



Co-funded by  
the European Union

# ANNUAL REPORT



*Empowering Mediterranean regulators  
for a common energy future*



# 2023 ANNUAL REPORT

## **ACKNOWLEDGEMENT**

This publication was co-funded by the European Union. Its contents are the sole responsibility of MEDREG and do not necessarily reflect the views of the European Union.

## **WRITTEN AND EDITED BY:**

The MEDREG Secretariat

## **GRAPHIC DESIGN:**

EUROMED Consulting Group

## **FIGURE 1 AND FIGURE 11:**

Created with mapchart.net



Co-funded by  
the European Union

## Contents

PAGE	
5	<b>President's Message</b>
8	<b>About MEDREG</b>
8	• Mission and Objectives
9	• Governance
9	◦ General Assembly
9	◦ Presidency Board
9	◦ Steering Committee
10	◦ Areas of work
12	◦ Members
13	◦ Secretariat
14	<b>A glimpse at the Mediterranean cross-border interconnections</b>
16	<b>Setting the conditions for market integration and energy transition</b>
16	• Consolidating our role as a recognised regulatory platform in the region
16	◦ Supporting Lebanon's Energy and Water Ministry in the creation of a Lebanese electricity regulator
17	◦ Strengthening regulatory cooperation with the Algerian members
18	◦ Welcoming North Macedonia's Regulator among our members
18	• Averting the energy crisis with reliable infrastructure and interconnections
18	◦ Promoting grid modernisation and smart meter deployment
20	◦ Minimising the impact of the energy price surge
21	◦ Presenting the latest electricity market dynamics and infrastructure investments
22	◦ Putting forward winning strategies to tackle security of supply
23	• Decarbonising the energy sector to respond to climate change
23	◦ Addressing decarbonisation and interconnections at the Presidents' level
25	◦ Stimulating energy-efficient behaviour from market actors
27	◦ Gauging hydrogen's dynamics and strategies

PAGE	
27	• Leveraging our Members' capacity for the benefit of consumers
27	◦ Enhancing transmission and distribution networks
28	◦ Reinforcing regulatory compliance and competences
29	◦ Gearing-up for setting just and effective tariffs in Morocco
30	◦ Improving quality of service in Algeria
31	◦ Pushing for greater market competition
34	◦ Boosting consumer confidence
36	<b>Dissemination of our work and messages</b>
36	• Promoting our key reports
36	• Spreading MEDREG's messages at the international level
38	• Shining the spotlight on our most critical work
39	<b>Cooperation with external partners</b>
39	• Keeping our priorities aligned with the EU's energy and neighbourhood policy agenda
40	• Confronting perspectives with the Balkan and European Regional Associations
41	• Steering the energy transition with the UfM stakeholders
41	• Championing energy efficiency and e-mobility with national agencies and intergovernmental organisations
42	• Pushing for innovative regulations with the industry, international institutions, the academia and energy players
44	<b>Looking at 2024: Ramping-up progress towards a more regional and climate-friendly energy regulation</b>
45	<b>List of publications</b>
46	<b>List of events</b>

## President's Message



As we reflect on the past year's accomplishments at MEDREG, it is evident that our collective efforts have yielded remarkable milestones. Our unwavering commitment to fostering a regulatory environment conducive to market integration and energy transition has been instrumental in advancing our association's mission.

In response to the unprecedented challenges facing the energy sector, we have demonstrated resilience and adaptability by equipping our members with tailored regulatory tools to navigate volatile energy prices. Despite these challenges, our dedication to advancing decarbonisation remains steadfast.

Throughout 2023, our initiatives strategically focused on enhancing the resilience of energy networks and infrastructures to mitigate the impacts of the energy crisis. We led efforts in grid modernisation and smart meter deployment, complemented by innovative regulatory measures adopted by our esteemed members, ensuring minimal disruption to consumers amidst rising energy costs.

Collaborative meetings with regional stakeholders, including the Presidents of the energy regulatory authorities, have been pivotal. Together, we have forged a proactive approach to ensuring security of supply, promoting effective strategies to mitigate disruptions and minimise price volatility. This includes advocating for diversification of gas sources, expanding infrastructure, and developing LNG capacities. Additionally, we are actively exploring alternative options such as renewable gases, including biogas and green hydrogen, envisioning the Mediterranean region as a vibrant energy trade hub.

Recognising the potential of green hydrogen in strengthening energy security and accelerating the energy transition, we have established a dedicated Task Force to analyse strategies, drivers, and barriers influencing its development in our region, along with defining the regulator's role in developing this technology proactively.

Decarbonisation remains a primary focus, driving initiatives to enhance energy efficiency across buildings, appliances, and electricity systems. Drawing insights from successful practices among our members, we continue to provide policymakers and stakeholders with actionable recommendations to advance sustainable energy practices.

In our commitment to harmonising the regulatory energy landscape, we collaborate closely with all regional stakeholders, including governments, industry players, and civil society organisations. Together, we strive to create a coherent framework that fosters innovation, investment, and sustainability in the energy sector across the Mediterranean region.

Moreover, our dedication to capacity building remains unwavering. We continue to deliver support activities to enhance regulatory capacity among our members in crucial subjects such as tariffs, quality of service, and transmission and distribution networks.

Looking forward, MEDREG remains committed to advancing energy market reform, infrastructure development, renewable energy integration, and consumer protection. With an ambitious work plan ahead, we aim to leverage knowledge and experience to chart a course towards a sustainable, secure, and thriving energy market in the Mediterranean.

Together, let us continue our journey towards a brighter and more sustainable energy future for all.

Warm regards,

Abdellatif BARDACH  
MEDREG President /ANRE Morocco President

## Message du Président



Alors que nous revenons sur les réalisations de l'année écoulée chez MEDREG, il est manifeste que nos efforts conjoints ont abouti à des réalisations significatives. Notre engagement indéfectible à promouvoir un environnement de régulation favorable à l'intégration des marchés et à la transition énergétique a été crucial pour faire avancer la mission de notre association.

Face aux défis sans précédent auxquels le secteur de l'énergie est confronté, nous avons démontré une résilience et une capacité d'adaptation remarquables en fournissant à nos membres des outils de régulation adaptés pour faire face à la volatilité des prix de l'énergie. Malgré ces défis, notre engagement envers la décarbonisation reste indéfectible.

Tout au long de l'année 2023, nos initiatives ont été stratégiquement axées sur l'amélioration de la résilience des réseaux et infrastructures énergétiques afin d'atténuer les impacts de la crise énergétique. Nous avons dirigé des efforts dans la modernisation des réseaux et le déploiement de compteurs intelligents, complétés par des mesures réglementaires innovantes adoptées par nos estimés membres, assurant ainsi une perturbation minimale pour les consommateurs malgré l'augmentation des coûts énergétiques.

Les réunions collaboratives avec les parties prenantes régionales, y compris les présidents des autorités de régulation de l'énergie, ont été essentielles. Ensemble, nous avons adopté une approche proactive pour garantir la sécurité de l'approvisionnement, promouvant des stratégies efficaces pour atténuer les perturbations et réduire la volatilité des prix. Cela inclut la promotion de la diversification des sources de gaz, l'expansion des infrastructures et le développement des capacités de GNL. En outre, nous explorons activement des alternatives telles que les gaz renouvelables, y compris le biogaz et l'hydrogène vert, envisageant la région méditerranéenne comme un hub énergétique dynamique.

Reconnaissant le potentiel de l'hydrogène vert pour renforcer la sécurité énergétique et accélérer la transition énergétique, nous avons établi une Task Force dédiée pour analyser les stratégies, les moteurs et les obstacles qui influencent son développement dans notre région, en définissant également le rôle du régulateur dans le développement proactif de cette technologie.

La décarbonisation demeure un axe majeur, avec des initiatives pour améliorer l'efficacité énergétique des bâtiments, des appareils et des systèmes électriques. En s'inspirant des pratiques réussies parmi nos membres, nous continuons à fournir des recommandations concrètes aux décideurs et aux parties prenantes pour promouvoir des pratiques énergétiques durables.

Dans notre engagement à harmoniser le paysage de régulation énergétique, nous collaborons étroitement avec toutes les parties prenantes régionales, incluant les gouvernements, les acteurs de l'industrie et les organisations de la société civile. Ensemble, nous œuvrons à créer un cadre cohérent qui favorise l'innovation, l'investissement et la durabilité dans le secteur de l'énergie à travers la région méditerranéenne.

De plus, notre engagement envers le renforcement des capacités reste ferme. Nous continuons à mener des activités de soutien pour améliorer la capacité de régulation de nos membres sur des sujets cruciaux tels que les tarifs, la qualité de service, et les réseaux de transmission et de distribution.

En regardant vers l'avenir, MEDREG reste engagé à faire progresser la réforme du marché de l'énergie, le développement des infrastructures, l'intégration des énergies renouvelables et la protection des consommateurs. Avec un plan de travail ambitieux devant nous, nous visons à utiliser nos connaissances et notre expérience pour tracer la voie vers un marché de l'énergie durable, sécurisé et prospère dans la région méditerranéenne.

Poursuivons ensemble notre chemin vers un avenir énergétique durable pour tous.

Bien cordialement,

Abdellatif Bardach

Président de MEDREG / Président de l'ANRE du Royaume du Maroc

## رسالة الرئيس



تميزت حصيلة السنة المنصرمة بالنسبة لجمعية هيئات ضبط الطاقة في منطقة حوض البحر الأبيض المتوسط بالجهود الاستثنائية التي مكنت من تجاوز وتحقيق الأهداف المرجوة. لقد كان ولا زال التزامنا من أجل بيئة تنظيمية ملائمة للإندماج في السوق والتحول الطاقوي يلعب دوراً محورياً في الإرتقاء بمهمة جمعيتنا.

واستجابة للتحديات الغير المسبوقة التي عرفها القطاع الطاقوي، أثبتنا قدرتنا على التكيف والمرونة وذلك بتمكين أعضاء الجمعية باليات ولوازم تنظيمية مصممة خصيصاً للتعامل مع تغير أسعار الطاقة. وعلى الرغم من هذه التحديات، فإن التزامنا لا زال ثابتاً من أجل تطوير عملية إزالة الكربون.

طيلة عام 2023، ظلت مبادراتنا مركزاً استراتيجياً على تطوير وتعزيز مرونة شبكات الطاقة والبنى التحتية من أجل الحد من تبعات الأزمة الطاقوية. لقد بذلنا جهوداً كبيرة في مواضيع تحديث وتطوير الشبكات ونشر العدادات الذكية، واستكملنا بندابير تنظيمية حديثة ومبتكرة اعتمدها أعضاء الجمعية الموقرون لتقليص الآثار السلبية على المستهلكين إزاء تزايد تكاليف الطاقة.

لقد كانت اجتماعات التنسيق مع الجهات المعنية، بما في ذلك رؤساء هيئات ضبط الطاقة، محورية، وقد قمنا جميعاً بصياغة مقاربة استباقية لضمان الأمن والتزود الطاقوي، وتعزيز الاستراتيجيات الفعالة للهدافة للتخفيف من التقلبات والحد من ارتفاع الأسعار.

وقد تناولنا مواضيع متعددة منها تنوع مصادر الغاز، وتمتين البنى التحتية، وتطوير قدرات الغاز الطبيعي السائل بالإضافة إلى استكشاف خيارات بديلة كالغازات المتجددة، بما في ذلك الغاز الحيوي والهيدروجين الأخضر، مع تصور منطقة البحر الأبيض المتوسط كمرکز حيوي لتجارة الطاقة.

وإيماناً منا بإمكانات الهيدروجين الأخضر في تعزيز أمن الطاقة وتسريع الانتقال الطاقوي، قمنا بإنشاء فريق عمل مخصص لتحليل الاستراتيجيات والعوامل المحركة والتحديات التي تؤثر على تطويره في منطقتنا، بالإضافة إلى تحديد دور هيئة ضبط الطاقة في تطوير هذه التكنولوجيا بشكل استباقي.

