

2022

ANNUAL REVIEW



THE EUROPEAN SMART ENERGY SOLUTION PROVIDERS



WHAT'S INSIDE

Introduction	3
About ESMIG	4
Our work	7
Events	19
Our members	20
Secretariat	43

Foundations for the digital transformation

Dear Colleagues,

Change is profoundly upon us all. Economies have begun to turn back on after pandemic lockdowns, an imbalance of supply and demand drove global semi-conductor constraints, and Europe has faced unprecedented increases in the price of energy. While high energy prices present a series of challenges and put a strain on households and public budgets, smart energy solution providers can support consumers to better manage their energy and reduce their bills through their wide range of products and services. This represents a unique opportunity for ESMIG and our membership to show how we can deliver and be part of the solution to face the energy supply and price crises.

The work we do is more relevant than ever before, especially as smart energy solution providers have a critical and contributory role to play along the journey to energy security and affordability through smart meter adoption, the removal of regulatory barriers to provide consumers real-time access to information so they can make informed decisions on energy usage, and in opening the huge potential of residential demand-side flexibility. These provide strong foundations for the digital transformation of the energy industry towards achievement of ambitious climate and energy targets by 2030.

Over the past year, we launched a new website that helps to prepare us for that digital transformation and improve our external communications. Our interviews with members, and blogs written by our members, are an insightful way to inform a wide range of stakeholders about our members' point of view on industry topics, and how they are going about solving challenges. I am pleased to see our members actively participating and

encourage continuation of this initiative.

We condensed the number of our active working groups to provide more focus on topics critical to our members' interests. I am really pleased to see attendance at the working groups increase from previous years and thank all those involved as their input makes a difference to representations made in 2021 and 2022, with our interlocutors in various DGs in the European Commission, the EU Council and Parliament and also with several partner associations we have been closely working with, including E.DSO, EER, Eurelectric, Europacable and T&D Europe.

The European Commission's RePowerEU Plan adopted in May 2022 and the Digitalisation of Energy Action Plan (coming September 2022), as well as the measures taken by National Governments, provide vast opportunities to continue our contribution to making energy smart.

I look forward, and am hopeful, that we can meet more often in person during the coming year. In the meantime, the work continues, and with appreciated support from the ESMIG Secretariat and Executive Committee, we remain at our members' disposal to promote our common goals and prosperous future.

Nigel Hughes
ESMIG President



About ESMIG

ESMIG is the European voice of the smart energy solution providers. We represent companies which provide products, information technology and services for multi-commodity metering, display and management of energy consumption and production at consumer premises.

These products and services help in making energy cleaner, more affordable and more reliable by enabling:

- a precise overview of consumption and manageable demand
- customised tariffs and accurate bills
- better outage detection

Information is at the core of our innovation

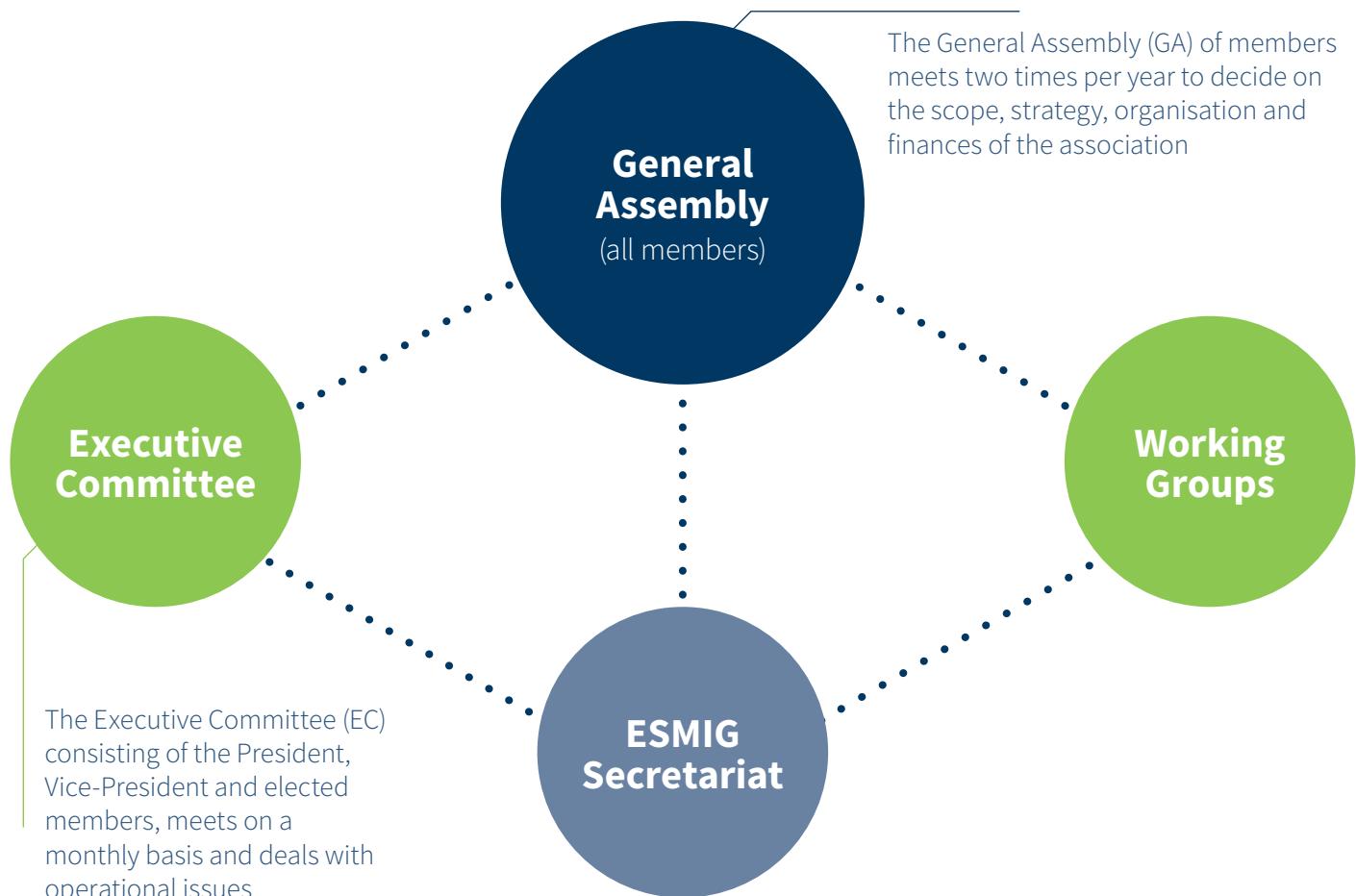
Our members' products and services provide the crucial ingredients in smart consumer energy management: they accurately measure, transfer and process energy

related data while ensuring this data is relevant, safe and reliable.

