Royaume du Maroc

الهيئة الوطنية لضبط الكهرباء

NATIONAL ELECTRICITY REGULATORY AUTHORITY

PRESENTATION NOTE ON THE APPROVAL AND PUBLICATION OF THE HOSTING CAPACITY OF THE MOROCCAN ELECTRIC POWER SYSTEM

2026

ROYAUME DU MAROC

الهيئة الوطنية لضبط الكهرباء

Presentation note on the approval and Publication of the hosting capacity of the Moroccan electric power system.

1. Context :

Under the enlightened leadership of His Majesty King Mohammed VI, may God assist Him, our country has embarked on a major energy transition, placing renewable energies at the heart of its development model. The ambition to increase the share of renewable energy to over 52% of the electricity mix by 2030 reflects a strategic drive to combine energy sovereignty, industrial competitiveness, and environmental sustainability.

The achievement of this ambition relies on the sustained deployment of new renewable capacities, which expand the national generation portfolio and strengthen system resilience. This dynamic, driven by innovation and competitiveness, is naturally accompanied by an increased need for system flexibility and control (reserves, storage, demand response, system operation and forecasting) in order to ensure, at all times, the balance between supply and demand, as well as the security and quality of electricity supply. In parallel, it entails the continuous modernization of transmission and distribution networks, through reinforcement, automation and digitalization, to integrate more variable power flows and better leverage bidirectional exchanges, in line with hosting capacity requirements.

These requirements are reflected in particular in the periodic assessment and publication of the hosting capacity of electricity networks, the accurate determination of which constitutes a key lever for optimizing the power system, by enabling the efficient integration of new generation capacities and improved anticipation of network developments.

The concept of hosting capacity was introduced by recent legislative provisions, namely Law No. 40-19 amending and supplementing Law No. 13-09 relating to renewable energy, and Law No. 82-21 relating to the self-generation of electrical energy. These texts define hosting capacity as the maximum amount of installed power from renewable energy sources, across all voltage levels, that the electric power system can host without hindering the management of generation assets and the operation of the electric power system.

Furthermore, Article 5 of Law No. 13-09, as amended and supplemented by Law No. 40-19, and Article 23 of Law No. 82-21 stipulate that each electricity Distribution System Operator (DSO) is required to communicate the available hosting capacity within its distribution area to the national electricity Transmission System Operator (TSO) no later than 30 November of each year. The hosting capacity is calculated by the national electricity transmission system operator, which ensures its updating, and the National Electricity Regulatory Authority approves and publishes it before 31 January of the following year.

Although the law does not specify the time horizon covered by the definition of hosting capacity, and in line with previous exercises, ANRE, on its own initiative, has succeeded in securing agreement from the transmission system operator and distribution system operators to extend this period to five years, in order to provide greater visibility for investors. This initiative aims to enable project developers to optimally plan their projects and obtain the necessary

authorizations, while allowing national electricity network operators to adjust their investment plans to effectively support sector development.

The deployment of hosting capacity across the transmission and distribution networks involves more than technical considerations. It also requires attention to market dynamics and the progressive opening of the electricity sector. Ensuring adequate infrastructure, such as substations, high- and medium-voltage lines, and advanced control systems, is crucial, while the rise of new market participants and competitive mechanisms necessitates clear regulatory frameworks that balance the interests of investors, network operators, and consumers.

In this context, the regulatory function acts as a key catalyst for the energy transition. It seeks to ensure that security, reliability, and economic efficiency criteria are aligned with decarbonization objectives, to promote transparency regarding the evolution of hosting capacity, and to ensure efficient coordination across the various market segments.

2. Reminder of the approach and methodology adopted to determine the hosting capacity

Determining the renewable energy hosting capacity of the electric power system is carried out through a rigorous and collaborative process, engaging the Transmission System Operator (ONEE), Distribution System Operators (DSOs), and ANRE. The exercise aims at the overall optimization of generation investments, ensuring a medium- and long-term balance between electricity supply and demand, while also pursuing competitive costs and enhanced service quality.

The initial step involved assessing the overall hosting capacity of the system, carried out in close collaboration between ONEE and ANRE. This assessment relied on reviewing input assumptions and using specialized software to refine scenarios, ensuring they accurately reflect the technical and economic realities of the national electric power system. The resulting system hosting capacity is presented in the following section of this note.

Subsequently, it was necessary to allocate the overall hosting capacity across voltage levels, between the transmission network and the distribution networks. Once the hosting capacity for one voltage level is determined, the capacity for the other level is derived by subtracting it from the total hosting capacity.

During the previous exercise, to overcome the limitations of the initially adopted empirical approach, used for the determination of the hosting capacity of the distribution networks, ANRE commissioned specialized experts to conduct detailed technical simulations. These studies focused on three pilot sites with distinct geographic and demographic characteristics: urban, semi-urban, and rural. Simulations were carried out using Cymdist, PowerFactory (DIgSILENT), and NEPLAN. Additionally, at the request of certain distributors, ENEDIS conducted supplementary simulations using ERABLE, an extension of PowerFactory.

This methodology enabled both the assessment of the relevance and comparative performance of the simulation tools used, and the identification of essential criteria to be integrated into the hosting capacity calculation methodology, ensuring a faithful representation of the technical and operational realities of distribution networks.

Ultimately, these efforts underscored the importance of providing distribution system operators with specialized, high-performance calculation tools, allowing them to implement advanced

methodologies for hosting capacity assessment and ensuring a controlled, harmonious, and sustainable integration of renewable energy into electricity distribution networks.

In this context, thanks to the joint efforts of ANRE and the Directorate of the Treasury and External Finances of the Ministry of Economy and Finance, ANRE secured funding from the African Development Bank (AfDB) amounting to **USD 511600** for the implementation of a technical assistance project.
This assistance aims to determine the hosting capacity of the national electricity distribution networks and will cover the following activities:

- Acquisition and installation of extensions to the distribution network analysis software already held by distributors, enabling them to study and assess the hosting capacity of renewable energy;
- The completion of the study on the hosting capacity of Morocco's electricity distribution networks using the advanced methodology cited above.
- Strengthening the capacities of the technical teams of the distribution system operators and ANRE, and enhancing their use of the simulation tool.

3. Hosting Capacity Results Based on the Adopted Methodology:

Applying the methodology cited in the previous section resulted in a cumulative renewable energy hosting capacity of **10429 MW** for the period 2026-2030, providing **additional** hosting capacities of **1091 MW** and **3193 MW** compared respectively with the 2025–2029 and 2024–2028 reference periods. Overall, this represents an increase of approximately **12%** and **44%** relative to the previous levels, which stood at 9338 MW and 7236 MW, respectively.

This increase reflects the evolving dynamics of Morocco's electricity sector, primarily driven by:

1. **Rising electricity demand forecasts,** particularly due to strategic industrial projects such as Gigafactories, seawater desalination facilities, green hydrogen projects, and the electrification of certain industrial processes, alongside major infrastructure works in preparation for upcoming international events;
2. **Flexibility investments** outlined in ONEE's development plan, including critical infrastructure such as pumped energy transfer stations (STEP), Battery Energy Storage Systems (BESS), and Open-Cycle Gas Turbines (OCGTs), which strengthen the network's capacity to integrate additional renewable energy.

The evolution of cumulative capacities between 2026 and 2030 is as the following:

	2026	2027	2028	2029	2030
Cumulative Power System Hosting Capacity (MW)					
Total Hosting Capacity (*)	**3886**	**6381**	**7681**	**9176**	**10429**
Wind Hosting Capacity	1088	2515	3315	4115	4915
Solar Hosting Capacity	2798	3866	4366	5061	5514

Table 1: Annual Total Hosting Capacity (MW) of the Moroccan Power System for the 2026–2030 Period

(*) These capacities have been approved, net of the projects completed in 2025, for a total installed capacity of 162 MW.

To ensure that this hosting capacity, determined at the overall power system level, is effectively usable by investors, it must be allocated in a structured and coherent manner between the transmission network and the distribution network. This allocation is based on a balancing approach, whereby determining one of the two capacities enables the derivation of the other.

Regarding electricity distribution networks, the current exercise, conducted in a context marked by the widespread deployment of all Regional Multiservice Companies (SRM), is characterized by enhancements to the calculation methodology, developed in close coordination with distribution system operators. These adjustments are intended to refine the key criteria established and used during previous exercises, pending the implementation, in forthcoming assessment cycles, of an advanced methodology convened upon with the relevant stakeholders. This advanced approach will be based on the use of specialized, high-performance analytical tools and will be implemented with the support of technical assistance financed by the African Development Bank (AfDB).