وتبقى عملية إزالة الكربون في كونها محور التركيز الأساسي، مما يقود إلى مبادرات لتعزيز كفاءة استخدام الطاقة في المباني والأجهزة وأنظمة الكهرباء. فمن خلال الاستفادة من الممارسات الناجحة بين أعضاء جمعيتنا، فإننا نواصل تقديم توصيات وتوجيهات قابلة للتنفيذ لصانعي السياسات للنهوض بممارسات الطاقة.

وبالتزامن مع توحيد المنظومة الطاقوية، فإننا نتعاون عن كثب وبشكل وثيق مع جميع الجهات المعنية الإقليمية، بما في ذلك الحكومات والجهات الفاعلة في الصناعة ومنظمات المجتمع المدني. ونسعى معاً جاهدين لخلق إطار عمل متماسك يشجع الابتكار والاستثمار والاستدامة في قطاع الطاقة في منطقة البحر الأبيض المتوسط.

علاوة على ذلك، يبقى التفاني في بناء القدرات ثابتاً حيث اننا نواصل تقديم أنشطة الدعم لتعزيز القدرة التنظيمية بين أعضاء جمعيتنا في مواضيع حاسمة مثل الأسعار وجودة الخدمة وشبكات النقل والتوزيع. بناءً على ذلك، تظل جمعية هيئات ضبط الطاقة في منطقة البحر الأبيض المتوسط ملتزمة بتقديم وتطوير سوق الطاقة والبنى التحتية، ودمج الطاقة المتجددة، كما وحماية المستهلك. مع وجود خطة عمل طموحة في المستقبل، فإننا نسعى إلى استغلال المعرفة والخبرة لرسم مسار نحو سوق طاقة مستدامة وأمنة ومزدهرة في منطقة البحر الأبيض المتوسط.

معاً، دعونا نواصل رحلتنا نحو مستقبل أكثر إشراقاً وأكثر استدامة للجميع.

مع أطيب التحيات،

عبد اللطيف برضاش

رئيس الهيئة الوطنية لضبط الكهرباء بالمملكة المغربية (ANRE)

رئيس جمعية هيئات ضبط الطاقة في منطقة البحر الأبيض المتوسط (MEDREG)

# About MEDREG

## Mission and objectives

The Association of Mediterranean Energy Regulators' (MEDREG) mission is to promote a transparent, stable and compatible regulatory framework for all Mediterranean energy actors in order to create a sustainable, secure and non-discriminatory Mediterranean energy market. The Association is based on independent and objective regulatory bodies. Governed by predictable and impartial regulations, energy markets are more likely to attract investment, ensure the efficient use of the system and encourage fair practices towards consumers.



## Governance

### General Assembly

The General Assembly (GA) is the decision-making body of the Association and meets biannually. Among its other prerogatives, the GA approves MEDREG's Action Plan, its annual budget, the reports and the studies prepared by the Working Groups (WGs) and the Secretariat. It also oversees protocols and agreements with external bodies and organisations.

The GA consists of the President, the Vice Presidents, the Chairpersons of the WGs, high-level representatives from among MEDREG's Members and representatives of the MEDREG Secretariat. The European Commission is invited to the GA meetings as an observer.



MEDREG's 36th General Assembly meeting, 5 December 2023, La Valletta | Malta

### Presidency Board

Since 2022, Mr Abdellatif Bardach, President of the Moroccan National Electricity Regulatory Authority (ANRE), has been at the helm of MEDREG's Presidency. He is supported in his mandate by three Vice Presidents: Mr Branislav Prelevic, President of the Board of the Energy and Water Regulatory Agency of Montenegro (REGAGEN); Professor Konstantinos Tsimaras, Board member of the Greek Regulatory Authority for Energy, Waste and Water (RAEWW); and the Permanent Vice President Mr Stefano Besseghini, President of the Italian Regulatory Authority for Energy, Networks and Environment (ARERA).



Mr Abdellatif Bardach  
President



Mr Stefano Besseghini  
Permanent Vice President



Mr Branislav Prelevic  
Vice President



Prof. Konstantinos Tsimaras  
Vice President

### Steering Committee

The Steering Committee coordinates the activities of the Association per the GA's instructions and directions, prepares its work, supervises the implementation of the Action Plan and provides guidance and recommendations. However, the Steering Committee has no decisional powers. It comprises the President, the Vice Presidents, the Chairpersons of the WGs and representatives of the MEDREG Secretariat.

# Areas of Work

The Association has five Working Groups (WGs) composed of representatives from each member regulator and three Task Forces. The WGs are permanent bodies of the Association. They meet at least twice a year and are led by one Chair, supported by two Vice Chairs. The WGs organise their annual agenda based on the principle of subsidiarity.



# Members

MEDREG hosts a **growing number of members**, formed by **28 energy regulatory authorities of 23 Mediterranean countries**. In June 2023, the Association welcomed a new member - **the Energy and Water Services Regulatory Commission of The Republic of North Macedonia**.

ALBANIA		JORDAN	
ALGERIA		LEBANON	
BOSNIA AND HERZEGOVINA		LIBYA	
CROATIA		MALTA	
CYPRUS		MONTENEGRO	
EGYPT		MOROCCO	
FRANCE		NORTH MACEDONIA	
GREECE		PALESTINE	
ISRAEL		PORTUGAL	
		SLOVENIA	
ITALY		SPAIN	
		TUNISIA	
		TÜRKIYE	

# Secretariat

The MEDREG Secretariat comprises nine experts representing seven countries from the region. The Secretariat develops and implements MEDREG's strategy in close coordination with the members, enhancing MEDREG's accountability and institutional cooperation in the Mediterranean energy sector. The Secretariat is responsible for managing and developing the Association's activities, guaranteeing continuous support to the President, Vice Presidents and all members.

The Secretariat is based in Milan, supported by ARERA.



Mr Hasan Ozkoc  
Director



Mr Bardhi Hoxha  
Deputy Director



Ms Genta Sinani  
Finance and Human  
Resources Officer



Ms Daphné Lacroix  
Communication  
Manager



Ms Valentina Pelosi  
Events and  
Communication  
Officer



Mr Lamine Zitouni  
Electricity Expert



Mr Tony Gebrayel  
Policy Expert



Mr Omar Raafat  
Gas Expert



Ms Tika Svanadze  
Office Secretary

# A glimpse at the Mediterranean cross border interconnections





# Setting the conditions for market integration and energy transition

## Consolidating our role as a recognised regulatory platform in the region

### Supporting Lebanon's Energy and Water Ministry in the creation of a Lebanese electricity regulator

As Lebanon has long envisioned the creation of an Electricity Regulatory Authority (ERA) to regulate the sector and restructure the electricity market, the Ministry of Energy and Water prepared an organisational structure of the board members and is in the process of recruiting them. **His Excellency Dr Walid Fayad, Minister of Energy and Water in Lebanon**, invited **MEDREG President Mr Abdellatif Bardach to Beirut** to share his views and advice on the process.

During the visit, which took place on 15–16 May, a committee formed by H. E. Minister Fayad **discussed and evaluated the applications for the board members** of the soon to be established ERA with the MEDREG Delegation.

The committee advised the Minister to reopen applications to have a bigger pool of applicants and to advertise the openings on all platforms to attract additional experienced professionals. Based on the recommendation, the Minister reopened the applications for those interested.

His Excellency Minister  
Dr. Walid Fayad



*"The Ministry of Energy and Water is grateful for the support and insights of our partner MEDREG, which brings years of experience and best practices in the setup of energy regulators, utility corporatisation as well as private sector participation."*

*"We have made good progress in the work towards establishing an independent electricity regulator authority, "ERA", in our country. This progress is the fruit of the welcomed cooperation and the needed support of MEDREG: the MEDREG President, Vice Presidents and the Director were fully engaged with us in adopting a transparent and effective way to review the whole process to set up the ERA, and these efforts are much appreciated."*



His Excellency Minister Dr Walid Fayad and MEDREG President Mr Abdellatif Bardach, 15 May 2023, Beirut | Lebanon

## Strengthening regulatory cooperation with the Algerian members

With the view of **reinforcing our support to our Algerian members**, the MEDREG Secretariat visited the **Commission de Régulation de l'Electricité et du Gaz (CREG) and the Autorité de Régulation des Hydrocarbures (ARH)** in Algiers in June 2023.



Mr Hasan Ozkoc and HE Mohamed Arkab, 21 June 2023, Algiers | Algeria

The **Presidents of AHR and CREG, Mr Rachid Nadil and Mrs Wassila Atimene**, both agreed that through capacity building and knowledge sharing, MEDREG can **respond to their needs** as well as **help them reach the targets of energy transition and market reform**.

Moreover, the MEDREG Delegation had the privilege to meet with the **Minister of Energy and Mines, HE Mohamed Arkab**, who **emphasised the need to further push the coordination of the energy markets' legal frameworks at the regional level** to progress towards their gradual integration, inviting the Association to pursue its initiatives in that direction.

This mission to Algiers held significant relevance in the context of **Algeria's pivotal role in Europe's energy security** during the recent winter season. Algeria, being a **major gas exporter**, ensured a stable and reliable supply to meet the energy demands of European countries. The exchanges held during the visit also **explored Algeria's potential as a reliable partner to Europe and southern Mediterranean neighbouring countries**.

The Algiers mission was completed by a visit to **the European Delegation to Algeria**, which reiterated the **importance of the collaboration between MEDREG and the European Union (EU) in advancing energy cooperation and regulatory harmonisation**.



ARH, CREG and the MEDREG Secretariat representatives, 21 June 2023, Algiers | Algeria

### Welcoming North Macedonia's Regulator among our members

MEDREG's 35th GA welcomed a new member – the Energy and Water Services Regulatory Commission of The Republic of North Macedonia, thereby expanding the geographic scope of the Association and bringing its number of members to 28. By extending its membership to Mediterranean neighbouring countries, the organisation intends to foster a more inclusive approach to address regional challenges and exert a greater collective influence to shape energy policies, advocate for regulatory convergence, and guide the energy transition in the Mediterranean region.

## Averting the energy crisis with reliable infrastructure and interconnections

### Promoting grid modernisation and smart meter deployment

#### A. Analysing and recommending what it takes to develop smart meters

Smart meters play a pivotal role in enabling efficient energy management and consumption, while smart grid technologies present high potential for improved grid reliability, enhanced renewable energy integration and increased energy efficiency.

For this reason, MEDREG delved into the transformative impact of smart meters and smart grid technologies in the Mediterranean region.

In a report titled 'Smart Meters and Smart Grid Integrations Requirements', we address key requirements for successful deployment, stressing the importance of establishing robust communication infrastructure, adhering to data privacy and security standards and developing interoperability protocols.

We also advocate for regulatory frameworks that facilitate fair competition, consumer protection and cost-effective implementation. Additionally, we analyse the challenges and opportunities associated with smart meter and smart grid deployments, exploring technical, financial, and regulatory hurdles that need to be overcome for widespread adoption. Notably, we highlight the potential for job creation, innovation and economic growth resulting from the integration of these technologies. The report further provides valuable insights from case studies and best practices in various Mediterranean countries, analysing successful initiatives and emphasising lessons learned and key success factors. With this report, we aim to guide policymakers, regulators and stakeholders in making informed decisions for the successful deployment and integration of these transformative technologies.