We advocate for a regulatory framework that accelerates the introduction of our members' innovative products and services, which are fundamental to the smart energy and water systems of Europe's future.

We actively contribute to the creation of a competitive internal energy market by development of architectures and open standards that allow efficient implementation and integration of new energy management technologies and services.

How are we structured



GOVERNANCE

Executive Committee



Nigel Hughes
ESMIG President and
Vice-President Sales
Marketing & Deliveries,
EMEA, Itron



Luis Goncalves
ESMIG Vice-President,
and CEO at Iskraemeco



Daniela Sellmann
Global Vice-President and Head of
Industry Business Unit Utilities at SAP



Javier Rodriguez
Sales Director EMEA
at Landis+Gyr

Working Groups and Task Forces

Data Communication and Protection Working Group

The main focus for this group is monitoring and reviewing security regulations and removing barriers for data access, transfer, processing, and protection. This group also evaluates communication technologies to get insight in applicability for smart metering.

Chair: **Jani Vehkalahti**, Wirepas

Marketing and Events Working Group

This group defines and implements ESMIG's communication strategy, including all events where ESMIG is represented, involvement in exhibitions and conferences, and our online presence.

Regulation and Policy Working Group

Maintaining a watch on EU regulatory and legislative developments with the potential to affect any aspect of smart energy management in Europe is the main goal of this group. Members strive to ensure effective and coherent policy development and coordinates ESMIG's responses to political developments that affect the membership.

Chair: **Mojca Markizeti**, Iskraemeco

Empower Prossumers Working Group

Focusing on interoperability for demand-side flexibility and consumer engagement, members explore use cases, infrastructure definition and standards selection.

Chair: **Ferry Cserep**, Netinium

Multi Utility Metering Working Group

Diving into the metrological and legal aspects of the advanced metering infrastructure, this group also manages relationships with related industry associations. In addition, members develop concepts for the future metering infrastructure.

Chair: **Henri Teboulle**, Sagemcom

Task Forces:

- Standard Essential Patents
- Fair Competition in the Energy Sector
- Next Generation Smart Meters
- Cybersecurity Regulation
- Smart Meter Gateway Concept
- H1 Interoperability



In the past year, ESMIG, in close cooperation with the European institutions, and in strengthening ties with partner organisations, represented its members' interests and achieved results at political and technical level.

With the easing of global pandemic restrictions, our association resumed participation in trade fairs and conferences and is back to meeting in-person. However, as Europe is leaving the Covid crisis behind, and the economy has rebounded, a new, unprecedented energy price and supply crisis, further fueled by war in Eastern Europe, has hit. The dual digital and green transition, the pillars of Europe's ambitious Recovery Plan, are now also a driver and means to ensure Europe's energy affordability and security long-term. Smart energy solution providers have a key role to play here.

At political level, the Fit for 55 Package, a set of legislative initiatives to make sure Europe is on track to meet ambitious 2030 climate and energy targets and the 2050 climate neutrality objective, set the framework for our advocacy work. For us, the revision of the Energy Efficiency and Energy Performance in Buildings Directives are of particular importance to make sure smart energy solutions can make a difference in delivering the Green Deal and ensure the participation of end-users in the energy system.

An additional focus area remains fair competition in the energy sector. In this context, the new EU Regulation on foreign subsidies distorting the internal market presents an opportunity to secure a global level playing field, taking into consideration the specificities of critical infrastructure.

Recognising **data** and data-driven solutions as the key to unlocking the benefits of smart metering, the Commission's upcoming "Action Plan on the Digitalisation of the Energy Sector", will be high on our agenda. We must ensure interoperability of energy data and develop a competitive market for digital energy services, and digital energy infrastructures, that are cyber-secure, efficient, and sustainable. We also continued lobbying on the implications of the e-Privacy Regulation with a coalition of associations in the energy sector to ensure the Regulation is not detrimental to the development of innovative data-driven business models.



At technical level, we continue to play an active role on standardisation in CEN, CENELEC and ETSI and supported the Commission in the Smart Grid Task Force, finalising the work on interoperability requirements for consumption data access.

Working on the next generation of smart meters, we are exploring what the role of smart meters in demand-side flexibility will be, how to cope with fast changing communication technologies, and the security requirements that will be needed. In this context we work closely with Grid Operators to explore the future and "forward-thinking" architecture.

Cybersecurity will remain high on our agenda as there are increasing security and privacy requirements being implemented at EU level and tracking new security requirements for smart metering products and services is more important than ever. Thanks to continued efforts, our "Protection Profile for Smart Meters", a European approach for security certification, has now been officially adopted by CEN/CENELEC, to be transferred to an official technical specification.

Furthermore, we have been actively involved in the European Commission's work on the Measuring Instruments Directive, and in cooperation with the DLMS User Association, we produced a position paper describing the way forward through new standardisation initiatives regarding a "remote display".

Going forward, in 2022 we will continue to promote members' interests, and make sure that the role of smart energy solution providers is fully recognised as part of Europe's answer to secure energy affordability and security. On every front we will continue our outreach and communication, making our voice heard in Europe.

Tomás Llobet
Managing Director

Willem Strabbing
Technical Director

Ensuring smart metering technology brings tangible benefits for consumers

With a clear focus on digitalisation and the ongoing clean energy transition in Europe, the smart metering industry is more important than ever. As a key step, smart meters are an essential component for enabling a digitalised and decentralised energy system.

Economic benefits such as savings on energy bills and reduced meter costs are key, but the long-term results of these changes will see our current energy system transform to a smart, demand driven, flexible and green one, with tangible benefits for empowered energy consumers.

While we advocate for such a transition, there are crucial intermediate steps that need to be taken to ensure that this transition is possible and carried out to a high standard. This includes additional services and technologies as part of a larger eco-system that will enable us to reach the full potential of smart meters.

To realise this, we are working together with the European Institutions and other key stakeholders, including partner organisations, to support the smart meter roll-out and advocating for the right framework that will allow consumers and society to take advantage of all the benefits that our members' technology and services can offer.



Delivering the European Green Deal

Our mission is to drive and accelerate the dual digital and green transition. Through our work supporting the implementation of the Clean Energy Package and the European Green Deal initiatives, we strongly support the EU's agenda towards climate neutrality by 2050 and the ambitious plans for addressing climate change through a modern, resource-efficient and competitive economy.

