of Energy, Mines, and Renewables⁷

The Tunisian National Agency for Energy Conservation (ANME) announced in September 2018 that the Tunisian government will be launching a 700 MW solar project in the Remada region, in Tunisian Sahara.

The project is intended to help the region achieve three main goals: (i) create the conditions for the development of organic farming; (ii) improve tourism in the Tunisian Sahara; and (iii) promote R&D activities in connection with innovative technologies for desert areas

The enactment of the first phase of this project will be by the implementation of a 200 MW solar project in addition to the development of 5,000 hectares of agricultural land, the construction of a road, a village, and basic infrastructure, the establishment of a grid connection, and the creation of an international center to support the project. The first phase will be implemented between 2018 and 2020.

The second phase, planned for the period 2021-2025, is expected to add a further 500 MW of PV power generation assets, an additional 15,000 hectares of agricultural land, and other infrastructure.

In the third and final phase, new PV capacity will reach 1 GW, while agriculture will be developed on a further total surface of 30,000 hectares.

Project Approval Process

The process for receiving approval from the Ministry of Energy, Mines, and Renewables is as follows⁸:



Bids are prepared and submitted to the Ministry.

Projects selected based on content, experience, and tariff

Multi-step:
- Principle: 3 yrs for wind
2 yrs for solar
- PPA
- SPV (1 year) –
- Authorizations, financing (18 months)

Works commence subject to STEG verification.
Final approval issued by Ministerial order (20 + 5 years).

Please note that while this information accurately summarizes the timeline set out by decree n°2016-1123 of August 2016, its practical accuracy cannot be confirmed at this time. The call for projects announced in May 2017 and 2018 mark the first attempt at developing projects under the new regulatory framework, and thus it is too early to confirm whether the schedule is realistic.

Key Contractual Terms and Selection Process

The primary components of the project proposal and selection process as outlined in the Manuel de Procédures, as well as the key contractual terms of the PPA and the Concession Agreement, are as follows:

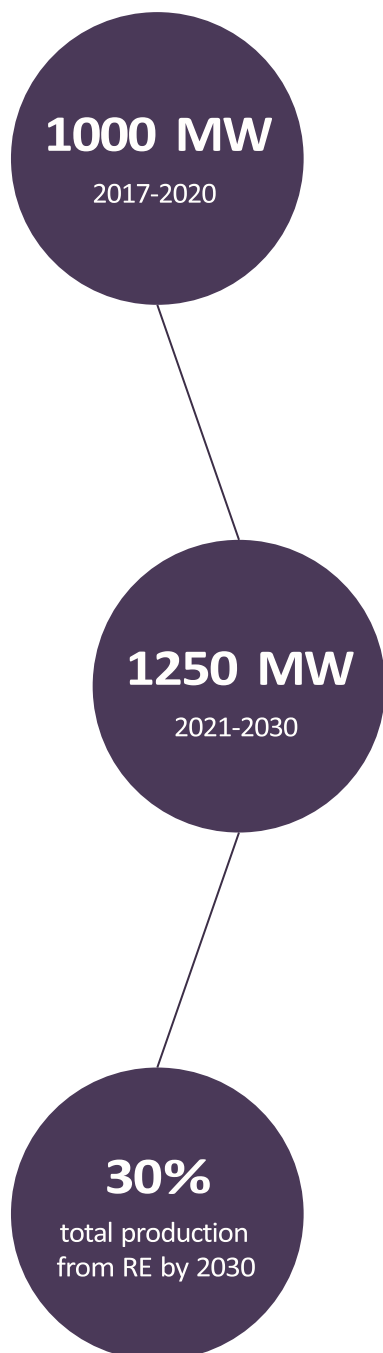
It should however be noted that the PPA template provided is related to the authorizations regime only as no template has been published as of yet in respect of the Concessions. **POWER PURCHASE AGREEMENT:** The key terms of the PPA include:

- Contract term: initial term of the contract is 20 years with a take or pay mechanism;
- Tariff's determined individually based on offers made by IPPs (see below).
- Grid Connection and management conditions are not specified but should be clarified at a later date;
- Connection Costs are the developer's responsibility, including initial connection and reinforcement costs;
- Quality of electricity produced is outlined in the Cahier des exigences techniques de raccordement et d'évacuation de l'énergie produite à partir des installations d'énergies renouvelables raccordées sur le réseau haute et moyenne tension, published on the Ministry's site; and
- Transfers in capital are allowed subject to approval by the Ministry

It should be noted that PPA template issued by the Ministry on 9 February 2017 has been revised by the order dated 28 September 2018 as the current PPA template revealed bankability issues raised by investors, banks and financial experts. Nevertheless, main issues remain unchanged.

The below is a comparative table highlighting the differences between the previous and new version of the PPA.

PROVISIONS	PREVIOUS VERSION OF PPA	NEW VERSION OF PPA
Change in the law	The previous version of the PPA included a provision for change in law, but there was ambiguity in dealing with the issue and potential extra costs.	The process is more defined in the new version of the PPA.
Invoicing and payment terms	The previous version of the PPA included an obligation to submit quarterly to STEG the certificates of tax situation and social security confirming the producer's compliance, failing of which payment of the invoices by STEG would be suspended.	This obligation has been deleted.
Termination: Event of default	The previous version included amongst the events of default enabling STEG to terminate the contract the non-compliance with the Terms and specifications having an impact on the network.	This event of default has been removed from the new version and a new event of default has been added and related to a breach by the producer of any of his obligations under the PPA and which can not be remedied.
Termination: Consequences	The previous version refers only to the consequences related to a termination by STEG as a result of the producers' default.	The new version clarifies STEG's obligations in the event of a termination by the producer as a result of STEG's default.



Direct agreement	Step-in rights allowing STEG to take over the project has been included, but step-in rights to benefit of the financing banks have not been specified.	The new version includes a template of the direct agreement to be concluded with the lenders.
Arbitration	International Arbitration introduced for a high loss (4 mil. USD) Arbitration procedure to be held in Tunisia, under Tunisian law.	International Arbitration introduced for a loss amounting to 1 mil. USD. Arbitration procedure to be held in Geneva.
Non Remedied Energy (<i>Energie Non Enlevée -ENE</i>)	NA	Clarification relating to ENE and, in particular, to the methodology for calculating the level of ENE in case of unplanned interruption of the energy evacuation as well as the conditions of repayment (Schedule 17 of the PPA template)

Please note that the terms of the PPA are not subject to case-by-case adjustment or modification. We understand that any potential changes to the PPA for all investors and projects would be announced by the Ministry in charge of Energy and effected by a new decree.

LANGUAGE OF REQUIRED DOCUMENTS: All documents required to be submitted with project proposals must be in French, though technical annexes such as balance sheets may be submitted in English.

PROJECT SITE: Contrary to the concession regime, the Tunisian government will not provide project sites to sponsors under the authorisation regime. As specified by the Manuel de Procédures, sponsors are obliged to propose a location based on its energy potential and to establish the availability of the site for purchase or lease by providing an agreement or ownership title. Thus, private developers must either rent or purchase the land.

Site proposals may then be approved or rejected by STEG, who must prepare a preliminary grid connection study. This study must be included with the authorization request. Neither the 2015 law nor the 2016 decree expressly stipulates that this study must be entrusted to STEG. However, we understand that this is a requirement and that relevant information will be explicitly mentioned as part of a *manuel de procédures de raccordement* currently being developed and intended to be published on STEG's website.