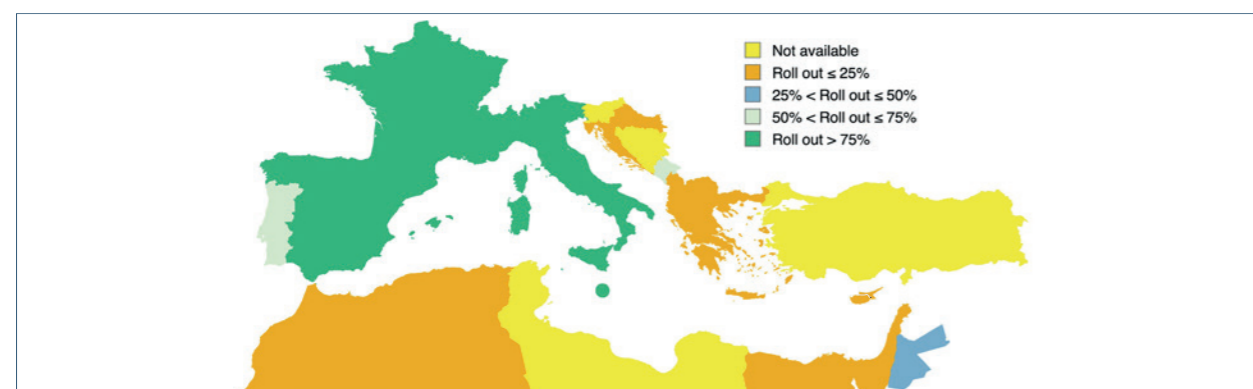


FIGURE 1: Smart meters' state of play in the Mediterranean region

### B. Regulatory frameworks supporting smart meter deployment: where do we stand?

In MEDREG's EU member countries: Smart meter deployment varies, with many nations implementing comprehensive strategies. Regulatory frameworks often emphasise interoperability, data privacy and consumer protection. Countries like Italy, Spain and France have achieved widespread smart meter adoption, while others are in various stages of deployment, guided by EU directives promoting energy efficiency and grid modernisation.

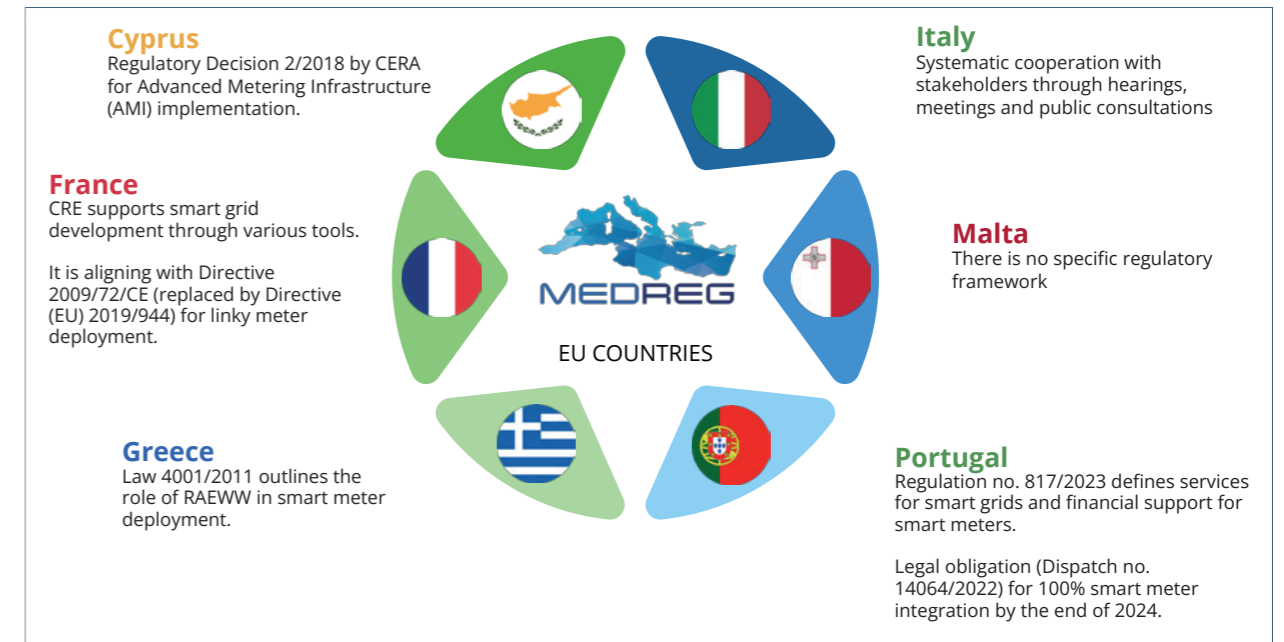


FIGURE 2: Regulatory frameworks supporting smart meter deployment in EU countries

In the Balkan countries: Diversity in regulatory approaches reflects the unique challenges and priorities each country faces in their journey towards modernising their energy infrastructure through smart metering and smart grid technologies.



FIGURE 3: Regulatory frameworks supporting smart meter deployment in the Balkan countries

In the southern shore countries: Some countries, such as **Algeria**, do not have a specific regulatory framework regarding smart meter development. In other countries, there are laws in place that include the deployment of smart meters.



FIGURE 4: Regulatory frameworks supporting smart meter deployment in the southern shore countries

**C. Driving smart grid and smart meter technologies through market incentives and demand response programmes**

As per the experiences of MEDREG members, the adoption of smart grid and smart meter technologies is **facilitated by market incentives and demand response programmes**. The design of these tools is tailored to each country’s specific needs. Key steps in implementation include a **market-driven approach without public subsidies**, thereby fostering a cost-effective electricity market for a sustainable power network. **Demand response mechanisms** play a vital role in **managing peak demand and balancing loads**, which are particularly crucial for **integrating renewable energy**.

In **Italy**, market incentives played a pivotal role in the early smart meter deployment phase, transitioning to a regulatory mandate for smart metering. Market incentives in **Lebanon** involve free meter replacements and a net metering scheme, while **Slovenia** employs various programmes and incentives for both consumers and businesses. Overall, **market incentives and demand response programmes synergise to drive technology adoption**, with the large-scale rollout of smart meters and smart grids considered essential for introducing flexibility markets. In regions without such programmes, comprehensive economic studies are deemed crucial to demonstrate the benefits of and encourage informed decision-making about the adoption of smart grid and smart meter solutions.

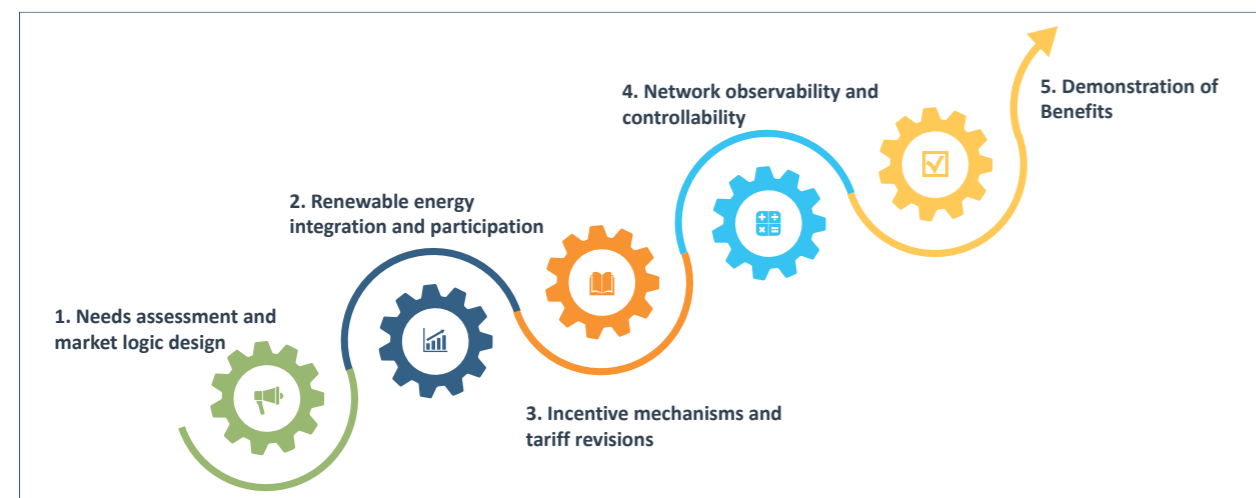


FIGURE 5: Market incentives and the implementation of demand response programmes

**Minimising the impact of energy price surge**

Building on an initial assessment of the energy price surge carried out in 2022, we delved into the recent developments in the energy sector, informing on the **factors contributing to the ongoing crisis**. In a comprehensive report, we highlight the **immediate challenges faced by the impacted countries**, as well as the **broader repercussions on inflation** in several Mediterranean countries, underscoring the multifaceted economic implications stemming from the surge in energy costs.

The report identifies three distinct categories of impact, as illustrated in Figure 6, shedding light on the diverse effects felt across the region due to the energy price surge.

By examining the complexities of the crisis, the report aims to offer a **strategic understanding** of the situation. Additionally, it outlines **future trends and perspectives**, with a focus on the trajectory of gas prices throughout 2023 and 2024, offering valuable **recommendations**. Understanding these evolving dynamics is essential for stakeholders to **navigate the energy landscape effectively and formulate informed strategies** for sustainable energy management in the Mediterranean region.

This report serves as a **meaningful resource for policymakers, industry stakeholders and regulatory bodies**, guiding efforts to ensure a resilient and affordable energy future for the Mediterranean region.

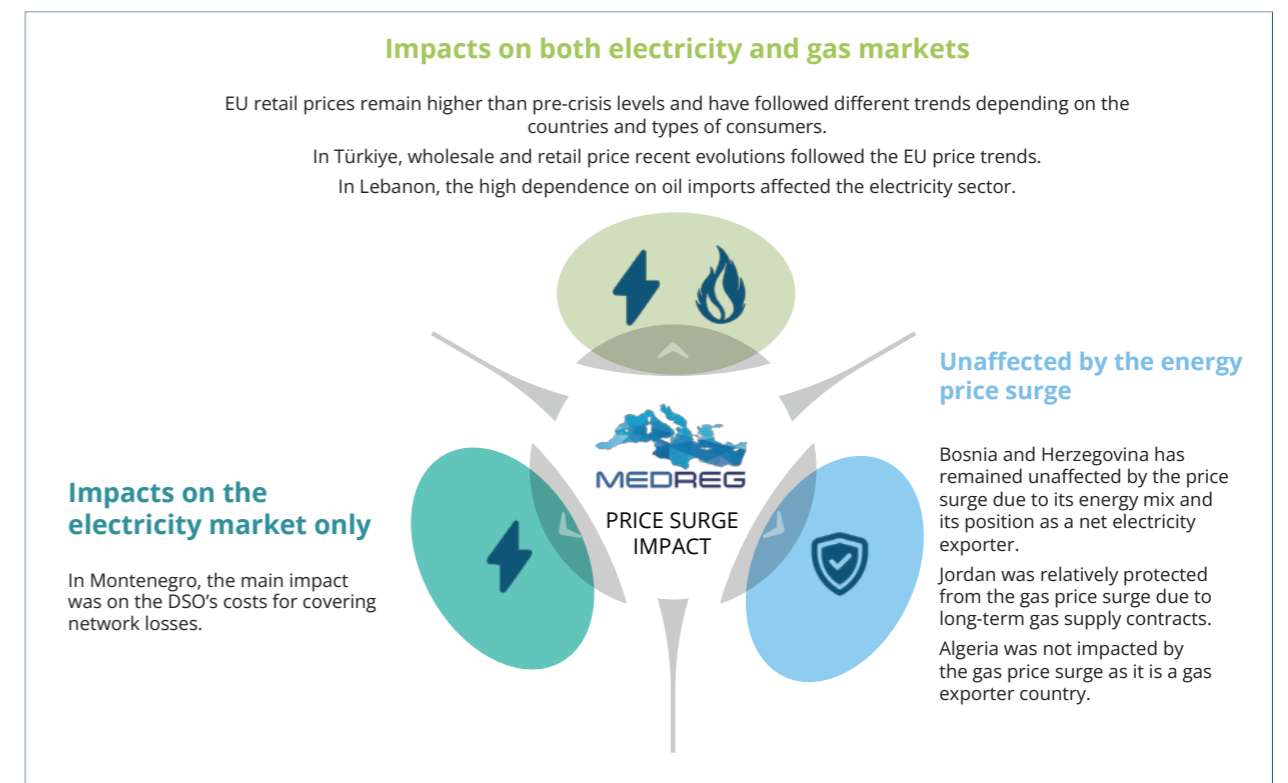


FIGURE 6: Price surge impact in MEDREG's countries

**Presenting the latest electricity market dynamics and infrastructure investments**

In order to reinforce grid resilience, we presented the **latest electricity market dynamics and infrastructure investments in the Mediterranean region**, which emerged from a MEDREG report published earlier in the year, during a workshop held in Milan in October 2023. There, 50 participants, together with highly knowledgeable contributors, **reflected on the evolution of the electricity market regulation after the crisis**, illustrated by some **case studies**, including an overview of the electricity price surge. In addition, among other concrete infrastructure projects considered for investments, the **Projects of Common Interest (PCI)**, the **Projects of Mutual Interest (PMI)** and the **Masterplan of Mediterranean Interconnections 2022** were presented.