The deployment of clean technology solutions is crucial for a sustainable EU economy, ensuring that the energy system becomes smarter and more efficient.

Recognising the contribution of digitalisation and technologies as a driver for the green energy transition is key for supporting the implementation of smart energy solutions and accelerating the smart meter roll-out across Member States.

As part of the European Commission's package of proposals to “*deliver on the European Green Deal*” we have been actively following the revision of the Energy Efficiency Directive (EED) to support the ambitious new 2030 climate objective of 55% GHG emission reductions under the European Green Deal and address any remaining gaps in the plan to reach the target in 2030, essentially requiring more efforts from all stakeholders in achieving energy efficiency.

ESMIG has been active throughout the revision process, meeting the European Commission early in the process and voicing our insights on Article 9 which is of particular importance for smart metering and for ensuring the participation of end-users in the smart energy system.

Digitalisation of the Energy Sector – a new action plan for moving forward

As a new initiative, the European Commission introduced their “Action Plan on the Digitalisation of the Energy Sector”, to be adopted in September 2022.

This initiative is of paramount important to ESMIG as it will have an impact on our industry and provides a unique opportunity to advocate for the benefits of smart metering and data-driven solutions in the energy sector. The Action Plan aims to support energy system integration, the participation of “prosumers” in the energy transition and ensure interoperability of energy data, platforms, and services. Ultimately, it should help develop a competitive market for digital energy services and digital energy infrastructure that are cyber-secure, efficient, and sustainable.

As such, to voice our position, we submitted our feedback to the European Commission’s public consultation underlying the gaps and the possibilities for the use of smart metering solutions, the benefits of smart meters for consumers, as well as the need for data to be interoperable and made available in a non-discriminatory way to all energy market participants. In addition to this, we have met with Commission representatives from the responsible Unit.

As the success of smart metering largely depends on the quality of data generated and transmitted, we also underlined the importance of cybersecurity in the energy sector which is a crucial element to be considered alongside digitalisation.

RePowerEU – the green transition as a solution to the energy price and supply crisis

In May 2022, the European Commission presented the RePowerEU plan as a response to Europe’s dependence on fossil fuels and the global energy market disruption as a result of Russia’s invasion of Ukraine. By acting fast, Europe aims to reduce dependency through energy savings, diversification of supplies and the accelerated roll-out of renewable energy.

Digitalisation and demand-side flexibility are mentioned in the RePower Plan, but more ambition is needed. While we support all initiatives driving the green transition and higher levels of energy efficiency, we must first ensure that current legislation, the Electricity Directive and Regulation, containing key provisions to drive the roll-out of smart energy technologies enabling data-driven services, including real-time data access and demand-side flexibility to empower consumers to better manage their energy, are fully implemented.

European Institutions, Member States, and European energy regulators must recognise the crucial contribution that smart energy solutions can provide regarding energy security and affordability.

In our position paper “Energy affordability and savings: the role of smart energy solutions”, released early May 2022, we set out three key actions that can be carried out as part of the solution to tackle energy price and supply issues.

1. Accelerate and complete the roll-out of smart meters across Europe
2. Remove barriers on energy data access and sharing and make real-time data available to consumers
3. Implement and enable demand-side flexibility and eliminate regulatory barriers



Untapping the potential of smart meters

Smart meters are a key enabler of the energy transition. To ensure that we continue to support the roll-out and a regulatory environment to unleash the full potential of the technology, in 2021, we established the “Enhancing the Benefits of Smart Meters Task Force”.

With activities completed in 2022, this task force discussed the huge potential and wide range of benefits for the energy system, the climate and consumers that smart metering solutions can bring. It highlighted what has been achieved in Europe so far, and what has not yet been achieved, with a focus on the EU regulatory framework and its implementation in Member States. In addition, the task force focused on the untapped potential in relation to access, use, and interoperability of data.

Collecting facts and figures, we drafted a catalogue of arguments which have fed several of our recent papers and presentations at events, driving home the message that smart meters are a key component and enabler of the energy transition and a technology whose massive potential needs to be better explored and recognised.

Standard Essential Patents supporting a strong energy industry

Standardisation based on patented technologies is a crucial contributor to innovation and competitiveness. Patents provide incentives for carrying out research and development while also facilitating knowledge sharing, encouraging the roll-out of new technologies, and

interoperability between products.

As an important issue for technology manufacturers, we have continued our work on Standard Essential Patents (SEPs) aiming to remove unnecessary barriers to encourage a competitive, smart energy industry and have co-signed several joint letters, participated in events with u-blox and ACT, the APP Association, and replied to a public consultation from the Institute of Electrical and Electronics Engineers (IEEE).

In June 2021, we published a new version of our position paper on the topic, highlighting the challenges for the smart energy industry. This includes the refusal of many SEP owners to license SEP's to companies at any commercially reasonable point of the supply chain, which can lead to higher costs of smart meters and components for consumers and manufacturers respectively. To address our concerns, and to avoid endangering the clean energy transition, SEP's should be licensed on a fair, reasonable, and non-discriminatory (FRAND) basis.

Taking inspiration from our position, Smart Energy International published an article “Standard essential patents – a growing challenge for EU smart energy delivery” interviewing our Managing Director, Tomás Llobet.

We will continue to monitor developments and make our voice heard, ensuring the right conditions for our industry.

Ensuring the use of smart meter data to its full potential

A crucial feature of the energy transition is not only the roll-out of smart meters across Europe, but the new level of detail and information about consumer patterns and performance that can be provided through data. This data can benefit all actors in the energy market including consumers, network operators, such as DSOs and TSOs, suppliers and innovative energy service providers.

For these benefits to be used to their full potential, we need to ensure that the data available is transferred, processed, and analysed in the best way. It also needs to be assessed in a safe, efficient, and non-discriminatory way by all authorised participants in the energy market.

To achieve this, our goal is to find the best technical solutions that can ensure this process while advocating for standards that detail requirements for data and a universal approach across Member States.

e-Privacy: ensuring a secure and efficient digital environment in the energy sector

As critical legislation for the energy industry, we keep a close eye on the consequences and implications the e-Privacy Regulation proposal has for the energy sector. Data is a crucial component for reaching the potential of the market and as such, we need to ensure it does not negatively impact the development of new, innovative business models.

After several years of deadlock in negotiations, we developed a joint declaration with fellow industry associations to express our position on the latest developments being discussed in the EU Council. While we acknowledge that it is a complex matter, the Regulation must strike a balance between protecting the users' data and supporting digitalisation and innovation. We must also ensure that the Regulation has no negative impact on the green and digital transition.