In this context, and in order to collectively validate these improvements and assess their operational relevance, ANRE organized a workshop on 30 October 2025, bringing together all stakeholders concerned with hosting capacity, namely representatives of the Ministry of the Interior (MI-DRPL) and the Ministry of Energy Transition and Sustainable Development (MTEDD), electricity distribution system operators (SRMs, ONEE distribution, concessionaires), as well as technical and financial partners such as the African Development Bank (AfDB) and GIZ. It also benefited from the participation of other interested stakeholders, including the World Bank and the European Union delegation.

This technical workshop, led by a specialized consultant, provided participants with a comprehensive overview of methodologies and international best practices for estimating the hosting capacity of electricity distribution networks. Discussions focused mainly on the comparative analysis of existing methodologies and their respective impacts on hosting capacity, international benchmark practices, the assessment of constraints related to reverse flows and short-circuit power, as well as the integration of network operating modes into the analysis.

Furthermore, the workshop enabled the identification of the main technical constraints affecting distribution networks, as well as potential levers and solutions to optimize their hosting capacity. This approach is part of an initiative aimed at harmonizing and consolidating the methodological foundations for determining the hosting capacity of electricity distribution networks across all operators.

Maintaining a balance between pragmatism and technical rigor:

It is important to recognize that hosting capacity is not a static value. It evolves over time under the influence of various factors. This is, among other reasons, why its calculation represents a complex technical challenge with no universal solution. Accurate assessment requires a careful understanding and analysis of the existing technical conditions of the network, while ensuring that its safety, reliability, and the quality of electricity supply are not compromised.

Drawing on insights from international best practices, and while awaiting the implementation of the advanced methodology in future assessment cycles, it was agreed, after consultation with the Ministry of Interior, to continue using the empirical approach applied in the previous exercise. This approach, however, has been enhanced by refining key input criteria, particularly those related to the identification of minimum load levels and the assessment of short-circuit power (P_{SC}).

These refinements, developed with due consideration for the specific characteristics and constraints of the Moroccan electricity distribution networks, focus mainly on the following elements:

- Under normal operating conditions, when the (EHV-HV/MV) transformers are simultaneously in service according to the standard configuration of the substation, it was agreed that the **annual minimum power of the substation** used for hosting capacity calculations should correspond to the **sum of the annual minimum powers of the** EHV-**HV/MV transformers** (after excluding singular points from the load curves). This approach ensures **maximum adherence to the reverse flow constraint**.
- For other configurations, such as transformers temporarily out of service, operating in redundancy, seasonal alternation, or substations supplied through reduced or modified configurations, the DSOs are responsible for determining the minimum power to consider. This determination should be based on an analysis of the load curves and the actual operating conditions, considering operational constraints (e.g., minimum synchronous power, minimum transformer load dips, etc.).
- Since photovoltaic solar represents the most suitable and commonly connected technology to the distribution network, it was agreed that the minimum **powers** used to assess hosting capacity, derived from the annual load curves of substations, should correspond to **diurnal minima during periods of highest solar generation**, generally between **10:00 and 15:00**.
- In all cases, for any specific connection requests involving renewable energy sources other than photovoltaic solar (e.g., wind, biomass, etc.), the **exact hosting capacity** will be determined by the DSO following integration studies (preliminary and detailed), taking into account the **nature and production profile** of the renewable energy source to be connected.

These refinements are intended to strengthen the precision of the calculations, while enabling a coherent and efficient adaptation of distribution networks to the growing demands of renewable energy integration.

The maximum cumulative capacities that distribution networks can accommodate in terms of renewable energy, as reported by the distribution system operators (12 Regional Multiservice Companies (SRMs) and the 2 concessionaires: REDAL and AMENDIS), expressed in MW, are:

DSO	2026	2027	2028	2029	2030
SRM CASABLANCA-SETTAT	698,07	719,03	740,57	762,76	785,67
SRM SOUSS-MASSA	202,13	211,59	221,73	232,62	244,05
SRM MARRAKECH-SAFI	211,80	214,47	217,12	219,87	222,57
SRM L'ORIENTAL	137,07	141,18	145,41	149,77	154,26
SRM RABAT-SALE-KENITRA	139,19	147,64	156,63	165,22	174,08
SRM DRAA-TAFILALET	85,23	87,27	89,34	91,39	93,44
SRM FES-MEKNES	188,55	192,16	196,54	206,18	212,34
SRM LAAYOUNE-SAKIA EL HAMRA	38,40	41,00	37,70	40,70	40,00
SRM BENI MELLAL-KHENIFRA	158,12	171,02	186,83	201,14	210,20
SRM DAKHLA-OUED EDDAHAB	17,64	18,95	20,26	21,54	22,90
SRM GUELMIM-OUED NOUN	16,78	21,00	24,06	27,03	29,74
SRM TANGER-TETOUAN-AL HOCEIMA	108,62	111,06	113,57	116,14	118,80
AMENDIS	79,07	83,20	87,46	91,92	96,50
REDAL	165,40	171,70	178,50	167,60	171,90
TOTAL (MW)	**2.246,07**	**2.331,27**	**2.415,72**	**2.493,88**	**2.576,45**

Table 2 : Annual Hosting Capacity (MW) as Reported by SRMs and Concessionaires for the 2026–2030 period

The allocation of distribution hosting capacity by substation, as reported by the various distribution system operators (12 SRMs and 2 concessionaires), in MW, is as follows:

DSO	Hosting Capacity (MW) per Substation	2026	2027	2028	2029	2030
SRM CASABLANCA-SETTAT	ADE	18,90	19,47	20,06	20,66	21,28
	CAMIRAN	7,30	7,52	7,75	7,98	8,22
	CHAVIGNE	19,40	19,98	20,58	21,20	21,84
	LAAYOUNE	20,01	20,61	21,23	21,87	22,52
	MOHAMEDIA	10,46	10,78	11,10	11,43	11,77
	OULAD HADDOU	34,45	35,49	36,55	37,65	38,78
	SIDI OTHMANE	37,35	38,47	39,62	40,81	42,03
	ZENATA 20kV	6,67	6,87	7,08	7,29	7,51
	DAR BOUAZZA	19,89	20,49	21,10	21,74	22,39

	AIN HARROUDA	10,64	10,96	11,29	11,63	11,98
	EL JADIDA	15,32	15,78	16,25	16,74	17,24
	JORF LASFAR	5,88	6,05	6,23	6,42	6,61
	HAOUZIA	11,89	12,24	12,61	12,99	13,38
	OULED AZZOUZ	25,41	26,17	26,95	27,76	28,59
	SIDI MAAROUF	18,86	19,42	20,00	20,60	21,22
	NOUACEUR	29,14	30,01	30,91	31,84	32,80
	HAY HASSANI	30,20	31,11	32,04	33,00	33,99
	SIDI MASAOUD	30,15	31,05	31,99	32,94	33,93
	OULED SALEH	32,80	33,79	34,80	35,84	36,92
	EL OUALIDIA	5,00	5,15	5,30	5,46	5,63
	SIDI BENNOUR	11,90	12,26	12,62	13,00	13,39
	ZEMAMRA	6,70	6,90	7,11	7,32	7,54
	S. SAID MAACHOU	0,91	0,94	0,97	0,99	1,02
	S. ALI B. HAMDOCH	1,40	1,44	1,49	1,53	1,58
	TIT MELLIL	35,06	36,11	37,19	38,31	39,46
	BENSLIMANE	13,19	13,59	14,00	14,42	14,85
	ONDA	8,46	8,71	8,97	9,24	9,52
	BOUZNIKA	3,65	3,76	3,88	3,99	4,11
	MAGHREB STEEL	10,44	10,75	11,07	11,40	11,75
	ZENATA 22kV	15,22	15,68	16,15	16,63	17,13
	BEN AHMED	12,87	13,26	13,65	14,06	14,49
	BERRECHID I	18,21	18,75	19,31	19,89	20,49
	BERRECHID II	25,14	25,90	26,67	27,47	28,30
	BERRECHID III	23,60	24,31	25,04	25,79	26,56
	DAOURAT	15,57	16,04	16,52	17,01	17,52
	EL BOROUJ	8,83	9,09	9,36	9,65	9,93
	MOUMEN	18,72	19,28	19,86	20,45	21,07
	OULAD YOUB	0,00	0,00	0,00	0,00	0,00
	SETTAT	12,33	12,70	13,08	13,47	13,87
	SIDI CHEHO	7,06	7,28	7,49	7,72	7,95
	LAAWAMER	23,81	24,53	25,26	26,02	26,80
	BIR JDID	28,02	28,86	29,73	30,62	31,54
	GHANEM	2,90	2,99	3,08	3,17	3,26
	MAACHOU 2	4,36	4,49	4,63	4,76	4,91
	TOTAL	**698,07**	**719,03**	**740,57**	**762,76**	**785,67**
SRM SOUSS-MASSA	AIT MELLOUL	28,67	30,39	32,21	34,15	36,20
	FOUNTY	10,45	10,97	11,52	12,10	12,70
	TALBORJT	10,96	11,44	12,01	12,73	13,50
	AMSERNAT	10,57	11,00	11,55	12,12	12,73