MEDREG's Workshop on the latest electricity market dynamics and infrastructure investments, 24 October 2023, Milan | Italy

### Putting forward winning strategies to tackle security of supply

In recent years, the global energy landscape has undergone profound changes due to fluctuating demand patterns, geopolitical tensions and a growing emphasis on sustainable energy sources. This transformation coincided with a significant gas crisis, characterised by a **surge in prices** and **concerns about the stability of natural gas supply**.

In order to **help policymakers and industry stakeholders** navigate the impact of the crisis and **equip them to respond to the crisis and minimise its impact**, we studied the **strategies implemented to address the security of supply issues during the gas crisis** in MEDREG countries. Indeed, the report **proposes solutions** and **provides crucial insights** to foster a resilient and secure energy future.

It also presents an **overview of the Mediterranean region's gas markets**, detailing **applications by country, distribution across sectors** and **implications for energy security and sustainability**. After all, the Mediterranean region – historically reliant on fossil fuels, particularly natural gas – has been pivotal in the global energy landscape.

	Electricity Generation	Heating	Industrial	Household	Transport
Albania	There is no current gas market in the country, however, there are plans for future gas market implementation.				
Algeria	X	X	X	X	X
Bosnia and Herzegovina		X	X	X	X
Croatia	X	X	X	X	X
Cyprus	For the future, there are plans for short-term electricity generation for conventional units and long-term industrial use.				
Egypt	X	X	X	X	X
France	X	X	X	X	X
Greece	X	X	X	X	X
Israel	X	X	X	X	X
Italy	X	X	X	X	X
Jordan	X		X	X	

	Electricity Generation	Heating	Industrial	Household	Transport
Lebanon	X				
Malta	X				
Portugal	X	X	X	X	X
Spain	X	X	X	X	X
Türkiye	X	X	X	X	X

FIGURE 7: Overview of natural gas usage by sector in the Mediterranean region

The report reveals that **most of the countries utilise natural gas** within their energy mix for **electricity generation, heating or industrial purposes** or for **household or transport sectors**. The region's dependence on natural gas presents both advantages and challenges. On the one hand, natural gas is a cleaner-burning fossil fuel than coal and oil, which can contribute to reduced greenhouse gas emissions when used efficiently. On the other hand, this dependence makes the region vulnerable to fluctuations in global gas prices and geopolitical tensions affecting gas supply routes. However, the latter does not apply to all countries, notably **Algeria**, which is a gas producer and exporter and uses natural gas in the transport section. Meanwhile, Jordan has future intent to use natural gas for household purposes.

The natural gas market in the Mediterranean region, which encompasses both net importers and net exporters, reveals intriguing dynamics. The report explores **the region's extensive reliance on natural gas**, delving into the **legal framework governing the security of supply obligations and the challenges surrounding** this vital energy source.

The recent gas crisis serves as a stark reminder of vulnerabilities faced by certain countries, emphasising the **need for a proactive approach to security of supply** concerns and **effective strategies to mitigate disruptions and minimise price volatility**.

Besides studying available measures and tools to address these concerns, the report **showcases how some countries have diversified gas sources, expanded infrastructure and enhanced LNG capacities to bolster energy security. Liquefied natural gas emerges as a pivotal player in diversifying supply sources and improving flexibility**.

Amid a global shift towards environmental sustainability, the report underscores the significance of prioritising **energy efficiency** in the gas sector. The promotion of energy-efficient technologies not only aligns with reducing energy consumption but also contributes to the region's broader sustainability goals.

In the quest for a secure energy future, the Mediterranean region is urged to consider alternative options, including **renewable gases like biogas**. Additionally, **exploring renewable energy sources and deploying energy storage solutions** can diversify the energy mix, reducing reliance on gas during crises and advancing sustainability objectives.

Looking to the future of the Mediterranean gas market, the region's potential for growth and transformation becomes increasingly evident. Beyond immediate security concerns, the Mediterranean could evolve into an **energy trade hub**, leveraging its strategic location at the crossroads of Europe, Asia and Africa.

Furthermore, the report highlights **ongoing efforts**, such as new **gas discoveries** in the Eastern Mediterranean and **potential explorations in Algeria, Egypt and Türkiye**, which have the potential to reshape the region's energy landscape, fostering stability and cooperation through exports.

To chart a path forwards, the report advocates for a **clear country-specific strategy**, outlining **short-, medium- and long-term plans**.



# Decarbonising the energy sector to respond to climate change

## Addressing decarbonisation and interconnections at the Presidents' level

In June 2023, the Presidents of 12 National Regulatory Authorities (NRAs) from Mediterranean countries convened in Rhodes, Greece to address the barriers and challenges to the energy transition in the Mediterranean region as well as share successful projects and best practices.

During a closed-door roundtable, the Presidents exchanged national perspectives on these critical issues in an open and genuine manner. They expressed the **shared desire to harness their common understanding** and regulatory expertise for specific areas, in order to **optimise interconnections, foster energy trade, support the decarbonisation of the energy sector and increase the security of supply** in the region.



The Presidents of 12 National Regulatory Authorities (NRAs) from the Mediterranean (14 June 2023, Rhodes, Greece)



Associate Professor **Athanasios Dagoumas**, President of the Greek Regulatory Authority for Energy, Waste and Water

*“The Greek Regulatory Authority for Energy, Waste and Water is grateful that MEDREG is an important pillar of the European Union’s policy on enhancing regional cooperation, strengthening institutional capacity and facilitating energy systems and market integration. Regulatory developments are strongly related with network developments, facilitated by numerous funding initiatives, which both enable the exploitation of resources in [the] Eastern Mediterranean and North Africa and the development of networks for meeting demand needs in Europe. MEDREG has a crucial role as a regulatory and institutional bridge in the region.”*



Mr **Abdellatif Bardach**, MEDREG President

*“The Mediterranean energy market has the potential to attract greater investment from around the world, given its extent and interconnection predisposition. Moreover, our region holds enormous potential in terms of renewable energy and new vectors, particularly green hydrogen. In this perspective, only a fully independent energy regulator can ensure the transparency and the neutrality needed to exploit this valuable opportunity.”*

## Stimulating energy-efficient behaviour from market actors

The energy market of the Mediterranean region is characterised by high energy consumption in buildings, inefficient industrial energy use and reliance on imported energy. However, opportunities exist for improvement through the adoption of energy-efficient technologies, implementation of policies and regulations and use of renewable energy sources. In this context, we explored **mechanisms and tools for enhancing energy efficiency**, covering both supply and demand sides; **consumer awareness**; and **energy efficiency in buildings and appliances**. We also examined the **implementation of energy efficiency measures and labelling within electricity systems**, featuring **case studies** and providing **recommendations** for policymakers and stakeholders to enhance energy efficiency implementation. Our report will feed the discussion of the UfM’s Renewable Energy and Energy Efficiency (REEE) Platform.

### A. Incentivising greater efficiency in network access tariffs

In the realm of network access tariffs, National Regulatory Authorities (NRAs) possess the authority to employ a variety of mechanisms to incentivise market actors towards greater efficiency. One prevalent tool used in multiple Mediterranean countries is the application of **cost recovery principles** to network access tariffs. The implementation of these principles varies from one country to another, as illustrated in Figure 8. Our report identifies several **regulatory models used to calculate allowed revenues**.

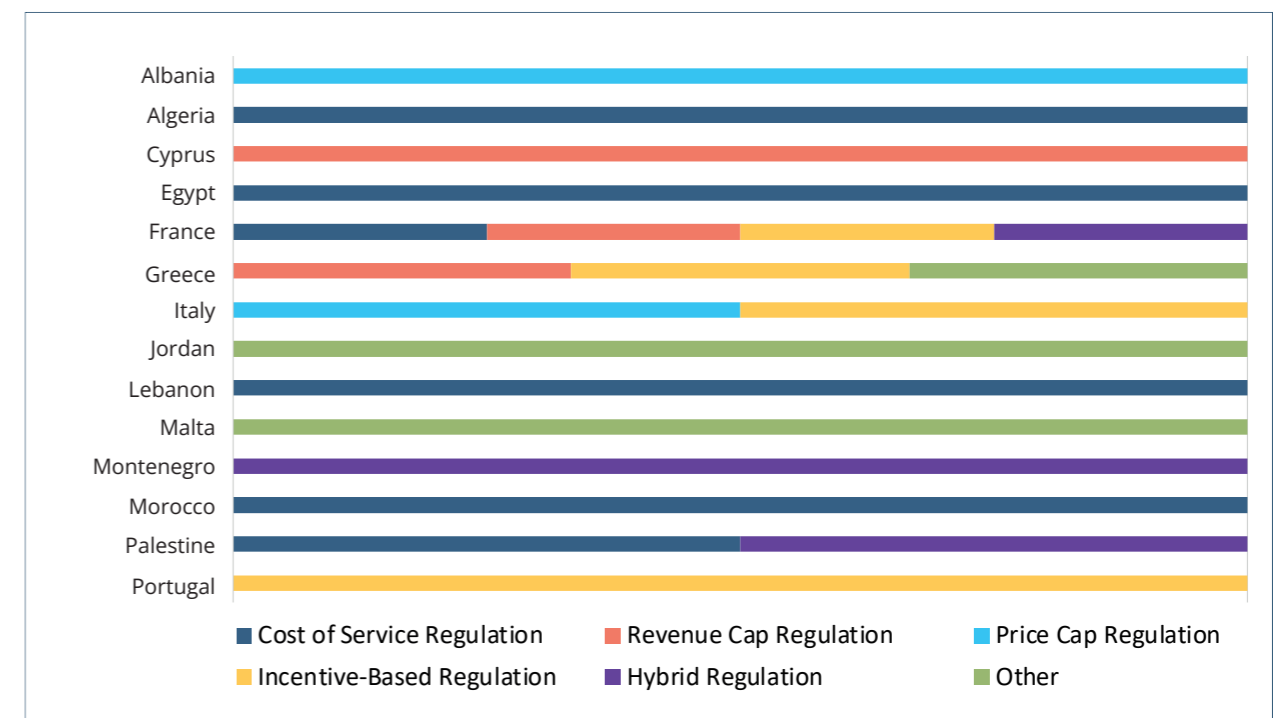


FIGURE 8: Network access tariff regulation in the Mediterranean region

### B. Encouraging energy-efficient consumer behaviour

We also tackled the **demand side of energy efficiency**, which focuses on reducing energy consumption through changes in consumer behaviour and preferences across various sectors, including **transport, building, industry and agriculture**. Key mechanisms include **energy labelling** to inform consumers about the energy efficiency of products, **smart building appliances, energy audits** for identifying waste and suggesting improvements, **public education campaigns** to raise awareness and **energy efficiency standards** for setting **minimum product requirements**. **Financial incentives**, such as rebates or tax credits, are also employed to encourage the adoption of energy-efficient technologies, offsetting

upfront costs and making the technologies more accessible to consumers. These tools collectively aim to increase awareness, promote informed decision making and ultimately reduce energy consumption and greenhouse gas emissions.