Following the release of a joint declaration, co-signed by ESMIG, E.DSO, Eurelectric, and EHPA, we have advocated for our common position at the EU Council, discussing with officials at the Permanent Representations in Brussels, Germany and Spain, among others, and meeting with the European Commission. Our position was well received but negotiations are moving slowly.

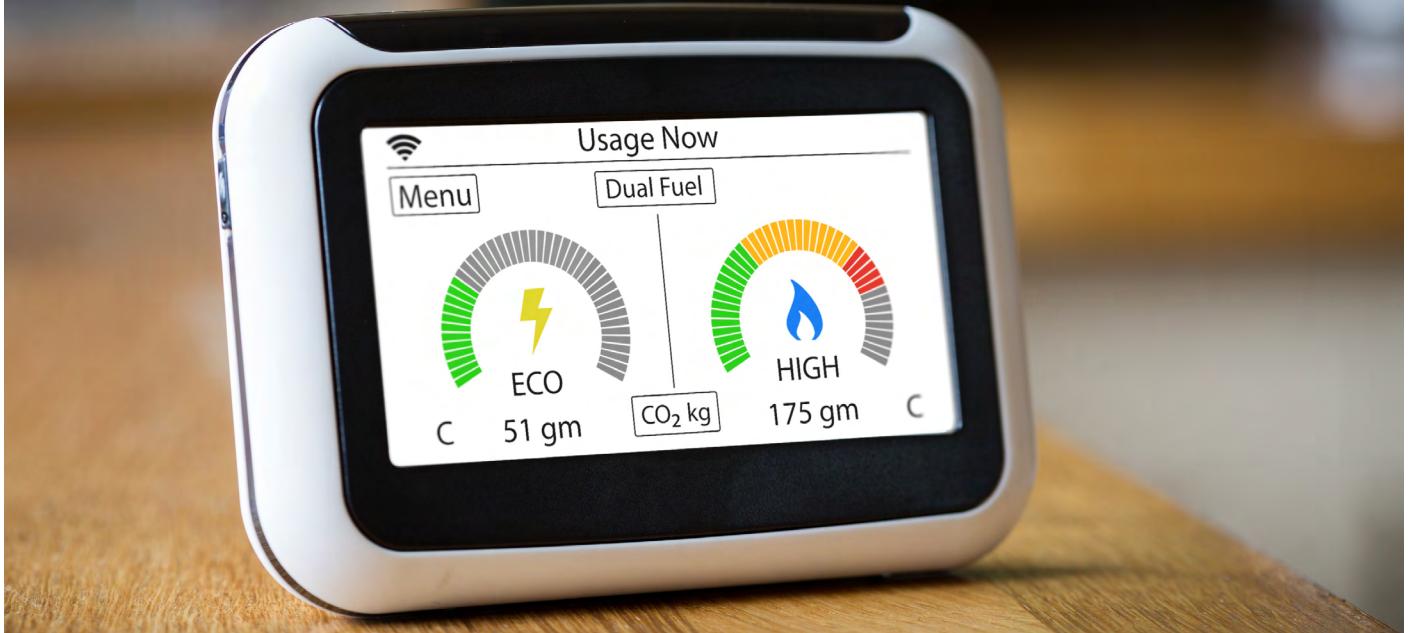
It is key for us to continue monitoring developments, ensuring the protection of the energy services customer data without heavily undermining progress on digitalisation of the energy sector.

The revision of the Energy Performance of Buildings Directive

We have been actively following developments for the Energy Performance in Buildings Directive (EPBD) as a key initiative for the decarbonisation of buildings in Europe. Decarbonisation is vital to deliver on the EU's climate and energy objectives, with buildings responsible for 40% of the European Union's energy consumption.

Energy efficiency is an essential element and smart meters are an indispensable feature for achieving energy savings. The smart meter is the only way to have a reliable and certified measurement of the energy consumed and/or generated by a building at a specific time of use.

As such, we welcomed the European Commission's proposal, adopted in December 2021, and the new Article 14 on data exchange, referring to building systems' data. We fully support consumer access to their data and that they can decide to provide access to a third party at no cost. However, there are still untapped opportunities such as data interoperability,



dynamic tariffs and real time information that are crucial elements for consumer empowerment.

If access to historical data is to be beneficial in the context of buildings renovation, it is important to enable the consumers to access their energy consumption data in real-time to ensure more energy efficient buildings. This will encourage them to change their consumption patterns and engage in energy generation and demand response. The lack of real-time access to data is a serious barrier preventing savings being directly shown to consumers which needs to be addressed.

Cooperation with DLMS User Association explores new areas of collaboration

In early 2022, we formalised our cooperation with the DLMS User Association (DMLS UA), a leading voice in interoperable and secure data exchange for strategic energy and water management, after identifying key areas of joint interest.

These issues, identified together with our Multi-Utility Metering Working Group, include cooperation on multi-utility metering and alignment on future regulatory and standardisation activities. The collaboration aims to examine and enable new opportunities and services related to energy consumption, costs, and energy efficiency.

As stated by ESMIG's Technical Director, Willem Strabbing, “*working with DLMS UA will greatly support ESMIG's work on the roadmap for the next generation of smart meters that will drive the energy transition, enable demand side flexibility, boost consumer engagement and support new grid services.*”

Measuring Instruments Directive: the way forward

We have been actively involved in the European Commission's Measuring Instruments Working Group and discussions regarding necessary changes. The current version of the Measuring Instruments Directive was introduced in 2004 and states that the instrument “*shall be fitted with a metrologically controlled display accessible without tools to the consumer*”. Since 2004, smart meter technology has greatly evolved and there are multiple tariff registers in the meter and more user-friendly alternatives for reading these registers via the internal meter display are available.

For example, most Member States already require the implementation of a local consumer interface to provide near real-time data directly to the consumer. It is a state-of-the-art feature for the currently unavailable smart meters today which allow for authenticated data and guaranteed integrity via a digital interface. Based on such an interface, the measurement data can be provided to the consumer in a user-friendly way.

In cooperation with the DLMS User Association, we produced a position paper describing the way forward through new standardisation initiatives regarding a “*legally relevant remote display*”. Using this paper, we will actively engage with the European Commission, putting forward our ideas and sharing insights into best practice for technologies and solutions that form the infrastructure that measure use.