	TAGHAZOUTE	6,65	7,05	7,48	7,92	8,40
	DRARGA	4,00	4,24	4,49	4,76	5,05
	TILILA	15,11	15,41	15,72	16,04	16,36
	AGOUNI	0,22	0,22	0,22	0,23	0,23
	AOULOUZ	4,90	5,18	5,44	5,71	5,99
	GLALCHA	2,00	2,12	2,25	2,38	2,52
	IGHREM	0,67	0,71	0,73	0,74	0,76
	IGLI	11,42	11,74	12,09	12,46	12,83
	OULED TEIMA	22,29	23,18	24,11	25,07	26,08
	SIDI MOUSSA	6,31	6,50	6,69	6,89	7,10
	SEBT GUERDANE	5,25	5,41	5,57	5,74	5,91
	TALIOUINE	3,48	3,58	3,69	3,80	3,88
	TAROUDANT	20,00	21,20	22,47	23,82	25,25
	LARBAA SAHEL	1,70	1,77	1,84	1,92	1,99
	CHTOUKA	22,00	23,32	24,72	26,20	27,77
	TAHALA	1,92	1,96	2,02	2,08	2,14
	TIZNIT	9,56	10,04	10,54	11,17	11,84
	TATA	4,00	4,16	4,37	4,59	4,82
	TOTAL	**202,13**	**211,59**	**221,73**	**232,62**	**244,05**
SRM MARRAKECH-SAFI	CHICHAOUA	4,50	4,56	4,61	4,67	4,73
	MAJJAT	4,77	4,83	4,89	4,95	5,01
	IMINTANOUT	3,87	3,92	3,97	4,02	4,07
	OD MOUMNA	2,34	2,37	2,40	2,43	2,46
	ESSAOUIRA	4,23	4,28	4,34	4,39	4,45
	OUNARA	3,60	3,65	3,69	3,74	3,78
	MOGADOR	2,79	2,82	2,86	2,90	2,93
	SMIMOU	1,89	1,91	1,94	1,96	1,99
	ASNI	2,99	3,03	3,06	3,10	3,14
	TAKERKOUST	2,71	2,75	2,78	2,82	2,85
	AIT OURIR	5,48	5,55	5,62	5,69	5,76
	CHOUITER	14,92	15,11	15,30	15,49	15,68
	SOUIHLA	9,94	10,06	10,19	10,31	10,44
	TENSIFT	5,49	5,56	5,63	5,70	5,77
	SAADA	12,94	13,10	13,26	13,43	13,59
	TAMANSOURTE	7,21	7,30	7,39	7,49	7,58
	JNANATE	17,60	17,82	18,05	18,27	18,50
	MHAMID	20,41	20,67	20,93	21,19	21,45
	MARRAKECH-VILLE	10,80	10,94	11,07	11,21	11,35
	ENNAKHIL	15,30	15,49	15,68	15,88	16,08
	NORD-OUEST (STEP)	10,44	10,57	10,70	10,84	10,97

	SIDI BOUATMANE	4,23	4,28	4,34	4,39	4,45
	BENGUERIR	5,22	5,29	5,35	5,42	5,49
	SKHOUR RHAMNA	1,26	1,28	1,29	1,31	1,32
	KELAA SRAGHNA	6,93	7,02	7,10	7,19	7,28
	EL HAMDI	4,77	4,83	4,89	4,95	5,01
	MY YOUSSEF	0,99	1,00	1,01	1,03	1,04
	BOUGEUDRA	5,17	5,23	5,30	5,36	5,43
	TNIN LAGHIAT	1,19	1,21	1,22	1,24	1,25
	AZIB DERAI	3,96	4,01	4,06	4,11	4,16
	SAFI 2	8,10	8,20	8,30	8,41	8,51
	EL YOUSSOUFIA	2,79	2,82	2,86	2,90	2,93
	LAKHOUALKA	2,97	3,01	3,04	3,08	3,12
	TOTAL	**211,80**	**214,47**	**217,12**	**219,87**	**222,57**
SRM L'ORIENTAL	SELOUANE	23,22	23,92	24,63	25,37	26,13
	BENI ANSAR	10,44	10,75	11,08	11,41	11,75
	ZEBRA	10,08	10,38	10,69	11,01	11,35
	TAFERSIT	10,35	10,66	10,98	11,31	11,65
	TAMSAMANE	1,35	1,39	1,43	1,48	1,52
	OUJDA	10,71	11,03	11,36	11,70	12,05
	AIN TAIRET	13,41	13,81	14,23	14,65	15,09
	BENI OUKIL	6,84	7,05	7,26	7,47	7,70
	TECHNOPOLE	2,98	3,07	3,16	3,26	3,35
	GUENFOUDA	0,30	0,31	0,32	0,33	0,34
	AIN BENI MATHAR	1,21	1,24	1,28	1,32	1,36
	TOUISSIT	0,33	0,34	0,35	0,36	0,37
	LAAOUINATE-PUIT III	1,26	1,30	1,34	1,38	1,42
	TENDRARA	0,28	0,29	0,30	0,30	0,31
	AIN CHAIR	0,12	0,12	0,12	0,13	0,13
	BOUARFA	1,11	1,14	1,17	1,21	1,25
	BOUANANE	0,44	0,45	0,47	0,48	0,50
	FIGUIG	0,31	0,32	0,32	0,33	0,34
	BENI TADJIT	0,32	0,32	0,33	0,34	0,35
	BERKANE	13,32	13,72	14,13	14,56	14,99
	SAIDIA	5,13	5,28	5,44	5,61	5,77
	MOULOUYA	5,40	5,56	5,73	5,90	6,08
	BOURDIM	3,87	3,99	4,11	4,23	4,36
	GUERCIF	4,95	5,10	5,25	5,41	5,57
	TAOURIRT	7,92	8,16	8,40	8,65	8,91
	MESTEGMER	1,44	1,48	1,53	1,57	1,62

	TOTAL	**137,07**	**141,18**	**145,41**	**149,77**	**154,26**
SRM RABAT-SALE-KENITRA	DRADER	5,68	5,90	6,14	6,38	6,64
	FOUARAT	5,92	6,11	7,01	7,21	7,42
	OULED MESSAOUD	4,90	5,09	5,30	5,51	5,72
	SIDI ALLAL TAZI	7,48	7,97	8,35	8,74	9,14
	SOUK LARBAA	8,09	8,44	8,80	9,24	9,63
	AFZI 60/22	5,94	6,24	6,56	6,88	7,22
	AFZI 225/22	4,90	5,19	5,49	5,80	6,11
	KENITRA NORD	5,55	5,81	6,08	6,34	6,60
	KENITRA EST	8,42	8,82	9,22	9,61	10,01
	KENITRA SUD	6,66	6,97	7,29	7,60	7,91
	EL KANSERA	2,48	2,56	2,65	2,74	2,84
	KHEMISSET	8,67	9,90	10,95	12,03	13,09
	MAAZIZ	4,66	4,99	5,34	5,70	6,09
	TIFLET	6,43	6,91	7,48	8,07	8,68
	OULMES	3,98	4,17	4,37	4,58	4,79
	ZAER	13,13	14,16	14,97	15,78	16,63
	DOMAINE DU LAC	0,77	0,80	0,84	0,87	0,91
	AIN AOUDA	3,61	3,83	4,06	4,28	4,51
	SIDI SLIMANE	10,36	11,05	11,78	12,61	13,40
	SIDI YAHIA	6,48	7,05	7,63	8,24	8,99
	BOUMAIZ	6,52	6,83	7,16	7,50	7,86
	SIDI KACEM	7,89	8,15	8,42	8,70	9,00
	ZAGOTTA	0,67	0,70	0,74	0,81	0,89
	TOTAL	**139,19**	**147,64**	**156,63**	**165,22**	**174,08**
SRM DRAA-TAFILALET	ERRACHIDIA	11,97	12,44	12,92	13,40	13,88
	ERFOUD	6,26	6,44	6,62	6,80	6,97
	GOULMIMA	4,92	5,04	5,16	5,28	5,39
	BOUDNIB	2,80	2,97	3,14	3,31	3,50
	OUED GUIR	0,69	0,73	0,77	0,82	0,86
	MIBLADEN	6,07	6,26	6,45	6,63	6,82
	RICH	4,27	4,35	4,43	4,51	4,58
	BOUMIA	4,25	4,33	4,41	4,48	4,55
	ZAIDA	2,26	2,36	2,46	2,57	2,68
	OUARZAZATE	1,38	1,39	1,41	1,42	1,43
	TARMIGT	6,53	6,64	6,74	6,84	6,95
	MANSOUR EDDAHBI	1,02	1,03	1,03	1,04	1,05
	SKOURA	1,66	1,67	1,69	1,70	1,72
	IMINI	1,96	1,98	2,00	2,02	2,03
	AGHBAR	2,43	2,45	2,47	2,50	2,52