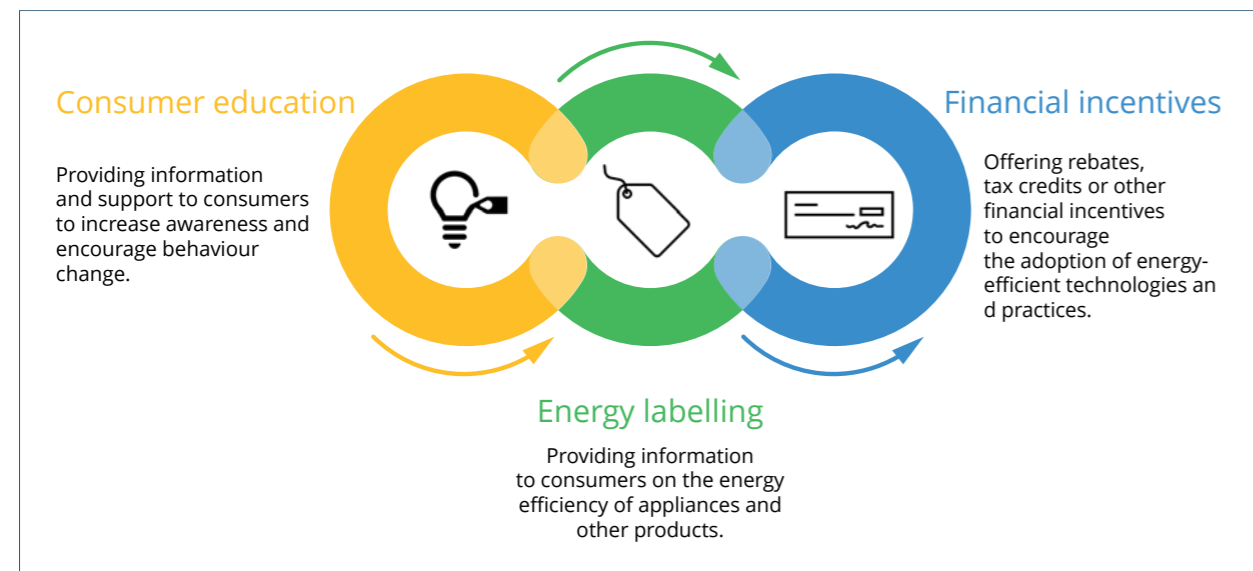


FIGURE 9: Demand-side mechanisms

Taking their physical gathering in Lisbon in September as an opportunity to finalise their report, and at the initiative of the Portuguese member the Energy Services Regulatory Authority (ERSE), the RES WG members visited the **Frielas Water and Waste Treatment Plant (WWTP)** in Loures, near Lisbon. The plant uses sludge to produce biogas through innovative processes that promote a circular energy economy. The plant project is a result of the collaboration between the Dourogás Group (a group acting in the energy sector) and Águas do Tejo Atlântico (a water company that manages the WWTP).

The Portuguese example illustrates the important role played by biogas in the decarbonisation of the energy sector, particularly in the transport sector, where the use of biogas is more efficient when used directly as a fuel for transportation rather than generating electricity from it. The production of biogas is relatively straightforward, particularly in the water and waste treatment sectors, leading to a reduction in carbon footprint and energy conservation.



Site visit of MEDREG's RES WG to the Frielas Water and Waste Treatment Plant, 27 September 2023, Loures | Portugal

## Gauging hydrogen's dynamics and strategies

Recognising hydrogen's potential as a clean energy carrier, especially when produced through renewable sources like wind and solar power, MEDREG's GA in June 2023 established a **Green Hydrogen Task Force**. This move shows the strategic importance MEDREG gives to hydrogen in the pursuit of sustainable and clean energy solutions, which aligns seamlessly with the global and regional agenda to reduce reliance on fossil fuels.

The Green Hydrogen Task Force will be working under the **GAS WG, led by our Moroccan member ANRE**, whose president currently holds MEDREG's presidency, given the country's commitment to fostering sustainable energy practices.

Some **preliminary work** was carried out to **gauge the insights of the regulators** in the region on the topic, **forming the basis for an upcoming report**. The planned study will **shed light on the dynamics and patterns prevailing in the region**, providing a **comprehensive overview of the state of play concerning strategies and roadmaps, renewable potential, current and future applications of hydrogen** and the significant **drivers and barriers** influencing the development of green hydrogen in the Mediterranean region.

The report will constitute a valuable resource for stakeholders, policymakers and industry players, offering nuanced insights into the regional landscape and paving the way for informed decision making.

Beyond the report, the task force is gearing up to organise a series of **workshops and webinars**. These interactive sessions will provide a **platform for in-depth discussions, knowledge sharing and collaboration among experts**, further enriching the collective understanding of green hydrogen dynamics within the region.

Additionally, MEDREG is at the forefront of the **International Confederation of Energy Regulators (ICER)'s Hydrogen Virtual Working Group**. This role underscores the Association's dedication to fostering collaboration and sharing best practices, further reinforcing its position as a platform of dialogue. This collective effort is needed to drive the advancement of hydrogen-related endeavours on both national and regional fronts.

## Leveraging our members' capacity for the benefit of consumers

### Enhancing transmission and distribution networks

From 20 to 22 June 2023, MEDREG welcomed **twenty-four regulatory staff from MEDREG members for a three-day training programme** in Milan to explore the regulation of transmission and distribution systems in EU countries.

Considering the crucial role played by transmission and distribution networks in the path to energy transition, this topic appeared of utmost relevance. Countries in the EU have been heavily investing in their networks, both nationally and internationally, in an attempt to increase the connections between inner regions and with other countries to enhance energy trading.

These networks need to be under constant renovation and enhancement to integrate as many renewable sources as possible while mitigating their intermittency.

The training programme equipped our members to **enhance their transmission and distribution networks and acquainted them with the EU case**. By exchanging expertise, the members benefited from their peers' experience, adapting it to their own scenarios and retrofitting the developed plans to match the needs of each country's energy market.

The programme participants **explored** topics ranging from **contracting models and terms to infrastructure investments and regulations; codes, tariffs and smart metering; and gas market balancing and interoperability regulation**.

The programme, which featured a wide range of experts and combined **theoretical lectures with practical group works**, was rated 'excellent' by 67% of the participants and 'good' by the rest.



MEDREG training on regulation of transmission and distribution systems in EU Countries, 20–22 June 2023, Milan | Italy

### Reinforcing regulatory compliance and competences

MEDREG members deepened their enforcement capacities in a training hosted by the French Regulator CRE in Paris in October 2023. Titled 'Implementation of Regulations – From Legislative Frameworks to Tools of Policy Execution', the training answered the question of **how to take the regulations from the legislative world to the applied world**.

**Twenty-four participants** were introduced to the **different facets of policy application**, based on our members' **experiences**, from the development of the regulator and its **strategies to the monitoring of different parameters in the market**.

First-rate experts from the industry and the European Commission explained **how to embrace new texts and tools, while the French Gas Transmission System Operator (TSO) and Electricity Distribution System Operator** exposed how they comply with the regulations and the procedure.

The training was deemed 'excellent' or 'good' by 85% of the participants, who indicated that they would apply the knowledge learned and found the course highly insightful and comprehensive.



MEDREG training on regulatory compliance and enforcement, 11–12 October 2023, Paris | France

### Gearing-up for setting just and effective tariffs in Morocco

As our Moroccan member ANRE was entering a critical phase of its tariff project and was set to implement a cost reflective methodology developed for the TSO, it sought to leverage its tariff-setting capabilities to define a robust methodology for distribution tariffs and further refine the tariff structure for transmission.

Responding to that need, MEDREG set-up a **study visit for ANRE to the Turkish Energy Market Regulatory Authority (EMRA)**, whose market is similar to Morocco's, making the **two regulators well paired to exchange best practices**.

Thus, over two days in October 2023 in Ankara, ANRE members gained knowledge **on financial parameters, tariff structure, revenue calculation methods and efficient accounting systems**.

These insights deepened ANRE's understanding of the methodologies and strategies required to establish accurate and effective tariff frameworks for the transmission and distribution networks in Morocco. It is now **well equipped to establish a clear, transparent and easy-to-implement methodological framework for the calculation of the two tariffs**, giving tariff setting the central position that ANRE enshrined in its mandate.



ANRE's study visit to EMRA on tariffication of networks, 4 October 2023, Ankara | Türkiye

ANRE's Delegation



*"We extend our sincere appreciation to MEDREG for facilitating this study visit, which has played an instrumental role in our endeavour to refine our tariff frameworks. The close collaboration between ANRE and MEDREG has indeed evolved into a valuable platform for sharing technical expertise and real-world experiences."*

## Improving quality of service in Algeria

As CREG prepared to **review the performance indicators** of the **quality of service**, including their relevance and measurement, the regulator saw an opportunity to improve both the reporting and auditing processes.

However, CREG was **facing several challenges** while performing this job, for example, the separation of activities had not been fully completed.

To support our member in this process, MEDREG organised a two-day **study visit to the Turkish regulator EMRA** in Ankara, who further corroborated the **concepts of performance improvement commitments** and **how to choose the performance indicators and goal setting procedures**. The two entities focused on the **connection procedure; complaint management** and KPIs, **information exchanges** between the regulator and the distribution company, the conditions for **awarding and withdrawing distribution concessions**, the elaboration and approval of **performance commitments for distribution operators**, performance indicators and the **verification procedure** for electricity and gas sectors and the **monitoring of the concessionaries' commitments and the consequences of non-compliance**.

## Pushing for greater market competition

In order to promote market competition in the energy sector, NRAs play an important role, particularly in the development of wholesale markets and the monitoring of the electricity and gas markets. For this reason, we **examined our members' role in opening the market to competition** in the Mediterranean region, **identifying areas for improvement** and **providing them with best practices** to enhance their regulatory action.

### A. Sharing new monitoring tools and best regulatory practices

Our study found that **energy regulators actively promote market competition and ensure fair and transparent access to energy markets**. In addition, by implementing market rules and promoting new market entrants, NRAs have played an active role in the **development of wholesale market**, which is essential for **creating a level playing field** and **enhancing competition**.

The report also emphasises the **importance of monitoring and enforcement to ensure that market rules are respected**, and **market abuse is prevented**. Our members have made **significant progress in developing wholesale markets and monitoring mechanisms** by developing **various tools**, including **market surveillance and investigation mechanisms**, but the effectiveness of these measures could be improved.

Moreover, energy regulators face various **challenges in promoting market competition**, such as **limited resources and capacity**, the **complexity of the regulatory environment** and **resistance from incumbent market players**.

Mr Smail Bazizi  
Director for Concessions  
and Public Service



*“The study visit was very beneficial for the CREG Delegation. The quality of the presentations and exchanges held with the experts from the Turkish regulator EMRA and the distribution company ENERJISA were very useful to us for the development of new performance improvement engagement plans for distribution concessions for the 2024–2028 period, which allowed us to improve our list of performance indicators and our method for monitoring the public service of electricity and gas distribution. We look forward to continuing our collaboration and having further opportunities to strengthen our partnership.”*



CREG's study visit to EMRA on 'Quality of service monitoring tools and methodology for the regulated electricity and gas distribution activity', 22 February 2023, Ankara | Türkiye

In order to **help our members overcome these hurdles**, we identified various **best practices** that can **enhance their effectiveness** in promoting market competition and development such as reinforcing **transparency and accountability**, improving regulatory capacity, strengthening **cooperation among NRAs** and promoting **stakeholder engagement**.

### B. Shifting towards a regional approach to energy regulation

In non-European Mediterranean countries, a **noticeable trend is emerging**, indicating a **shift towards a more regional approach** to energy regulation. Despite diverse market structures, these countries are aware of the potential benefits of a unified regional energy framework, **emphasising cooperation and coordination among neighbouring nations**. This transition is driven by the acknowledgement that regional **collaboration can unlock shared resources, enhance energy security and improve market competitiveness**.

By examining the **scope of the regulatory powers used by our members** in their respective countries to oversee and regulate the energy sector, we found that besides **ensuring compliance with existing regulations**, some regulators actively **contribute to shaping the regulatory landscape** by issuing legislative texts. This trend is particularly evident in **Albania, Algeria and Jordan**.