WORK Advocating for security and interoperability of the advanced metering infrastructure

All over Europe, companies have created impressive technologies for smart metering and home energy management. However, solutions are not yet connected in a way that can empower consumers and maximise savings. If products and systems cannot communicate with one another, the benefits they promise cannot be realised. Therefore, interoperability is crucial in engaging consumers to participate in the management of their energy usage.

Additionally, security of the advanced metering infrastructure is essential in gaining consumer trust and protecting their data, as well as the hardware from attacks. Recognising this, we have made it our priority to advocate for and promote the importance of security and interoperability.

Protection Profile for smart meters adopted by CEN/CENELEC

At an early stage, we began to develop a European approach for the security certification of smart meters together with other stakeholders in the CEN/CENELEC/ETSI Coordination Group on Smart Meters. This was to prevent further fragmentation of approaches in Europe where France, Germany, Switzerland, and the UK already have a national approach resulting in different certification procedures.

The Cybersecurity Act, issued in 2019, was key as it supported our view through requiring a European framework for certification leading to certificates that can be applied in multiple Member States. To contribute to this discussion, we became a member of the Stakeholders Cybersecurity Certification Group (SCCG) to closely follow the development of the framework to ensure that the approach that we had developed, was aligned.

Thanks to continued efforts, our approach, defined as a “Protection Profile for Smart Meters” has now been officially adopted by CEN/CENELEC, to be transferred to an official Technical Specification.

New task force on cybersecurity regulation launched

In the past few years, there are increasing security and privacy requirements being implemented at EU level, these are set out in the Network and Information Security Directive (NIS), the General Data Protection and Regulation Directive (GDPR) and the Cybersecurity

Act. Alongside upcoming changes with the review of the Radio Equipment Directive (RED), NIS2 Directive and Network Code on Cybersecurity (NCCS), the need for a task force, tracking new security requirements for smart metering products and services, is greater than ever.

The main purpose of our new task force is to identify, assess and actively respond to upcoming definition of security requirements for smart metering products and services, originating from EU Directives and Regulations. Our work will cover topics such the preparation of a risk assessment framework for smart metering to be presented to NCCS stakeholders, supporting the transfer of our Protection Profile for Smart Meters (see previous section) into an official CEN/CENELEC Technical Report and promote it for use as a harmonised standard under the RED and the assessment and response to new security requirements for smart meters under the RED.

Our response to the public consultation on the Cybersecurity Resilience Act

As one of the first activities of our new Cybersecurity Task Force, we responded to the European Commission’s public consultation and call for evidence on the Cybersecurity Resilience Act, looking at new rules for digital products and ancillary services.

As mentioned, requirements for cyber and information security topics, network protection, security risk management, security governance, security certification and data protection have been addressed with several legislative and regulatory acts and directives. While we support any legislation and regulation that addresses



the ever changing and evolving cybersecurity threats, we emphasised that it is crucial that the increasing level of obligatory acts is monitored.

As stated by Anže Zaletel, Chair of ESMIG's Cybersecurity Task Force, “*the European Commission must ensure that any upcoming obligatory acts do not overlap and compete with each other, allowing several interpretations and putting the industry into a position of undermining technological innovation.*”

Cybersecurity requirements in the Radio Equipment Directive

The review of the Radio Equipment Directive (RED) began in 2021, with the aim to include cybersecurity requirements. CEN/CENELEC was requested by the European Commission to define a list of standards that can be linked and harmonised to this Directive, to capture the detailed requirements per product group. As smart meters are in the scope of the RED, standards containing security requirements also need to be linked. As such, we began working with CEN/CENELEC to ensure that our Protection Profile for Smart Meters was on the list of standards linked to the RED. This would oblige EU Member States to apply particular standards for certification of smart meters.

In early 2022, the European Commission developed new security related requirements, covered by a new Delegated Act for the RED. We responded to these changes with a position paper calling for more clarity regarding the scope of this Act to understand

how it would impact smart meters and their security requirements at an EU level.

Task force on 5G explores opportunities for smart metering offered by new telecom technologies

Connected to our Data Communication and Protection Working Group, the Task Force on 5G has been investigating the impact of 5G for our sector. It is not only the higher speeds enabled by 5G but also additional features such as improved security, low power, and low latency connections to a massive number of devices that are of importance.

Drawing on different areas of expertise, the task force has been working to define and investigate the communication requirements for the next generation and future of smart metering. A list of use cases was developed alongside the communication requirements for each. This list can be used to evaluate the applicability of new communication technologies in general for smart meters of the future.

Supporting the European Commission's Expert Groups of the Smart Grid Task Force

We continue to support the Smart Grid Task Force, established in 2009 by the European Commission, with the objective of exploring smart grid services and operations, and how best to deliver smart grids for the benefit of the energy system and its users. Under this task force, some Expert Groups work on key topics for the introduction of smart grids.

Expert Group 1 focusses on interoperability. With our support, this group has finalised its work on drafting an Implementing Act containing the interoperability requirements for consumption data access. We specifically focussed on defining the requirements for the local interface on the smart meter providing near-real-time data directly to the consumer.

The Electricity Directive, which is part of the Clean Energy Package, requires the Commission to prepare such an Implementing Act to define the interoperability requirements for access to consumption data by energy market parties.

Additionally, Expert Group 2 of the Smart Grid Task Force advises the European Commission on policy and regulation frameworks related to the security aspects of smart grids. In December 2021, we also provided substantial comments on the draft Network Code on Cybersecurity that has been developed by the European grid operators.

CEN/CENELEC/ETSI Coordination Group on Smart Meters

Bringing together a variety of stakeholders in the energy sector, this group worked closely with the European Commission in its aim to monitor and coordinate the development and maintenance of formal interoperability standards that are applied across the European single market for multi-utility smart metering. In 2021 this group merged with the Coordination Group on Smart

Grids with having smart meter related topics covered in a sub-group and had its first meeting early 2022.

As a long-time member of both coordination groups, we continue our active role in supporting the standardisation work of CEN, CENELEC and ETSI.

Key activities with the Stakeholders for Cybersecurity Certification Group

Established by the Cybersecurity Act in 2019, the Stakeholders for Cybersecurity Certification Group (SCCG) is monitoring and supporting the work of ENISA, the European Union Agency for Cybersecurity, on new cybersecurity and certification schemes while also offering advice and assisting the European Commission in the preparation of the work programme.

A key goal of the group is to support the creation of market driven certification schemes to help reduce fragmentation between various existing schemes in Member States. As a first activity, the SCCG supported the preparation of a candidate EU cybersecurity certification scheme based on Common Criteria as a successor to the existing schemes operating under the SOG-IS MRA.