	TINGHIR	4,53	4,62	4,71	4,80	4,89
	KELAA MGOUNA	2,67	2,69	2,72	2,74	2,77
	BOUMALEN	1,57	1,63	1,69	1,76	1,83
	ALNIF	4,57	4,66	4,75	4,84	4,92
	GHLIL	0,04	0,04	0,05	0,05	0,05
	ZAGORA	5,37	5,43	5,48	5,52	5,57
	AGDEZ	2,59	2,62	2,66	2,70	2,74
	BLEIDA PM	5,42	5,50	5,58	5,66	5,74
	TOTAL	**85,23**	**87,27**	**89,34**	**91,39**	**93,44**
SRM FES-MEKNES	FES-WISLANE	0,30	1,00	2,00	8,30	11,80
	FES-AMONT	0,60	0,60	0,60	0,60	0,60
	FES-SUD	11,80	12,00	12,20	12,40	12,60
	FES-OUEST	13,50	14,30	15,60	16,30	16,50
	SAIS	11,60	11,70	11,80	12,00	12,10
	ZERHOUN	16,40	16,60	16,80	17,00	17,20
	JBABRA	9,40	9,52	9,60	9,70	9,80
	MEKNES SUD	8,20	8,30	8,30	8,40	8,50
	MY SMAIL	1,40	1,40	1,40	1,40	1,40
	TOULAL	4,80	4,90	4,90	4,95	5,00
	M'HAYA	7,46	7,53	7,60	7,67	7,75
	MY DRISS	2,49	2,51	2,54	2,56	2,59
	SEFROU	5,40	5,50	5,50	5,60	5,60
	ELOUATA	5,30	5,40	5,40	5,50	5,50
	IMOUZZER	7,50	7,50	7,60	7,70	7,80
	DOUIET	11,50	11,60	11,70	11,80	12,00
	AIN TAOUJTATE	1,60	1,60	1,60	1,60	1,60
	BOUFEKRANE	9,00	9,10	9,20	9,30	9,40
	SBAA YOUNE	4,20	4,20	4,20	4,30	4,30
	AZROU	5,40	5,40	5,50	5,50	5,60
	IFRANE	4,30	4,40	4,40	4,50	4,50
	TAOUNATE	13,90	14,40	14,90	15,40	16,00
	IDRISS 1er	2,10	2,20	2,20	2,30	2,40
	OUERTZAGH	1,00	1,00	1,10	1,10	1,20
	PS TAZA 1	12,70	12,80	13,00	13,10	13,20
	PS AKNOUL	3,00	3,00	3,10	3,10	3,10
	PS MATMATA	2,70	2,70	2,70	2,80	2,80
	PS OUED AMLIL	4,50	4,50	4,60	4,60	4,70
	PS MISSOUR	1,70	1,70	1,70	1,80	1,80
	PS OUTAT EL HAJ	2,40	2,40	2,40	2,50	2,50
	PS BOULEMANE	2,20	2,20	2,20	2,20	2,30
	PS KSABI	0,20	0,20	0,20	0,20	0,20
	TOTAL	**188,55**	**192,16**	**196,54**	**206,18**	**212,34**

SRM LAAYOUNE-SAKIA EL HAMRA	LAAYOUNE région	18,60	19,90	16,70	19,80	19,70
	FOUM ELOUED	15,50	16,60	16,50	16,40	15,80
	ESSMARA	2,70	2,70	2,70	2,70	2,70
	SIDI KHATARI	0,20	0,20	0,20	0,20	0,20
	BOUJDOUR	0,00	0,00	0,00	0,00	0,00
	TARFAYA	1,40	1,60	1,60	1,60	1,60
	TOTAL	**38,40**	**41,00**	**37,70**	**40,70**	**40,00**
SRM BENI MELLAL-KHENIFRA	BENI MELLAL	19,10	20,49	22,61	24,88	26,72
	KASBA TADLA	12,46	12,90	13,44	13,99	14,48
	AZILAL	1,93	2,05	2,22	2,33	2,44
	AFOURER	6,90	7,15	7,41	7,71	7,90
	AITOUARDA	8,22	8,61	9,02	9,35	9,56
	DEMNATE	3,86	4,20	4,55	4,88	5,01
	KHOURIBGA I	12,45	13,31	14,54	15,85	16,95
	KHOURIBGA II	10,46	11,92	13,69	14,31	14,89
	OUED ZEM	8,45	8,95	9,44	9,97	10,36
	BOUJAAD	5,24	5,57	5,93	6,20	6,47
	FKIH BEN SALAH	18,25	20,97	24,24	26,64	27,48
	KASBA ZIDANIA	7,89	8,24	8,64	8,95	9,26
	SOUK SEBT	10,87	11,48	12,08	12,71	13,25
	D.O. ZIDOUH	9,01	9,61	10,12	10,72	10,99
	KHENIFRA	13,81	14,68	16,28	17,94	19,10
	M'RIRT	7,37	8,98	10,65	12,68	13,25
	KERROUCHEN	1,85	1,91	1,97	2,03	2,09
	TOTAL	**158,12**	**171,02**	**186,83**	**201,14**	**210,20**
SRM DAKHLA-OUED EDDAHAB	DAKHLA	17,64	18,95	20,26	21,54	22,90
	TOTAL	**17,64**	**18,95**	**20,26**	**21,54**	**22,90**
SRM GUELMIM-OUED NOUN	GUELMIM	6,81	7,25	7,70	8,15	8,60
	BOUIZAKARNE	1,67	3,47	4,10	4,73	5,45
	RAS OUMLIL	0,16	0,16	0,16	0,16	0,25
	OUANSIMI	0,45	0,63	0,72	0,81	0,90
	ASSA	0,56	1,37	1,73	2,00	2,27
	SIDI IFNI	1,56	1,92	2,28	2,64	2,65
	TANTAN	3,11	3,56	4,10	4,55	4,91
	TANTAN PORT	2,46	2,64	3,27	3,99	4,71
	TOTAL	**16,78**	**21,00**	**24,06**	**27,03**	**29,74**
SRM TANGER-TETOUAN-AL HOCEIMA	M'JAARA	5,16	5,22	5,29	5,35	5,42
	OUEZZANE	9,74	9,86	9,98	10,10	10,22
	AMZEFROUNE	2,32	2,35	2,37	2,40	2,43
	KHMIS M'DIQ	5,67	5,74	5,81	5,88	5,95
	CHEFCHAOUEN	5,93	6,00	6,08	6,15	6,22
	BNI AHMED	3,11	3,15	3,19	3,22	3,26