<b>Albania</b>	* The current regulatory framework is completed, for the moment no gaps or limitations have been identified. ** As the market is developing, some reviews will be needed related to PX operating and market growth.
<b>Algeria - CREG</b>	* The law did not specify the market model to be followed. ** A reflection is underway, in collaboration with the Ministry of Energy and the operator with the aim of modifying the law for better implementation.
<b>Algeria - ARH</b>	* There are no gaps or limitations identified for the moment. ** As the texts are relatively new, they are currently in the application phase. Workshops are planned for 2024 to examine them with all stakeholders and identify any areas for improvement.
<b>Bosnia and Herzegovina</b>	* There is no legal basis for the establishment of an organised electricity market/power exchange and its integration with neighbouring markets. ** SERC plans to create and adopt accordingly all relevant secondary legislation after the adoption of the new laws.
<b>Cyprus</b>	* The competitive electricity market is still under a transitional arrangement period. CERA will be able to identify any gaps or limitations as soon as the market becomes fully operational. ** There are no current plans to revise or update regulations.
<b>Egypt EgyptERA</b>	* The current regulations need to handle different schemes (FiT, BOO, BOOT, Net metering, etc.) and the transitional phase before opening the electricity market. The regulations must be revised extensively for the contracts and tariff subsidy. ** Currently the electricity market is undergoing revisions and updates to tackle the gaps listed above.
<b>Egypt - GasReg</b>	* The main gaps and limitation of the current situation are related to the legacy contracts, in particular, long-term ones. ** Many pillars in the new gas market design are under review and subject to feasibility study to remove any barrier in the gas market.
<b>France</b>	* For the time being, no gaps or limitations have been identified. ** The electricity market design rules are currently under review at EU level as well as the regulation on gas (the so-called gas package) which once approved, will be applicable in France.
<b>Greece PAE-RAE</b>	* The question is mostly a matter of legislative/governmental initiative. ** The regulation on the energy supply to customers codes can be updated, and there may be a need to improve the recently established legal/functional unbundling requirement for Distribution System Operators (DSOs) formerly under ownership unbundling.
<b>Israel - NGA</b>	* There are no gaps or limitations in the current regulatory framework that need to be addressed. ** In its scope of cooperation with MEDREG, the Israeli Natural Gas Authority (NGA) asked support in understanding natural gas trading in the world to improve their knowledge in gas exchange market over the region and beyond.
<b>Italy ARERA</b>	* No gaps or limitations have been identified. The system follows the EU provisions. ** Similarly to France, the market design is based on EU Regulation. Therefore, possible decisions to revise or update are taken in accordance with EU updates.
<b>Jordan</b>	* The storage technology is an important element in the Jordanian energy strategy. However, it has not yet been introduced in the regulatory framework. ** The Energy and Minerals Regulatory Commission (EMRC) and the Minister of Energy and Mineral Resources (MEMR) are working to update the general electricity law to pass from a single buyer model to a competitive market.
<b>Lebanon LCEC</b>	* The absence of an NRA results in poor regulatory governance and limited tariff regulation best practices. ** Law no. 462 aims to organise the electricity sector by creating the Electricity Regulatory Authority (ERA) and separating electricity activities.
<b>Malta</b>	* For the time being, no gaps or limitations have been identified. ** There are no current plans to revise or update regulations.
<b>Morocco ANRE</b>	* The focus is on fostering competition, promoting market liberalisation, ensuring fair rules, and transparent market practices. ** ANRE continuously monitors the energy landscape and engage in regular reviews to ensure that the regulatory framework remains effective and aligned with the evolving needs of the sector.
<b>Montenegro REGAGEN</b>	* Nominated Electricity Market Operators "NEMO" should be designated, and TSO and NEMO should adopt laws related to market coupling, which will be subject to NRA approval. ** The legal framework should be harmonised with a new legislative package adopted by the Energy Community ("Clean Energy Package").
<b>Portugal ERSE</b>	* New regulations were approved in July 2023 and are expected to mitigate potential gaps or limitations that may have existed before. ** Following the cross-cutting regulatory review carried out in the first half of the year and completed in July 2023, no further review or update is planned.
<b>Spain CNMC</b>	* For the time being, no gaps or limitations have been identified. ** Member States shall draft National Energy and Climate Plans (NECPs) to define national targets on decarbonisation for the period 2023-2030. The Spanish government published the National Plan in 2020. This document is under revision and a public consultation was launched, ending in September 2023 .
<b>Türkiye EPDK</b>	* A new Electricity Market Law was issued in 2013, replacing the first Electricity Market Law of 2001. Various provisions are continuously added or amended in light of the evolving needs of the market and of the current situation. In parallel, secondary regulations are also introduced. ** No new Natural Gas Market Law has yet been issued to replace the first Natural Gas Market Law of 2001, but amendments are constantly made, and all the necessary secondary regulations are published.

FIGURE 10: Overview of the regulatory gaps and limitations in the region \* Gaps or limitations \*\* Plans to revise or update regulations

### C. Common trends for market unbundling in the Mediterranean region

Market unbundling is a common regulatory practice across several countries aimed at **preventing conflicts of interest**, ensuring **transparent access to networks** and **fostering innovation** in the energy sector.

Looking at **market unbundling** across the Mediterranean region, we found the following similarities:

- **Reasons for unbundling:** The primary reasons driving market unbundling include **fostering competition, complying with EU rules, ensuring equal access to networks, enhancing market efficiency through specialisation, increasing transparency, mitigating monopoly power, attracting investment and promoting economic growth.**
- **Outcome of unbundling:** In most cases, the unbundling process has resulted in the **separation of ownership and operation of energy market components.** This outcome ensures that different entities are responsible for generation, transmission, distribution and supply activities. The specifics of ownership separation may vary between countries, but the general goal is to create independent entities responsible for each function.
- **Plans to revise or update unbundling:** Some countries have plans to revise or update their unbundling processes. These revisions are **often driven by changes in regulatory frameworks, evolving market conditions or the need to further enhance competition and efficiency.** However, no immediate updates or revisions are planned, as the initial unbundling objectives have been achieved.

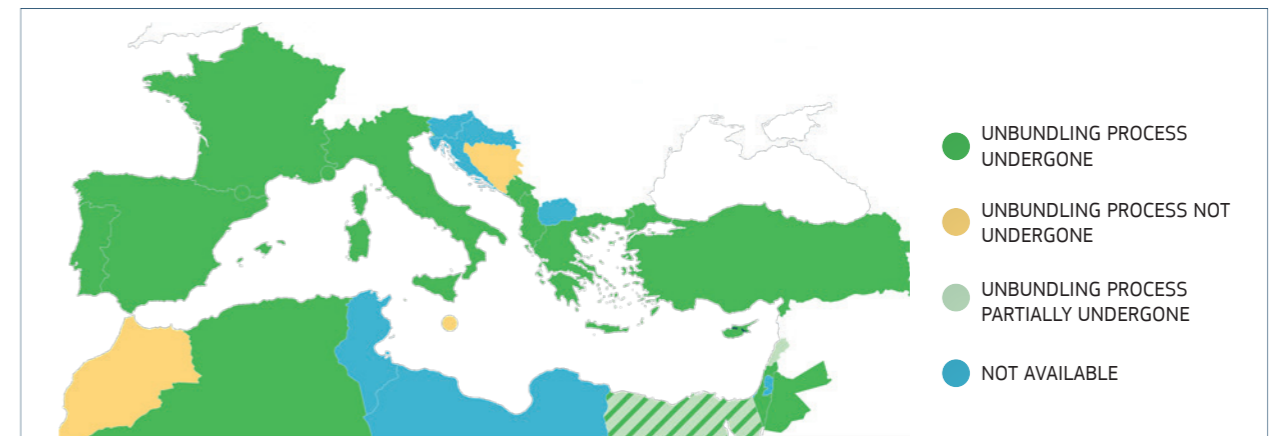


FIGURE 11: Market unbundling development in the region

### D. A variety of wholesale market models

Regarding the structure of the wholesale market, a variety of products and modalities exist in the Mediterranean region, designed to facilitate the buying and selling of electricity in bulk, typically between generators, wholesalers and large consumers.

They can be listed into three types of categories:

- Use of only one model of trading
- Use of one or two models of trading
- Use of more than two models of trading



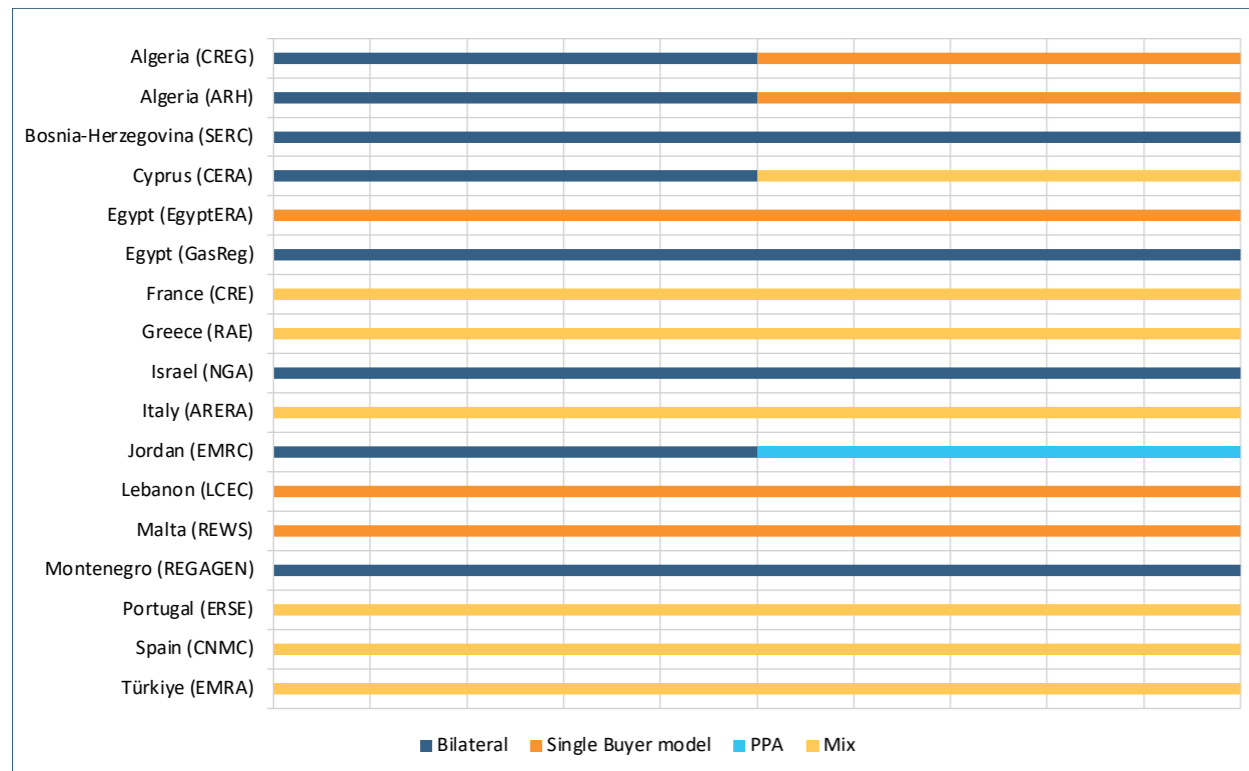


FIGURE 12. Models of trading used in the Mediterranean countries.

### Boosting consumer confidence

Consumer protection is a cornerstone of regulatory oversight, with regulators playing a pivotal role in ensuring fairness and justice for consumers.

In 2023, we developed some **guidelines on good regulatory practices for consumer protection rules and communication strategies**, including a **benchmarking of billing practices**.

The objective of the report is clearly defined: to provide energy regulators with practical guidelines and insights to enhance consumer protection standards and optimise communication strategies. The focus on billing elements serves as an illustrative example of the consumer-supplier relationship, emphasising the importance of **trust and empowerment**.

The report reinforces the **crucial role regulators play in upholding fair and just treatment for consumers** and stresses the multidimensional responsibilities of regulators as well as the need for **clear and transparent communication with various stakeholders**.