This successor has been named “EUCC” and it looks into the certification of ICT products and cybersecurity, based on Common Criteria. For us, the EUCC is the most important scheme since the Protection Profile for Smart Meters, and we will continue our active participation.



Driving the deployment of flexible demand-side resources

Demand-side flexibility will play a key role in fulfilling the EU's clean energy transition. It not only benefits and empowers consumers but also reduces system costs and facilitates renewable integration. To reap the benefits, demand-side flexibility requires customers to adapt their energy consumption in response to market signals, depending on the availability of energy generated by sustainable resources. For this to happen, consumers must be able to manage and track their energy consumption. Smart metering systems are the crucial element as they are used for measuring and communicating consumption. As such, they form the basis for a flexible demand-driven energy market.

Task force explores the next generation of smart meters

The Next Generation Smart Meter Task Force was established in 2021 to work on a new concept for smart meters in Europe. Through this task force, we are exploring what the role of smart meters in demand-side flexibility will be, how to cope with fast changing communication technologies, and the security requirements that will be needed.

To facilitate and inform our discussions, we hosted meetings with Grid Operators to explore the new "forward-thinking" architecture, receiving feedback and insights on data exchange, flexibility, interconnectivity, and cybersecurity. Using this feedback, we are working to define the use cases and technical requirements for the infrastructure of the future.

Putting flexibility at the core of the Fit for 55 Package

The revision of key legislations and new initiatives linked to the Green Deal, and the Climate Action Plan, are presented under the "Fit for 55 Package" (which aims to make the EU fit to achieve its target of reducing GHG emission by 55% in 2030).

Together with 10 fellow energy system stakeholders, we wrote to the Slovenian EU Presidency in 2021 and rapporteurs from the European Parliament with recommendations on how to improve legislative proposals to ensure the Green Deal objectives are achieved in the most cost-effective way thanks to the participation of all energy end-users.

As such, the letter highlighted ways to promote the flexible participation of buildings, industries, and vehicles in the electricity system.

So, how can we do this? In a nutshell we should:

- Equally promote the flexible consumption and storage of efficient and renewable electricity and heat both produced on-site and from the grid in all end-use sectors, including buildings and industry. This would ensure that all end-use sectors would actively support the overall system efficiency
- Equally consider the dynamic savings achieved from a flexible, time-dependent use of energy along the on-site energy efficiency improvements. This would increase system efficiency and reliability while helping to penetrate more variable renewables in end-use sectors
- Ensure smart charging for electric vehicles is deployed at least in all normal power charging points, including buildings.

We will continue to drive this message and concrete solutions to ensure that the Green Deal becomes a reality!

Advocating for fair competition in the energy industry

In Europe, companies are increasingly faced with unfair competition from third country producers in the EU market. In particular, subsidies granted by non-EU governments to companies competing in the Single Market have a negative impact on competition.

In the absence of a true international level playing field, third country producers who are subsidised by their governments and are successfully entering the EU market, can afford to compete with lower prices against European companies that are subject to EU State aid control.

ESMIG members strongly defend open markets and free competition as indispensable pillars for innovation, technology development and a well-functioning economy. However, competition needs to be fair and transparent and should take into consideration the specificities of strategically important sectors and mission critical infrastructures.

The importance of a level playing field in the energy industry

The creation of our Fair Competition in the Energy Industry Task Force in 2020, came at a crucial time.

With the publication of the European Commission's White Paper on "*levelling the playing field as regards foreign subsidies*" followed by the proposal for a Regulation on Foreign Subsidies Distorting the Internal Market in May 2021, the need to address potential market distortions as part of the updated Industrial Strategy was garnering more attention.

Considering the unfair practices that companies face from third country producers operating in the Single Market, and with risks of unfair competition closely connected to the safety of the electricity and gas grids, privacy, and data security, this Regulation has been a key focus for us. In 2021 and 2022, we published two position papers to highlight the negative consequences and risks, while also underlining where there is an urgent need to legislate and reinforce high-level standards. We have actively promoted our position to the EU Institutions, with the European Parliament and EU Council officially adopting their position in May 2022.

We supported the European Commission's proposal to introduce a mechanism of prior notification of foreign financial contributions in the context of public

procurement procedures. However, most of the European industries were excluded from this procedure with the proposed threshold, some of them being critical for the European Union. On this matter, we welcomed the references to critical infrastructure in the European Parliament's report which recognises our industry's specific situation and is a valuable improvement from the European Commission's initial proposal.

To make our position heard, in November 2021, we hosted a webinar with fellow industry associations T&D Europe and Europacable titled "Manufacturing and serving the energy transition" addressing the need to foster a strong industrial base and main Europe's leadership in technology and innovation. We welcomed a European Commission representative from DG Energy to share key findings from their annual progress report on the competitiveness of clean energy technologies.

Mojca Markizeti, Chair of our Fair Competition Task Force, joined the discussions to present ESMIG's position and highlight that it is crucial to make sure competition rules ensure a fair level playing field for EU and non-EU competitors to ensure strategic independence of mission critical infrastructure, while maintaining the privacy and data security of Europe's citizens.

We will continue our efforts to ensure that this Regulation guarantees a level playing field in the internal market for these fundamental industries for the European Union.

Padiglion
Hall

8



WE MAKE ENERGY SMART

THE EUROPEAN ASSOCIATION OF
SMART ENERGY SOLUTION PROVIDERS

www.esmig.eu · @esmig.eu



APATOR

ENERGOMERA

S.C10

Smart
Grids

BALAN

Smart
Grids

BALAN

Smart
Grids

Event participation in Europe

To expand our reach, and present our association, we participate in events around Europe. This provides the opportunity for us to not only make new connections but also highlight our activities and how we, with the crucial support of members, are advocating for a green transition that embodies smart energy solutions and empowered consumers.

EU Sustainable Energy Week webinar exploring access to energy data

On 13 October 2021 we hosted a webinar, moderated by our former Vice-President, Miguel Gaspar Silva, taking a deep dive into innovative services for empowered consumers in the energy transition and barriers preventing data-driven services.

Co-organised with European Energy Retailers (EER) and Bundesverband Neue Energiewirtschaft e.V. (bne), with the participation of SmartEn, we welcomed a representative from DG Energy, European Commission, to present actions supporting the drive for a decentralised, distributed and data-driven energy landscape.

Continuing to advocate for the smart use of smart meters, Miguel represented ESMIG at the Digital Utilities Conference in Amsterdam, 27-28 October 2021. Joining a session identifying the advantages and dispelling the myths around smart meters, Miguel highlighted the untapped functions and how to realise consumer benefits, engage consumers and make (real-time) consumption data accessible.