	BEGGARA	13,43	13,83	14,24	14,67	15,11
	KSAR EL KEBIR	8,56	8,73	8,90	9,08	9,26
	REGRAGA	2,41	2,50	2,60	2,71	2,81
	RMEL	1,00	1,04	1,08	1,12	1,17
	LOUKKOS	0,71	0,73	0,76	0,79	0,83
	TETOUAN	4,09	4,25	4,42	4,60	4,78
	TAGHREMT	0,76	0,79	0,82	0,85	0,88
	MELOUSSA	9,50	9,88	10,28	10,69	11,12
	KSAR SGHIR	1,51	1,57	1,63	1,69	1,76
	ISSAGUEN	12,44	12,69	12,94	13,20	13,47
	AIT KAMRA	5,48	5,59	5,70	5,81	5,93
	BNI HADIFA	2,00	2,04	2,08	2,12	2,16
	IMZOUREN	14,80	15,10	15,40	15,71	16,02
	TOTAL	**108,62**	**111,06**	**113,57**	**116,14**	**118,80**
AMENDIS	ASSILAH	2,00	2,10	2,20	2,30	2,40
	CEA	0,00	0,00	0,00	0,00	0,00
	AOUAMA	16,00	11,40	12,80	14,10	13,70
	HARRARINE	0,00	0,00	0,00	0,00	0,00
	TEB	29,00	24,00	24,90	25,70	24,70
	MGHOGHA	0,00	13,00	14,20	15,80	21,00
	SMIR	4,32	4,40	4,50	4,58	4,67
	BOUSSAFOU	13,17	13,43	13,70	13,97	14,25
	QUODS	14,58	14,87	15,16	15,47	15,78
	FNIDEQ	0,00	0,00	0,00	0,00	0,00
	TOTAL	**79,07**	**83,20**	**87,46**	**91,92**	**96,50**
REDAL	AGDAL	37,10	38,50	40,00	41,50	43,20
	RIAD	36,10	37,50	38,90	36,40	35,00
	AKREUCH	20,30	21,00	21,90	22,70	23,60
	TABRIQUET	24,60	25,60	26,60	27,60	28,60
	AMEUR	10,50	10,90	11,30	11,70	12,20
	HSSAIN	18,40	19,10	19,90	20,60	21,40
	SKHIRAT	18,40	19,10	19,90	7,10	7,90
	TEMARA	0,00	0,00	0,00	0,00	0,00
	TOTAL	**165,40**	**171,70**	**178,50**	**167,60**	**171,90**
TOTAL (MW)		**2 246,07**	**2 331,27**	**2 415,72**	**2 493,88**	**2 576,45**

Table 3: Allocation of Hosting Capacity (MW) per DSO per Source Substation

4. Adopted Values of Transmission and Distribution Network Hosting Capacity for the 2026–2030 Period:

4.1 Adopted Hosting Capacity Values for Electricity Distribution Networks:

The cumulative hosting capacity of the distribution networks, as reported by the DSOs to the TSO and the ANRE, amounts to **2576 MW** for the 2026–2030 period across all distributors. This represents a decrease of approximately **1%** and **24%** compared, respectively, to the total capacity of **2604 MW** for 2025–2029 and **3401 MW** for 2024–2028, as reported in previous assessments.

Following extensive constructive discussions with the TSO, it was agreed to **keep the distribution networks' hosting capacities, initially planned for the 2025–2029 period, for 2026–2030.** This adjustment aims to better align the projected hosting capacities with the sector's actual dynamics.

This decision is based on the following observations:

- **The low utilization of hosting capacities allocated to the DSOs in 2025**, mainly due to the limited number of approval requests for projects within the distribution networks.
- **The reduction in total capacities communicated by the distributors this year,** as a direct consequence of identified technical constraints.

Moreover, it should be noted that the recent opening to decentralized generation represents an emerging dynamic, the short- and medium-term evolution of which remains difficult to anticipate. This uncertainty has led to the adoption of a **cautious yet flexible approach**, incorporating several **safeguards** designed to ensure rapid adaptation if the pace of demand accelerates.

These safeguards include :

1. **Annual updates of hosting capacities**, allowing values adjustments to reflect sector developments.
2. **The possibility of exceptional revisions** in the event of a significant acceleration in renewable integration projects.
3. **Enhanced flexibility between the transmission and distribution networks**, practically, this flexibility allows for the reallocation of capacities initially reserved for transmission to distribution, whenever emerging needs from decentralized networks require it.

By relying on these measures, ANRE aims to ensure an adaptable and coherent framework while effectively meeting the requirements of sector stakeholders. This balanced approach guarantees the transparency and fluidity necessary to support the emergence of decentralized generation and advance the country's energy transition.

As a result, the adopted hosting capacity values for the distributors are as follows:

	Photovoltaic (PV) Hosting Capacity per DSO (MW)				
DSO	**2026**	**2027**	**2028**	**2029**	**2030**
SRM CASABLANCA-SETTAT	196	248	262	375	375
SRM SOUSS-MASSA	37	47	50	84	84
SRM MARRAKECH-SAFI	57	72	76	109	109

SRM L'ORIENTAL	32	39	42	60	60
SRM DRAA-TAFILALET	18	22	23	32	32
SRM FES-MEKNES	64	89	95	152	152
SRM FES-MEKNES RESERVED	33	33	33	33	33
SRM LAAYOUNE-SAKIA EL HAMRA	17	18	18	30	30
SRM BENI MELLAL-KHENIFRA	28	37	40	57	57
SRM DAKHLA-OUED EDDAHAB	10	10	10	17	17
SRM GUELMIM-OUED NOUN	13	14	14	23	23
SRM TANGER-TETOUAN-AL HOCEIMA	31	39	41	60	60
AMENDIS	69	87	93	96	96
AMENDIS RESERVED	35	35	35	35	35
SRM RABAT-SALE-KENITRA	44	55	60	86	86
REDAL	75	94	100	143	143
Total Hosting Capacity (*)	**691**	**871**	**924**	**1324**	**1324**
Hosting Capacity Reserved for the Free Market (**)	**68**	**68**	**68**	**68**	**68**

Table 4: Adopted Cumulative PV Hosting Capacity Values (MW) by DSO

(*): Projects based on other renewable energy sources (wind, hydro, biomass, etc.) may also be considered within the scope of hosting capacity.

(**): This refers to the capacity allocated pursuant to Law No. 13-09 on Renewable Energy, as amended and supplemented.

It should be noted that the hosting capacities of the new SRMs commissioned in 2025 were calculated based on the updated groupings of distribution zones, reflecting an adaptation to the networks' new organizational and technical realities.

In the interest of flexibility and to better manage uncertainties related to the deployment of renewable energy projects, it was decided to introduce mechanisms allowing a more flexible allocation of hosting capacities, while respecting the total cumulative capacity approved by ANRE for the 2030 horizon. These mechanisms include the following provisions:

1. **Annual Allocation within Each DSO's Scope**:

   Each DSO has the freedom to allocate, among its substations, the hosting capacities determined within its perimeter (see Table 3), up to the total annual hosting capacity approved by ANRE (table 4). This flexibility aims to optimize the use of infrastructure according to local priorities and the specific dynamics of each distribution zone.

2. **Redistribution of Capacities Between DSOs**:

   If a DSO receives network access requests exceeding its approved annual volume, it may request the use of any available surplus from another DSO, subject to the latter's agreement and prior notification to ANRE. This measure encourages cooperation among distributors and optimizes the overall allocation of capacities.

3. **Transfers Between Distribution and Transmission Networks**:

- If a DSO exhausts its allocated capacity, even after utilizing the available surplus from other DSOs, additional capacity may be allocated through the transfer of part of the transmission network's hosting capacity to the distribution network, subject to ANRE's approval and after consultation with the TSO.
- Conversely, if one or more DSOs do not utilize all or part of their annual capacity, a transfer to the transmission network may be considered, subject to ANRE's approval and after consultation with The Ministry of Interior (MI-DRPL) and the concerned DSOs.

These flexibilities establish an adaptive management framework, enabling DSOs to respond effectively to variations in access demand and to better anticipate changes in hosting capacity needs. They also reflect the intention to optimize the use of electrical infrastructure while supporting the integration of renewable energy sources within a balanced framework consistent with national objectives.

4.2 Adopted Hosting Capacity Values for the Transmission Network:

After deducting the hosting capacity allocated to the distribution networks from the total hosting capacity of the electric power system, the cumulative hosting capacity assigned to the transmission network amounts to 9105 MW by 2030.

	2026	2027	2028	2029	2030
Solar Hosting Capacity to be connected to the EHV/HV Network (MW)	2107	2995	3442	3737	4190
Wind Hosting Capacity to be connected to the EHV/HV Network (MW)	1088	2515	3315	4115	4915
Total Hosting Capacity – EHV/HV Network (MW)	3195	5510	6757	7852	9105

Table 5: adopted Cumulative Hosting Capacity (MW) of the National Transmission Network

This capacity is available across the entire transmission network and may be allocated to applicants, subject to the completion of the necessary connection and reinforcement works, in accordance with the applicable regulatory provisions.