The **collaborative approach with ministries, energy companies and consumer protection organisations** emerges as a key element of successful regulatory practices to ensure the welfare of the end consumer. Furthermore, while each country possesses a unique regulatory landscape, a unified approach to safeguard consumer interests at all decision-making levels proves necessary.

**Outreach and awareness campaigns** appear as instrumental tools for transforming consumers from passive to **active participants** in the energy market. These campaigns aim to inform consumers about their rights, responsibilities and options, fostering a sense of empowerment. The study shows that the regulators understand that informed consumers are more likely to make decisions that are aligned with their preferences and needs.

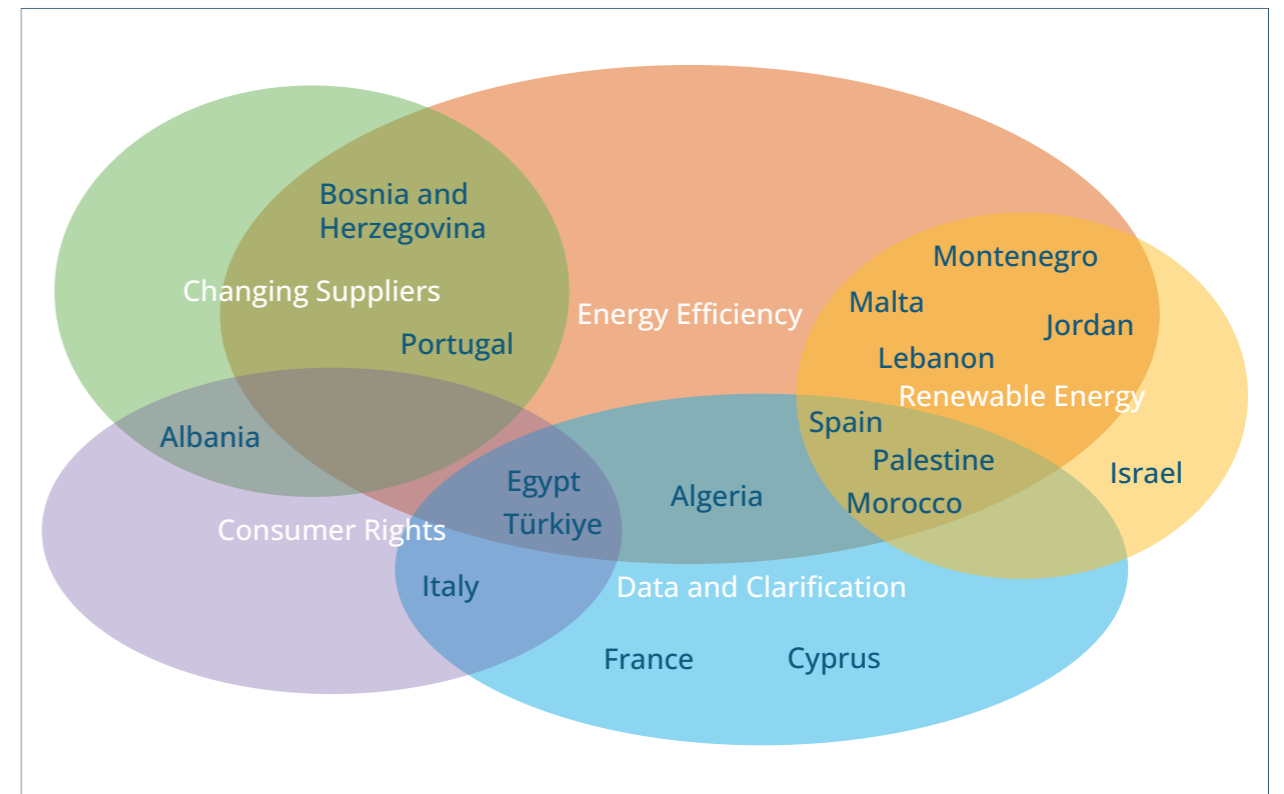


FIGURE 13: Awareness campaigns for energy consumers in MEDREG countries by theme

Billing elements also take centre stage, showcasing **best practices** and detailing aspects such as **metering, bill contents, compliance monitoring and dispute resolution mechanisms**.

The report underscores the **integration of consumer rights into the regulatory framework**, extending to **supplier terms, contract termination and access to price comparison tools**. It acknowledges the **diversity in handling procedures** across countries while emphasising the regulator’s role in creating an environment for informed consumer choices.

In a dynamic energy market, the report’s guidelines serve as a **practical resource to enhance consumer confidence, promote fairness and ensure transparency**. Also, the regulator’s commitment to consumer advocacy is reaffirmed, emphasising their tireless efforts to ensure protection, empowerment and satisfaction.

Lastly, the report positions MEDREG as a **bridge between regulatory authorities in the Mediterranean region**, fostering the dissemination of knowledge and sharing of experience.



# Dissemination of our work and messages

## Promoting our key reports

For our best regulatory practices and technical reports to reach as many of our members as possible, we presented some of our most important work to regulatory employees and external energy stakeholders in dedicated **workshops**. These events **explored our studies in depth** and offered the opportunity to **exchange views** and **raise questions** in an open and constructive way, keeping our overall goal of advancing regulatory convergence and culture in our region at the centre of the reflections.

Workshop	Message	Audience
Workshop on the rules to manage conflicts of interest Oct 2023   Paris	Sharing of best practices and concrete case studies.	35 employees from our members
Workshop on the latest electricity market dynamics and infrastructure investments in the Mediterranean region Oct 2023   Milan	Assessment of the national priorities and their potential to be a part of the integrated sub-regional and regional electricity markets.	50 participants from our members and the wider public

## Spreading MEDREG's messages at the international level

Beyond its members, MEDREG strives to bring its vision and recent findings to a wider audience. To do so, through the voice of its President, Vice Presidents and other senior figures, MEDREG participated in **major international events and fora, advocating the crucial role of regulation** as well as **expanding its network of influential energy players** in the Mediterranean, thereby gaining first-class insights on the latest energy trends.

Events participated in	Message	Audience
High-Level Public-Private Dialogue on Private Sector Investment in Electricity and Infrastructure Development in Africa March 2023   Addis Ababa	Regulations are key to attract private investments in energy and infrastructure.	60+ stakeholders from the public and private sectors, including policymakers, international organisations and decision makers working in energy and infrastructure
Med-TSO closing event of the TEASIMED (Towards an Efficient, Adequate, Sustainable and Interconnected Mediterranean power system) project March 2023   Brussels	Regulators work hand-in-hand with TSOs to create the conditions of an integrated and functioning Mediterranean energy market.	30+ energy stakeholders and EU decision makers
Mediterranean Energy Perspectives 2022 March 2023   Milan	Cooperation in the Mediterranean region is crucial to ensure the security of supply in Europe.	50 energy stakeholders
Flame Conference on Gas and LNG Developments in East Mediterranean May 2023   Amsterdam	A coherent and compatible regulation is necessary to ensure the interoperability of the pipelines in the region.	500 attendees
The UfM Energy Platforms meeting May 2023   Barcelona Dec 2023   Paris	Regulatory bodies play a crucial role in steering the energy transition, influencing technological innovation, investment patterns and market behaviour.	50+ UfM energy platform members
World Forum on Energy Regulation Aug 2023   Lima	Sharing of regulators' best practices to solve conflicts of interest and comply efficiently with the energy and environmental policy objectives.	40+ world leaders in regulation 90+ attendees
Gastech 2023 Roundtable and Strategic Conference Sep 2023   Singapore	Regulators are key to unlocking the full potential of East Mediterranean low-carbon gas.  Being part of the Gastech Governing Committee (formed of 60 members charged with ensuring that the conference supports research of the highest standards), MEDREG also advised on the best research papers.	250+ top-level and senior energy stakeholders
Energy Week of Western Balkans Oct 2023   Montenegro	Regulatory cooperation can foster the deployment of renewable energy in the region and attract foreign direct investment.	250 attendees



## Shining the spotlight on our most critical work

Some of our studies hold valuable information and data that are made available by our regulatory members in the form of detailed reports. Knowing that the digital revolution led people to prefer a short digital format over lengthy readings, we translated some of our most significant work into **reader-friendly online publications**. Similarly, we highlighted and promoted the messages of our high-level representatives in **audio social media cards** while continuing to keep our audience acquainted with our activities on **social media** and in **press articles**. We also reinforced our visual identity and profile with the development of **corporate guidelines** which ensure that MEDREG’s products follow a harmonised and coherent branding and that the Association is well recognised by external audiences.

Activity / Product	Message	Audience
Publication	Digital card on ‘A Glimpse at the Mediterranean Energy Mix and Interconnections’	◦ 1,600 downloads ◦ 1,530 views on social media
Publication	Snapshot on ‘Practical Tools to Improve Regulatory Compliance and Competences’	◦ 700 downloads ◦ 600 views on social media
Audio social media cards from six regulatory authorities’ Presidents	Necessity of tightening up the cooperation between MEDREG members to deliver the energy transition and reinforce the security of supply in the region	◦ 4,500 views
Identity guidelines	◦ Reinforce MEDREG’s institutional identity ◦ Ensure that MEDREG is consistently recognisable and maintains its visual impact across all platforms, media and products	Members, external partners and the wider public
Website and social media	Our activities, news and publications	◦ 8,000+ visitors ◦ 53,000+ page views ◦ 5,700+ followers
Press articles	Our project, mission, vision and latest work	130 media mentions

## Cooperation with external partners

To carry out its mission and make concrete progress in the integration of energy markets, cross-border infrastructure development, the greater integration of renewables, increased energy efficiency and the deployment of smart technologies or stronger consumer protection in the Mediterranean region, MEDREG does not act on its own. It regularly **meets and exchanges with other regional regulatory associations, TSOs, financial institutions, industries and other institutions** to stay up to date with the energy sector’s latest trends, policies, practices and technologies as well as to collaborate on specific topics.

## Keeping our priorities aligned with the EU’s energy and neighbourhood policy agenda

Providing policy and financial support to MEDREG since its initial steps in 2007, the EU has been a privileged partner. Beside the financial contribution the EU grants to our project, **MEDREG regularly exchanges with the European Commission** to sound out its evolving energy and neighbourhood policies in order to **adapt its strategy** as much as possible **to serve the EU agenda** while assisting our members in strengthening their regulatory capacities.

Indeed, **MEDREG met with EU officials** on several occasions in 2023. Most recently, in November 2023 in Brussels, we discussed **key strategic matters pivotal to MEDREG’s mission**, with the aim to create the regulatory conditions for an integrated and interoperated energy market in the Mediterranean region.



MEDREG President Abdellatif Bardach meeting Mrs Henrike Trautmann, Acting Director of DG NEAR, 8 November 2023, Brussels | Belgium



MEDREG President Abdellatif Bardach meeting Mr Isaac Valero Ladron, Head of International Relations Unit at DG ENER, 9 November 2023, Brussels | Belgium



## Confronting perspectives with the Balkan and European Regional Associations

In the framework of their cooperation agreement, MEDREG, the Council of European Energy Regulators (CEER) and the Energy Community Regulatory Board (ECRB) representing energy regulators from the Eastern European and Black Sea regions convened in Milan in October 2023 to address the **evolving landscape of consumer-related energy issues within the Mediterranean, European and Balkan regions**. Experts from regulatory bodies in the region and members of the consumer WGs of the three associations gathered to explore the **complexities and opportunities inherent in the energy market transformations**.

The three organisations discussed the current state of the electricity market design. They also addressed the **next challenges implied by the latest legislation and analysed the progress and state of play of the decarbonisation of the electricity and gas grids**.



MEDREG-CEER-ECRB trilateral workshop, 4 October 2023, Milan | Italy

## Steering the energy transition with the UfM stakeholders

In the framework of the UfM energy platforms, **MEDREG brings input and actively collaborates** with the organisation of the **Mediterranean Transmission System Operators (Med-TSO)**, the **Observatoire Méditerranéen de l'Énergie (OME)**, the **Regional Center for Renewable Energy and Energy Efficiency (RCREEE)** and **MeetMED**, among others, **to make concrete progress on the establishment of a regional electricity and gas market and to promote renewable energy and energy efficiency in the Mediterranean basin**.