Highlighting the potential of an interoperable, multi-vendor smart meter and smart home

Each year we join the industry event Enlit Europe alongside our members. We presented an interoperable architecture in Milan in 2021, revealing the exciting possibilities of using meter data by displaying an interoperable, multi-vendor smart meter infrastructure that not only enables the collection of billing data but also facilitates smart meter-based grid management and provision of real-time data for consumer-focused applications.

This infrastructure is based on existing standards such as CIM (IEC 61968-9), DLMS/ COSEM, EEBUS and MBUS and shows a fully cloud-based interoperable solution

for grid operators and energy suppliers and consumers highlighting that:

- The industry has the necessary technology and solution for reaching full interoperability.
- The technology is available to securely process data from smart meters in cloud applications and manage the protection of metering assets as well as their data transfer and storage.
- Real-time consumption data feedback results in substantial savings for consumers.

As each year brings new innovation, we look forward to joining the next edition to demonstrate new technologies and solutions in our next interoperable display!

Forum session at The Smarter E Europe

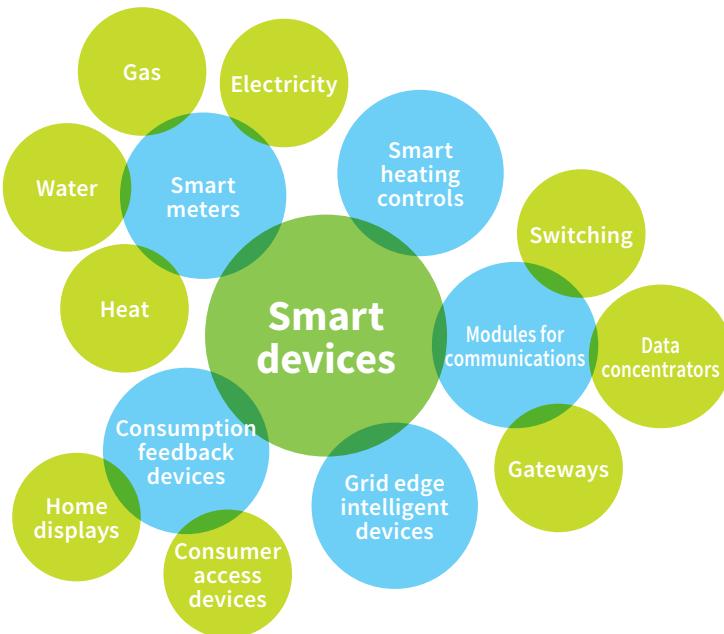
On 12 May 2022, we joined The Smarter E Europe Conference at Messe München. Moderated by our Managing Director, Tomás Llobet, we hosted a session exploring next generation smart metering technologies enabling flexible integration of metering devices alongside our members, SAP and Netinium, and ewz, Xemex, NET2GRID and SmartRED. Participants took a deep dive into how to make use of digital tools to maximise the use of smart meters and grid infrastructure for enhanced services.

Partnership with SPARK

Having first partnered with SPARK in 2021 for a session exploring the role of digital technology in enabling the shift to a cleaner energy system, in 2022, Tomás Llobet shared insights on the role of smart meters in the digitalisation of the energy market, an update on the national roll-outs of smart meters in Europe, and highlighted the untapped benefits of smart metering with recommendations on how to unlock the full potential of smart energy solutions for consumers and the energy system as a whole.

Our members in a nutshell

ESMIG member companies provide:



Revenue

Total of ESMIG member companies

€ 87.7 B

The revenue of the smallest company in the ESMIG membership

€ 6.8 M

The revenue of the biggest company in the ESMIG membership

€ 39 B

Employees

Total employees of ESMIG member companies

358 534

The smallest company in terms of employees in the ESMIG membership

14

The largest company in terms of employees in the ESMIG membership

135 000

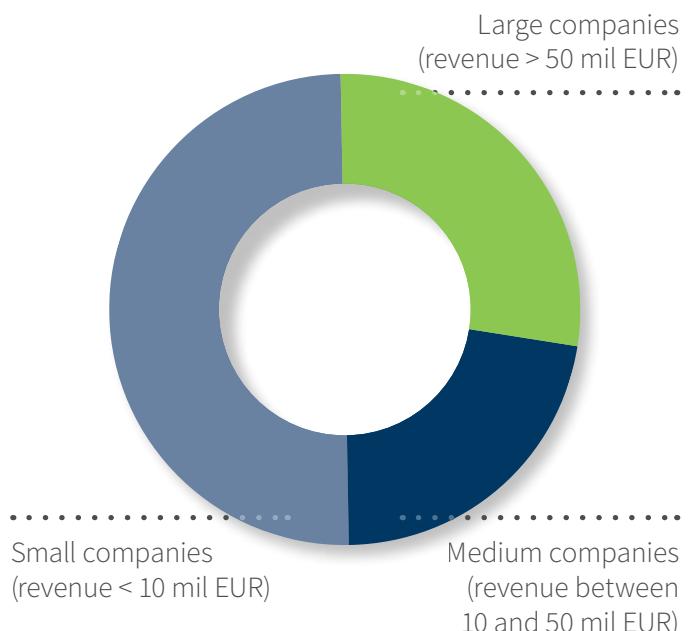
Reach

ESMIG members cover all European countries and some of them more than

180 countries globally.



Breakdown by revenue



Other facts

ESMIG member factories/software development centres/excellence centres in Europe



ESMIG member headquarters in Europe

44

17



Aidon is a leading innovator and provider of smart metering and smart grid solutions, applications and services. Making use of the latest technologies and combined with in-depth knowledge of the Nordic energy markets, they help distribution system operators fulfil their primary responsibility: to ensure reliable energy distribution to end users and also to cope with the big changes that are underway in the energy sector. Digitalisation is altering the energy market, leading to automated networks and processes. Aidon is committed to providing customers with the solutions and services they need to take advantage of a smarter grid.

www.aidon.com

Jyväskylä
Finland

Main products

- Metering as a Service total solution for electricity, district heat and water with automated processes
- SaaS and on-prem AMI head-end system with modern integration interfaces
- Energy Service Devices (smart meters) based on the most widely deployed device platform in the Nordics

- Robust and scalable IoT connectivity solutions with eSIM
- Power Grid Monitoring with embedded analytics
- Map-based solution for DSO's field work management

Markets where the company is present

EU countries: Finland, Sweden, Denmark

Outside EU: Norway

Number of employees

In Europe

65

In total

65

Highlights from the past year

- Launch of new generation 7000 series smart meter with extremely accurate sampling capability for versatile and real-time controls and diagnostic applications.
- Launch of new Metering as a Service solution based on the modern service provisioning platform developed by Aidon, the strengths of which are a high

degree of automation and an easy integration with the customer's systems.