The hosting capacities, in MW, for wind energy on the national electrical transmission network are as follows:

	2026	2027	2028	2029	2030
Total Wind Capacity on EHV/HV Network (MW)	1088	2515	3315	4115	4915
Capacity Reserved for the Free Market (MW) (**)	519	1035	1749	1789	1789

Table 6: Cumulative Hosting Capacity (MW) of the National Transmission Network for Wind Energy

The hosting capacities, in MW, for solar energy on the national electrical transmission network are as follows:

	2026	2027	2028	2029	2030
Total Solar Capacity – EHV/HV Network (MW)	**2107**	**2995**	**3442**	**3737**	**4190**
Free Market Reserved Capacity (MW) (**)	**109**	**692**	**790**	**790**	**790**

Table 7: Cumulative Hosting Capacity (MW) of the National Transmission Network for Solar Energy

(**): This refers to the capacity reserved under Law No. 13-09 on renewable energy, as amended and supplemented, and under Law No. 82-21 on self-generation of electrical energy.

5. The New Platform for Publishing Hosting Capacity:

ANRE has developed a dedicated platform, accessible on its website, to provide all electricity sector stakeholders, especially renewable energy project developers, with a clear overview of the hosting capacities of both distribution networks and the national transmission network.

Based on interactive mapping, the platform is designed to promote transparency in the availability of hosting capacities on the national electricity network and to improve the accessibility and clarity of related information.

The distribution network mapping provides a regional view of maximum available hosting capacities for each distributor and per substation over the 2026–2030 planning horizon, as approved by ANRE. By centralizing key information within a single interface, it helps identify the most favourable areas and ensures alignment between project locations and network capacities, allowing developers to optimize site selection for project implementation.

Using structured filters, users can efficiently access relevant data, conduct combined searches based on location, proximity to substations and capacity needs, and identify, by year and minimum power threshold, the substations offering hosting capacities suitable for their projects.

With clear, transparent, and structured access to data, the hosting capacity publication platform is a major decision-support tool, enabling rational investment planning, efficient infrastructure use, and optimal integration of renewable energy, while contributing to system security and national energy transition goals.

A detailed tutorial video is available on ANRE's website to help users navigate and utilize the mapping tool effectively.

Examples of Extracts from the Publication Platform:

- **Mapping of Distribution Network Hosting Capacities:**

« Map» View: This interface provides a visualization of all substations (approximately 300) within Moroccan distribution networks, as well as the total cumulative hosting capacity allocated to each distributor (12 SRM and 2 concessionaires, REDAL and AMENDIS) by the 2030 horizon. In addition,

by selecting any given substation, users can view the available hosting capacity over a five-year period, as approved by ANRE.

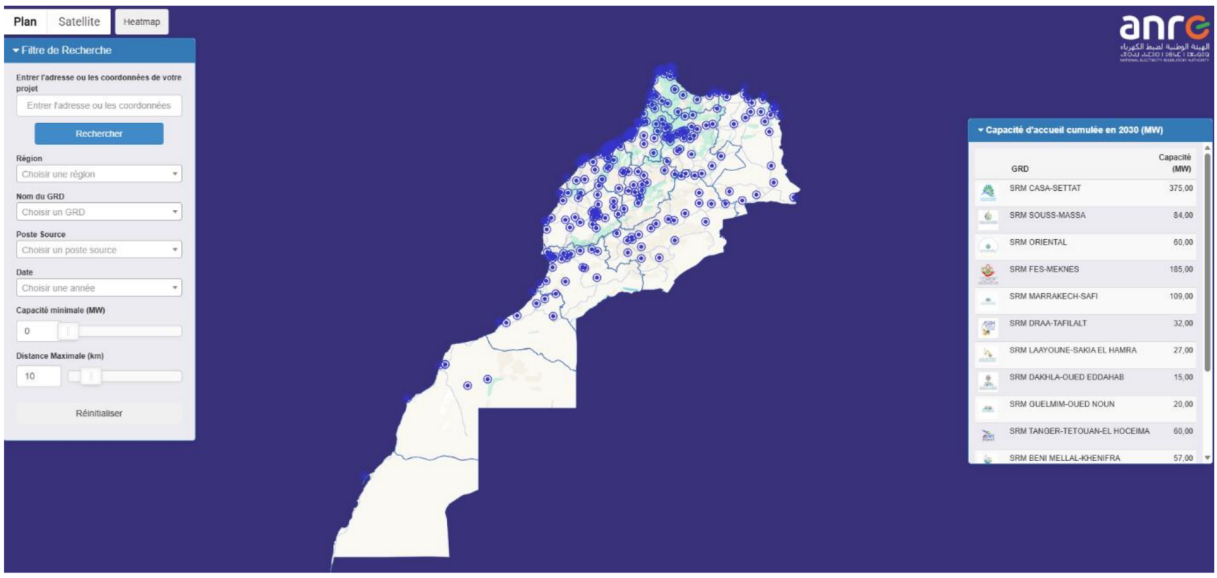


Figure 1: Plan view of the publication platform for the hosting capacity of electrical distribution networks

View « **Satellite** »:

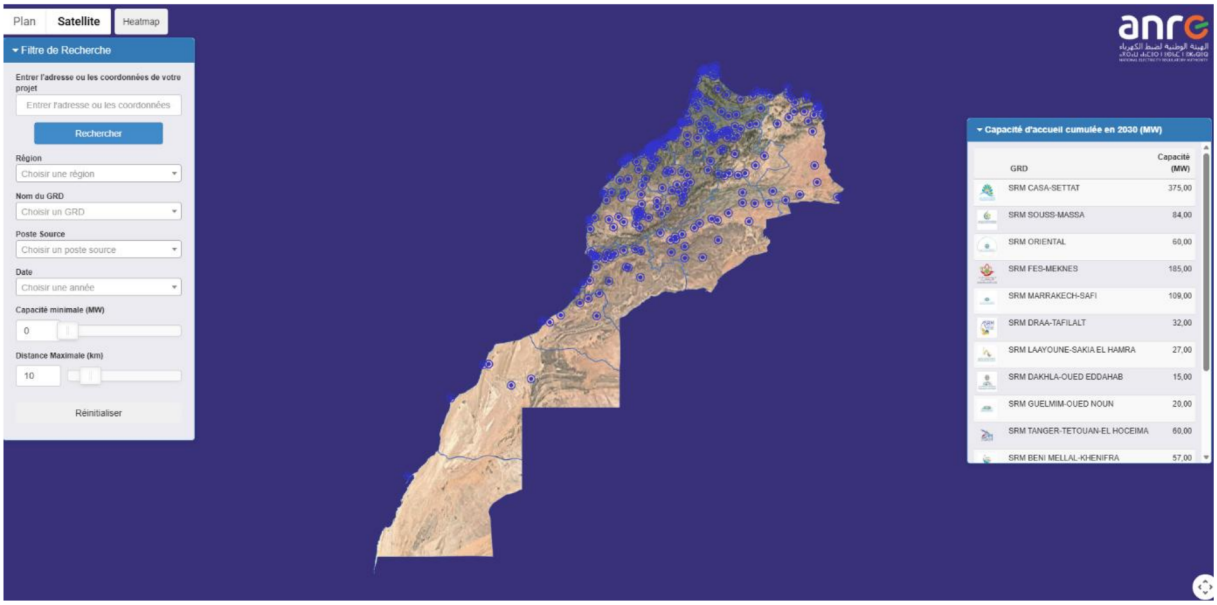


Figure 2: Satellite view of the publication platform for the hosting capacity of electrical distribution networks

View: « Heatmap »: This interface allows users to visualize distribution hosting capacity concentrations at the national level using a color gradient, ranging from red, indicating areas of highest concentration, to light blue, representing areas of lowest concentration. It thus provides potential developers with a decision-support tool to help identify the most suitable locations based on the capacity requirements of their projects.