In 2023, we participated in several meetings, identifying the most significant **factors and barriers that would affect Mediterranean energy trends till the year 2050**, as well as the **path towards decarbonising the region**. Along with our fellow platform partners, we **assessed the importance of natural gas in the energy transition** while ensuring that **gas investments are aligned with long-term climate goals**. We also **explored concrete and collaborative scenarios to speed up the development of cleaner gas solutions**, such as **hydrogen and biogases**, that offer promising alternatives to natural gas in a just energy transition.

Within the UfM platform, MEDREG **put forward regulation as the guiding framework** that shapes the dynamics of the energy sector, influencing technological innovation, investment patterns and market behaviour.

## Championing energy efficiency and e-mobility with national agencies and intergovernmental organisations

On the side lines of the **Beirut Energy Week**, we held a workshop in collaboration with the **Mediterranean Association of National Agencies for Energy Management (MEDENER)** and the **RCREEE** in September 2023.

Opened by an intervention from **H. E. Dr Walid Fayad, Minister of Energy and Water in Lebanon**, the joint workshop addressed the **role of National Regulatory Authorities and National Agencies for Energy Management** to promote **energy efficiency**, enhance **access to finance** for energy efficiency project developers and owners.

Speakers delved into the **concept of energy efficiency**, its benefits in achieving sustainability goals and the potential for reducing carbon emissions and enhancing energy security in the Mediterranean region.

Together with our partners, we discussed **effective regulatory frameworks that can incentivise the deployment of electric mobility solutions** and explored policies, financial mechanisms and incentives that can encourage investment, research and development in the electric mobility sector.

Once more, **contributors called on the NRAs to create a favourable regulatory environment that encourages energy efficiency practices**. **Successful case studies** from Mediterranean countries were shared to **inspire fellow regulators** and decision makers.

The event offered a platform for fruitful discussions, knowledge sharing and networking among experts, policymakers, regulators, financing institutions and industry professionals in the field of energy efficiency and e-mobility in the Mediterranean region, thereby contributing to fostering sustainable practices and driving the transition towards a low-carbon future.



His Excellency Dr Walid Fayad delivering the keynote speech in the MEDREG-MEDENER-RCREEE joint workshop, 22 September 2023, Beirut | Lebanon



## Pushing for innovative regulations with the industry, international institutions, the academia and energy players

In addition to its long-standing partners, MEDREG often collaborates with energy actors beyond the regulatory sphere and Mediterranean boundaries to bring its messages further, enrich its knowledge and widen its perspectives on emerging topics and innovative technologies as well as expand its network of influence.

For instance, during the **Energy Week of Western Balkans 2023** in Montenegro, we took part in a dialogue in which we **presented our recommendations to deploy renewable energy** in the region and attract foreign investment. Similarly, we envisioned the **future of the energy sector with the development of hydrogen and renewable energy projects**, pointing out the barriers they are facing, in an event organised by the **World Energy Council - Italy** and **OME** in collaboration with **EDISON**.

At the **Flame Conference**, we **took stock of the gas and LNG developments** in the East Mediterranean, while at the **Arab Electricity Regulators Forum**, we called **for interconnections and green hydrogen**. We also discussed the changes needed in policy and regulatory frameworks to ensure adequate openness, attractiveness and readiness of African markets to private investments in a High-Level Public-Private Dialogue organised by the **United Nations Economic Commission for Africa (ECA)** and **RES4Africa Foundation**.

Finally, MEDREG volunteered to **lead a new Hydrogen Virtual WG** under the **ICER** platform, allowing energy regulators from around the world to cooperate on this urgent issue.



Energy Week of Western Balkans, 18 October 2023, Montenegro

## Looking at 2024: Ramping-up progress towards a more regional and climate-friendly energy regulation

Continuing the work that has been realised in 2023, we will pursue our actions to reinforce **consumer protection**, with a focus on **vulnerable consumers**, thereby shedding light on distinct challenges faced by vulnerable consumers and energy poverty and **exploring best practices** adopted by the regulators.

We will extend our efforts to **facilitate and accelerate the energy transition**, looking at suitable regulation to develop **energy storage and distributed flexibility resources**, such as demand-side management and batteries for households and industries.

In parallel, we will examine the role of **green LNG as a central hub for the energy transition**, assessing its potential to serve as a sustainable alternative to conventional LNG. **Eco-friendly production methods** and the reduced carbon footprint associated with green LNG will be explored, with the aim of providing insights into green LNG's significance in advancing the energy transition.

In order to scale-up the progress made towards a more **regional approach to energy regulation**, we will continue to **identify good regulatory practices and develop recommendations** for the development of coherent regulatory policies in the region in terms of independence, competences, enforcement, and transparency and accountability, to name just a few. This work forms part of our goal to encourage a **consistent and robust regulatory climate** in the Mediterranean.

Moreover, we will further **monitor the evolution of the Mediterranean electricity market** and **analyse the contribution of alternative energy sources** such as **nuclear** power and **hydrogen** to achieve the decarbonisation of the region's electricity production.

Our work on these crucial themes will take the form of detailed studies, which will complement the **individual and personalised support** we will provide to our members on **regulatory topics** that they deem to be of primary importance in their national context through physical study visits, expert missions, workshops and ad-hoc reports.

# List of publications

## Best practices and benchmarking reports

- INS WG 2023 Report: ‘NRA’s Role in Opening the Market to Competition’  
[Download](#)
- ELE WG 2023 Report: ‘Smart Meters and Smart Grid Integrations Requirements’  
[Download](#)
- GAS WG 2023 Report: ‘Tackling Security of Supply Concerns in the Current Gas Crisis’  
[Download](#)
- RES WG 2023 Report: ‘Energy Label and Energy Efficiency Mechanisms’  
[Download](#)
- CUS WG 2023 Report: ‘Guidelines of Good Practices on Consumer Protection Rules and Communication Strategies’  
[Download](#)
- Energy Price Surge Task Force Report: ‘Impacts and Lessons Learnt for Mediterranean Energy Markets - 2023 Update’  
[Download](#)

## Training reports

- *October 2023*  
**Training report on the Implementation of Regulations**  
[Download](#)

## Workshop reports

- *May 2023*  
**High-level Workshop Report on the Role of Regional Organisations in Promoting Coherent Regulation to Accelerate the Energy Transition**  
[Download](#)
- *September 2023*  
**Report on the 3rd MEDREG Presidents’ Workshop**  
[Download](#)
- *December 2023*  
**Summary Report on CEER-ECRB-MEDREG Trilateral Workshop on Consumer Related Issues**  
[Download](#)

## Digital cards and snapshots

- *September 2023*  
**Digital card – A Glimpse at the Mediterranean Energy Mix and Cross-Border Interconnections**  
[Download](#)
- *December 2023*  
**Snapshot: Practical Tools to Improve Regulatory Compliance and Competences**  
[Download](#)



Download all the reports here in the publication archive.  
[www.medreg-regulators.org/Publications.aspx](http://www.medreg-regulators.org/Publications.aspx)



# List of Events

JAN	FEB	MAR	MAY	JUN	AUG	SEP	OCT	NOV	DEC
<p><b>MEDREG's 1<sup>st</sup> Presidency Meeting</b>, 17 January 2023, Milan   Italy</p>	<p><b>The Algerian CREG's visit of the Turkish EMRA</b> to study the 'Quality of Service Monitoring Tools and Methodology for the Regulated Electricity and Gas Distribution Activity', 21–22 February 2023, Ankara   Türkiye</p>	<p><b>34th Institutional WG meeting</b>, 7 March 2023, Milan   Italy</p> <p><b>23rd Consumer WG meeting</b>, 8 March 2023, Milan   Italy</p> <p><b>33rd Gas WG meeting</b>, 15 March 2023, Milan   Italy</p> <p><b>Participation in Med-TSO closing event of the TEASIMED</b> (Towards an Efficient, Adequate, Sustainable and Interconnected Mediterranean power system) project, 15 March 2023, Brussels   Belgium</p> <p><b>34th Electricity WG meeting</b>, 17 March 2023, Paris   France</p> <p><b>Participation in the 'Mediterranean Energy Perspectives 2022'</b> event jointly organised by the World Energy Council and OME, 20 March 2023, Milan   Italy</p> <p><b>33rd RES WG meeting</b>, 23 March 2023, online</p> <p><b>Participation in a High-Level Public-Private Dialogue on Private Sector Investment in Electricity and Infrastructure Development in Africa</b> organised by the United Nations ECA and RES4Africa Foundation, 28 March 2023, Addis Ababa   Ethiopia</p>	<p><b>Participation in the UfM Energy Platforms meeting</b>, 3 and 4 May 2023, Barcelona   Spain</p> <p><b>Participation in the Flame Conference on Gas and LNG developments in the Eastern Mediterranean region</b>, 4 May 2023, Amsterdam   Netherlands</p> <p><b>Institutional visit to the Lebanese Energy and Water Ministry</b>, 15–16 May 2023, Beirut   Lebanon</p> <p><b>Participation in the GA of the Arab Electricity Regulators Forum</b>, 22 May 2023, Dubai   United Arab Emirates</p>	<p><b>3rd MEDREG Presidents' Workshop titled 'The Role of a Coherent Regulation in Promoting Energy Transition in the Mediterranean Region'</b>, 14 June 2023, Rhodes   Greece</p> <p><b>MEDREG's 35th GA meeting</b>, 15 June 2023, Rhodes   Greece</p> <p><b>Training on the Regulation of Transmission and Distribution Systems in EU Countries</b>, 20–22 June 2023, Milan   Italy</p>	<p><b>Participation in the 8th World Forum on Energy Regulation</b>, 22–25 August 2023, Lima   Peru</p>	<p><b>Participation in Gastech 2023</b>, 5–8 September 2023, Singapore</p> <p><b>34th RES WG meeting</b>, 26 September 2023, Lisbon   Portugal</p> <p><b>ANRE's visit to EMRA to study the Tariffication of Transmission and Distribution Networks</b>, 3–4 October 2023, Ankara   Türkiye</p>	<p><b>24th CUS WG meeting</b>, 5 October 2023, Milan   Italy</p> <p><b>MEDREG-CEER-ECRB Trilateral workshop on 'Technical and Non-Technical Losses'</b>, 4 October 2023, Milan   Italy</p> <p><b>35th INS WG meeting</b>, 10 October 2023, Paris   France</p> <p><b>Workshop on the Conflict of Interest in the Electricity and Gas Sector</b>, 10 October 2023, Paris   France</p> <p><b>MEDREG Training titled "Implementation of Regulations - From Legislative Frameworks to Tools of Policy Execution"</b>, 11 and 12 October 2023, Paris   France</p> <p><b>Participation in the Energy Week of Western Balkans</b>, 18 and 19 October 2023, Porto of Montenegro   Montenegro</p> <p><b>34th Gas WG meeting</b>, 19 October 2023, Milan   Italy</p> <p><b>35th Electricity WG meeting</b>, 24 October 2023, Milan   Italy</p> <p><b>Workshop on the latest electricity market dynamics and infrastructure investments</b>, 24 October 2023, Milan   Italy</p>	<p><b>MEDREG's Institutional meeting with EU officials</b> from DG NEAR and DG ENER of the European Commission, 8–9 November 2023, Brussels   Belgium</p>	<p><b>MEDREG's 36th GA meeting</b>, 5 December 2023, La Valletta   Malta</p> <p><b>Participation in the OME OMEC Event</b> in the framework of UfM Gas Platform, 14 December 2023, Paris   France</p>







**MEDREG**

Mediterranean Energy Regulators

MEDREG  
Via Lazzaretto, 3  
20124 Milan  
[info@medreg-regulators.org](mailto:info@medreg-regulators.org)

Follow us:



Co-funded by the  
European Union