On an exceptional basis, authorization may be granted for the use of land owned by the State or by local collectives. Land use and occupation will be treated in these circumstances as a concession for temporary occupation, as regulated by law n°2008-23 on the concessions regime (*régime des concessions*). In this case and for the duration of temporary occupation, project sponsors would enjoy the rights and obligations of full ownership of any constructions erected on the land, while the land itself would remain under State ownership. These rights are mentioned in a special registrar held by the relevant services of the Ministry of State-owned Property and Land Affairs

July 19, 2018

submission deadline for call for pre-qualification for solar (500 MW) and wind (300 MW) tenders under the Auction Process

Dec. 18, 2018

submission deadline for call for projects under the Authorization Regime

Oct. 25, 2018

submission deadline for call for pre-qualification for wind (200 MW) tender under the Auction Process

TECHNICAL AND FINANCING DOCUMENTS: Sponsors must submit technical and financial information along with their proposals, including:

- o A detailed technical study of the project, indicating specifically the energy source, the project capacity, equipment specifications, and an implementation plan for the project;
- o The investment and financing scheme, including term sheets agreed upon by lenders and sponsors;
- o An analysis of local industrial integration indicating the rate of integration relative to global investment (excluding land costs), and supporting documents ;
- o The number of employment positions created during construction and operation phases; and
- o A preliminary environmental study

TARIFF: Sponsors must propose a two-part tariff, including one fixed portion for the first 12 operational years and a fixed portion for the following 8 years. Proposed tariffs must include currency differences and will be adjusted according to a formula published by the Ministry.

BANKABILITY ISSUES: Based on the terms of the PPA for the authorization scheme, the following provisions should be considered:

- o No state guaranties have been prepared;
- o The projects may be disconnected by STEG if the producer does not respect technical and contractual obligations (reconnection procedures not specified) without compensation to the IPP;
- o The IPP shall not be compensated for 72 hours of annual programmed interruptions for grid maintenance; and
- o No compensation measures for Force Majeur have been defined and the risk of "political force majeure" is not covered by the State.

PROJECT SELECTION: The following criteria as outlined⁸ in the *Manuel de Procédures* will be considered during the selection process (please note that this list is not exhaustive, and that the document outlines the full details of the points-based breakdown for evaluating proposals):

- o Experience of the sponsor with similar (technology and scale) projects
- o Project content, including financial benefits, site potential, and technical details
- o Local industrial integration
- o Employment creation
- o Environmental considerations
- o Tariff Proposed

CONCESSION AGREEMENT

Large-scale projects are implemented through a concession further to a tender procedure. Concession holders are chosen at the end of a 2-phase tender procedure process:

Phase 1: Pre-qualification

As a first step, the technical commission of private electricity production from renewable energy (“Technical Commission”) will review the offers submitted to assess the economical and technical feasibility of the project and to ensure that the project developers fulfill the necessary technical, financial and bank guarantees set forth in the tender’s terms of specifications. Offers will be evaluated based on developer experience in development, financing, construction, and operation of similar projects.

The Technical Commission submits to the higher commission of private electricity production (*Commission Supérieure de production privée d’électricité*) the final results of its examination and its proposals. Once the higher commission gives its agreement on a concession holder, the Tunisian government, as the awarding authority represented by the Ministry of Industry, and the concession holder conclude a concession agreement, which must then be approved by decree.

In case where the project is carried out on sites belonging to the State, the Ministry in charge of State properties shall be a party to the concession agreement.

Phase 2 : Concession Agreement

The developer enters into a concession agreement with the State and a power purchase agreement with STEG.

No templates have been published, as of yet, in respect of the concession agreement and the PPA; however, Law 2015-12 states the main provisions that should be included in the concession agreement such as the duration of the concession, the technical characteristics of the project, the time schedule for its completion, the grantor’s control procedures, the regime of movable and immovable property assigned to the fulfilment of this concession, the specific benefits that could be granted to the concessionaire and the dispute resolution provision.

The concession agreement will also include hardship clauses, force majeure clauses and clauses providing for State compensation in the event of early termination of the concession. It should be noted that the concession holder has rights in rem on buildings built within the framework of the concession, on which it may grant mortgages for the benefit of its lenders.

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Renewable Energy Partner is a boutique advisory firm providing a full range of services at all stages of the development of renewable energy projects in Africa and Middle East. We aim to create long-term relationships with our partners and provide a continuous, dedicated and high-quality support to our projects or investments. Renewable Energy Partner is also, devoted to carrying out large scale solar PV project development as well as building, owning and operating bespoke solar energy or hybrid projects for C&I clients in Middle East and Africa.

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