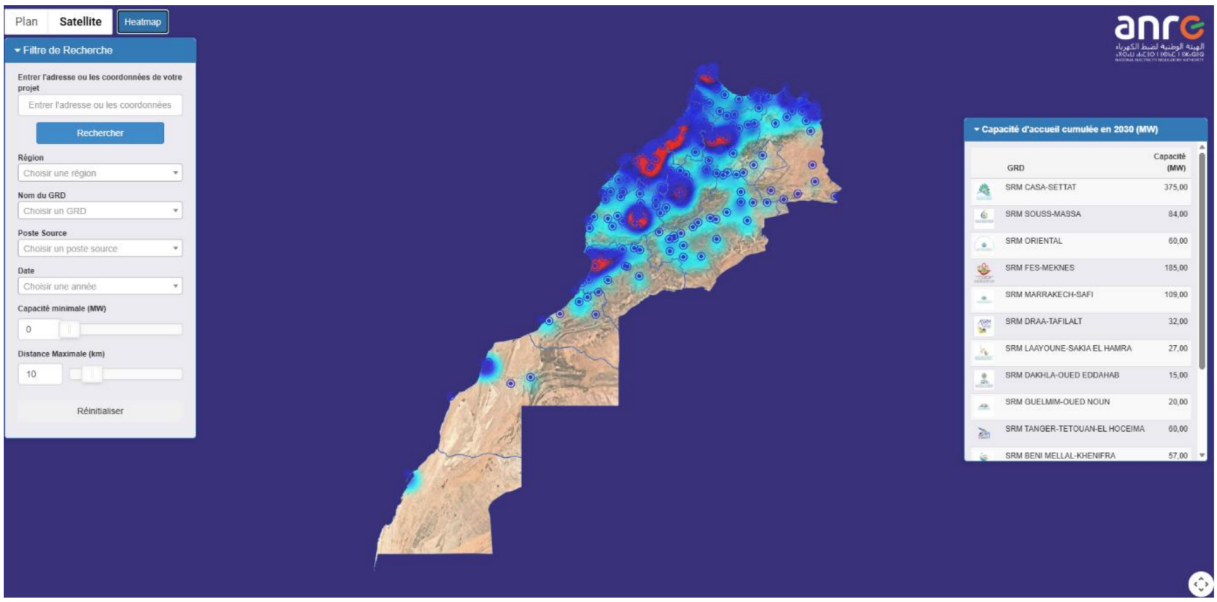


Figure 3: Heatmap view of the publication platform for the hosting capacity of electrical distribution networks

➢ Example of Display at the Regional Level: Rabat-Sale-Kenitra Region

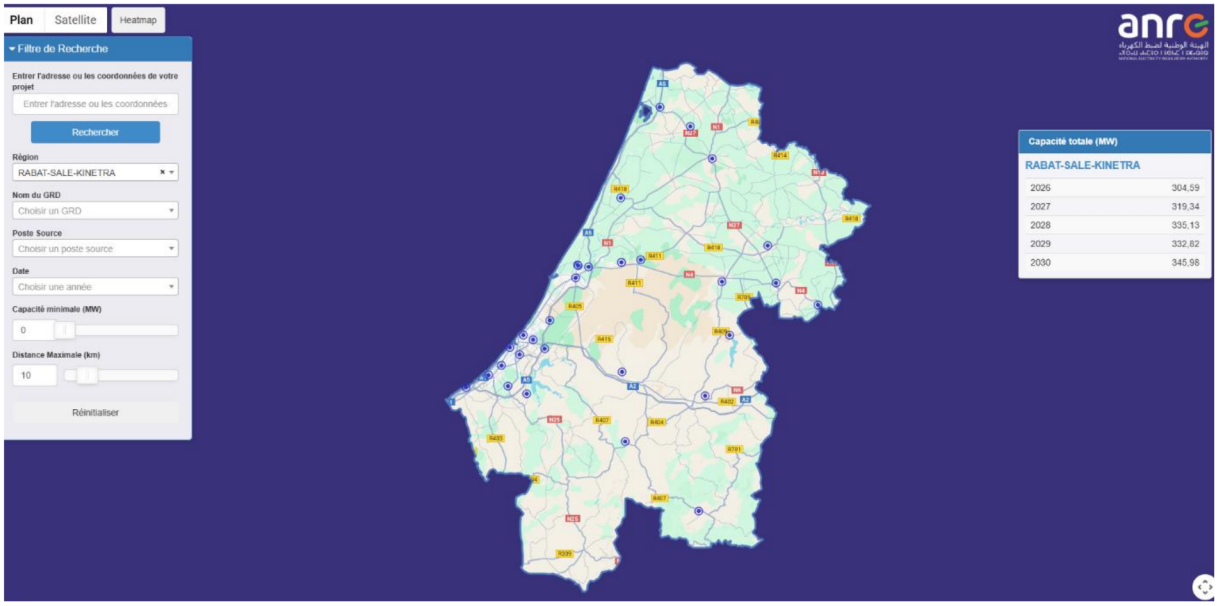


Figure 4: Example of regional display on the publication platform for the hosting capacity of electrical distribution networks

This region is served by two distribution system operators: SRM Rabat-Sale-Kenitra and REDAL. The filter for searching by DSO allows users to visualize the substations of each operator along with the allocated hosting capacities.

➢ **Example of Hosting Capacity Display by Substation: RIAD Substation – REDAL:**

Substation RIAD of REDAL:

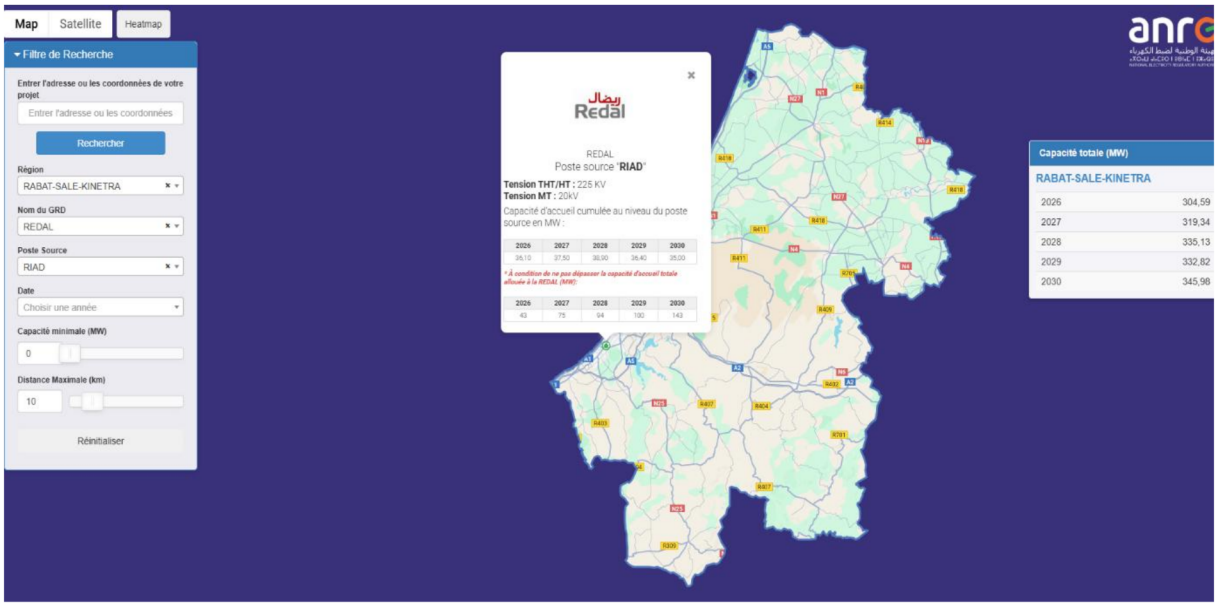


Figure 5: Example of hosting capacity display by source substation in the Rabat–Sale–Kenitra region: RIAD source substation; DSO: REDAL

Sidi Yahya Substation – SRM Rabat-Sale-Kenitra:

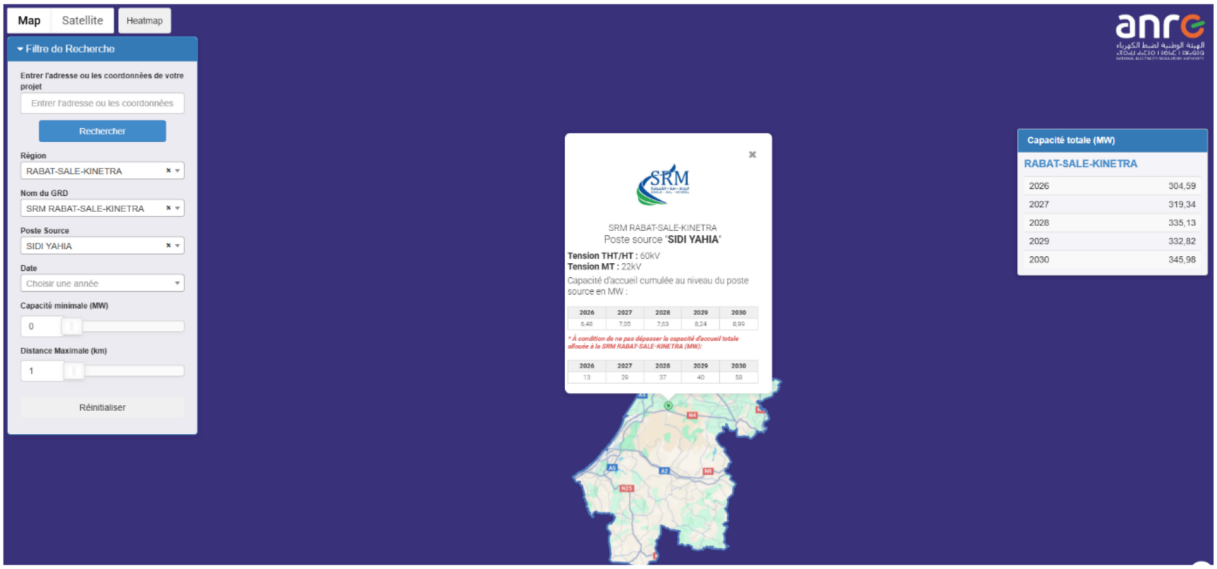


Figure 6: Example of hosting capacity display by source substation in the Rabat–Sale–Kenitra region: Sidi Yahia source substation; SRM: RSK

- **Display of Hosting Capacity Reserved for the Free Market (Law No. 40-19 and Self-Generation):**

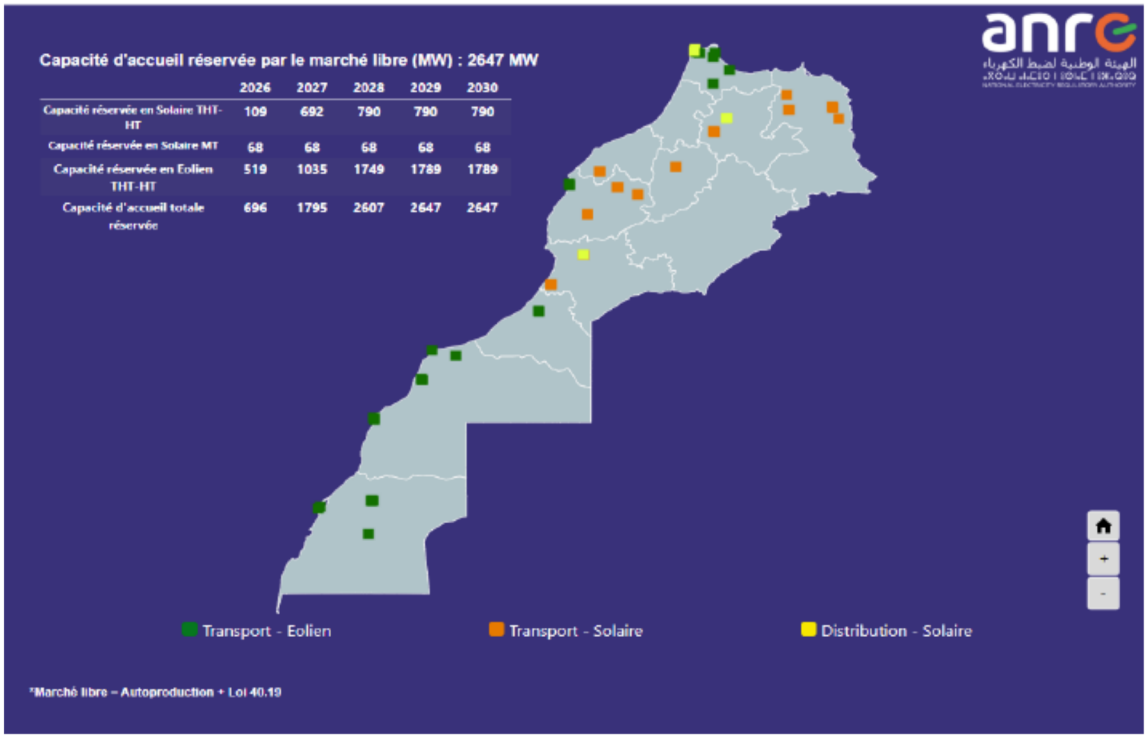
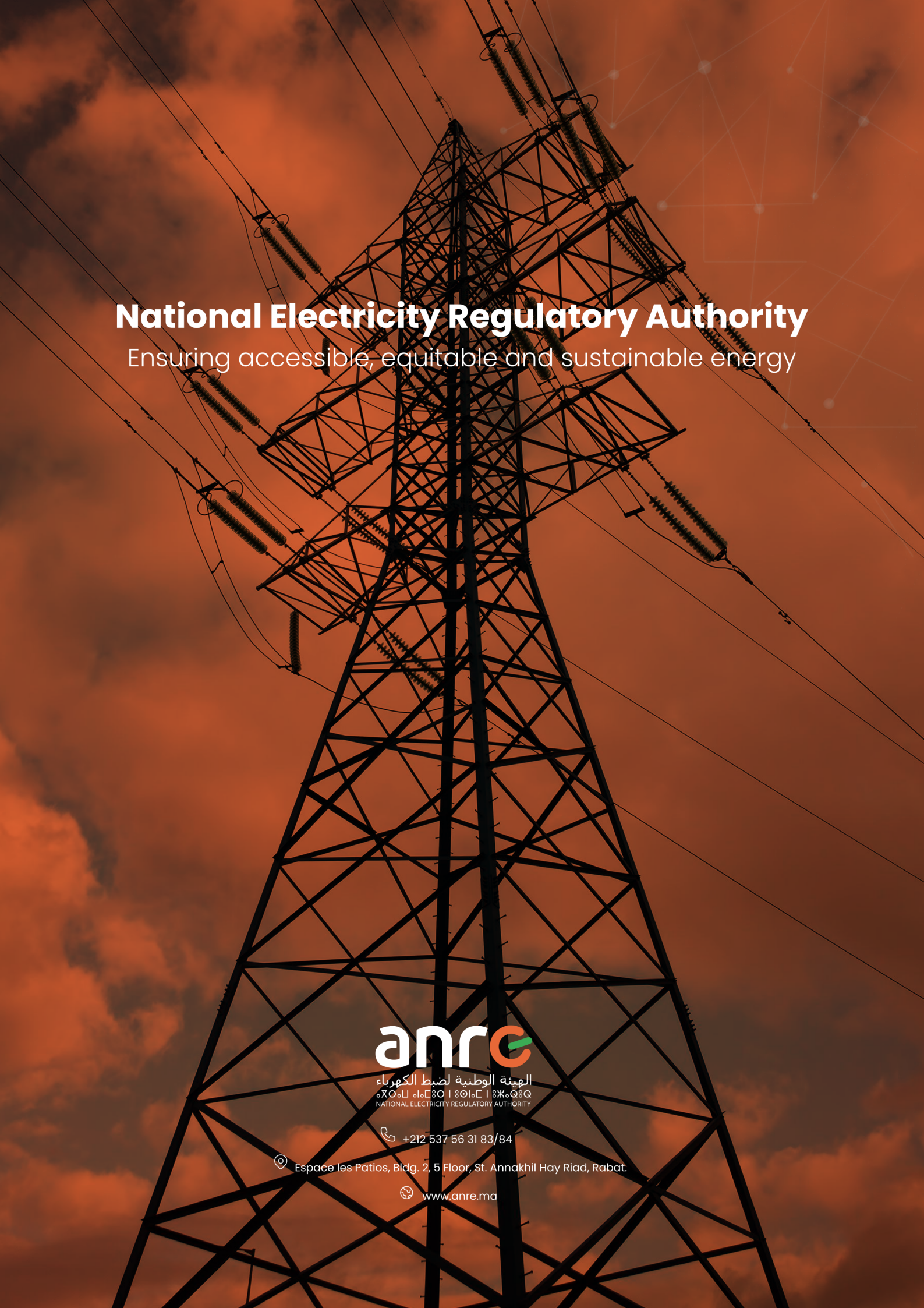


Figure 7: Map displaying of reserved hosting capacities by the free market (MW)



National Electricity Regulatory Authority

Ensuring accessible, equitable and sustainable energy

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