- Launch of new Connectivity as a Service solution including a turn key IoT connectivity service agreement provided by Aidon.

- Launch of eSIM service with guaranteed reliable, flexible and operator independent IoT connectivity throughout the customers' system lifecycle.
- Beginning delivery of all the above-mentioned services and products to Finland's second largest DSO, Elenia, in September 2022.

Arkossa Smart Solutions



Arkossa is an independent personalised services provider for smart metering systems deployment, maintenance, and operations optimisation.

Their services and solutions help utility companies to overcome the recent challenges arising from the introduction of smart metering and smart grids in the electricity sector.

With hands-on field experience around smart meter deployment, and an in-depth understanding of the practicalities of deploying, optimising, maintaining, and operating powerline communications networks, Arkossa offers a unique value for providing customised services and solutions to satisfy the needs of customers related to powerline smart metering systems.



www.arkossa.com



Granada
Spain

Main products

Arkossa rolls-out smart meters with the added value of guaranteeing reachability and readability. They manage the powerline networks to keep the reachability and readability at the maximum level and operate and maintain the network with the added value of, using data analysis, identifying, and solving issues, including fraud, load-balancing, powerline, and communications issues.

Arkossa offers:

- Compliance with the regulatory framework, such as GDPR
- AMI monitoring
- Network security
- Integral maintenance of the AMI
- Operations management
- Information security and backup
- Specialised technical support
- Power quality

Markets where the company is present

EU countries: Spain, Portugal, Italy, Slovenia, Denmark, Estonia, Croatia, Rumania, Poland, Bulgaria

Outside EU: Peru, Argentina, Colombia, Israel, Qatar, Pakistan, Ethiopia, Australia

Number of employees

In Europe

38

In total

38

Highlights from the past year

- Increasing added value PLC metering roll-out services, principally in Iberia and Central-Eastern Europe, with the main DSOs in each country.

- In Iberia area, PLC optimisation and monitoring metering digital networks services allow Arkossa to be a reference in these kind of innovation services in market.



Cuculus is the key to providing utilities to all, while protecting the world's precious resources. They provide cutting-edge software and technology solutions that address the needs and challenges of utilities – and societies – worldwide. Innovative and progressive solutions meet current and future challenges of the utility industry and enable utilities and organisations to successfully transition to a new era of providing and managing electricity, water, and gas. Their state-of-the-art IoT Platform is developed for critical infrastructure and tailored to the special needs of smart metering, smart city, smart grid applications, and beyond.

www.cucus.com

Ilmenau
Germany

Main products

- ZONOS IoT Platform for electricity, water, gas and heat
- Head End System (HES) / Advanced Meter Management (AMM)
- Meter Data Management (MDM)
- Smart metering solutions: smart residential metering, industrial metering, submetering
- Smart grid solutions: distribution management, demand response
- ZONOS CollectAll for pre-payment (vending) and post-payment (billing)
- ZONOS modules for reporting, forecasting, etc.
- Managed Services

Markets where the company is present

EU countries

Number of employees

7

In Europe

88

Outside EU

15

In total

92

Highlights from the past year

- Cucus is growing continuously, both its own team, including industry-leading experts, and its partner network across the globe.
- The growth path is accelerated by strengthening its position in India and the Middle East and entering the African and Latin American market.

- To be closer to customers and partners, Cucus opened an office in Dubai (United Arab Emirates) and Johannesburg (South Africa).
- Together with local partners, Cucus is working on numerous smart metering projects worldwide addressing utility challenges.

- Cucus expanded its product portfolio by offering a billing and vending solution to protect the critical and financial assets of utility companies.

Data Communications Company



The Data Communications Company (DCC) provides the digital backbone of Britain's energy system. They have delivered a unique, secure communications platform that is now available in more than 99% of premises across Britain. It connects tens of millions of smart meters across all of Britain, supporting the nation's journey to net zero.

www.smartdcc.co.uk

London
United Kingdom

Main products

- Smart meters

Markets where the company is present

Europe

Number of employees

In total

600

Highlights from the past year

- DCC has connected over 20 million smart meters across Britain to their secure network.

This prevents the release of an estimated 600,000 tonnes of CO₂ every year.



IDEMIA provides Augmented Identity for international clients from financial, telecom, identity, public security, and IoT sectors. Serving clients in 180 countries and trusted by over 500 mobile operators globally.

With over 900 million SIM cards shipped, 100 + eSIM platform references and over 2.2 eSIM consumer transactions in 2020, IDEMIA is leading the way in eSIM and remote subscription management for consumer and M2M spaces. Benefiting from its worldwide footprint and cutting-edge security data centers in Europe and the United States. It's continuous innovation is fuelled by strong R&D investments and close partnerships in IoT/M2M - Connectivity - Biometrics – Security – Encryption – QoS – Advanced SIM & services areas.



www.idemia.com



Courbevoie
France

Main products

SIM: IoT/M2M

IoT security: IoT SAFE

Digital solutions:

Subscription Management, OTA

Markets where the company is present

Worldwide

180

Number of employees

In Europe

5 000

In total

15 000

Highlights from the past year

IoT activities

- Telefonica UK (O2) and IDEMIA are working to securely connect 23 million homes in the UK with smart meters by 2025.

- IDEMIA and Kudelski IoT first-to-market with GSMA IoT-SAFE solution.
- IDEMIA's facial recognition ranked #1 in NIST's latest FRVT test.

- GREENCONNECT by IDEMIA gives mobile operators a way to achieve sustainable connectivity.
- IDEMIA Collaborates with Microsoft to Deliver Secure, Digital Verified Credentials Solution.



Since the company's founding, Iskraemeco employees have been transforming their invaluable experience, innovation, and thorough understanding of customers' needs into comprehensive energy and water management solutions. Iskraemeco is a globally recognised brand with its solutions found in more than 80 countries worldwide. For more than seven decades, Iskraemeco has been delivering high-quality products, solutions and services that make efficient energy and water use a reality to companies worldwide. Digitalised solutions based on IoT, data lakes and smart cities give utilities the necessary data to manage energy use, anticipate demand, and optimise costs. It also helps consumers act more sustainably, while significantly lowering their energy bills.

www.iskraemeco.com

Kranj
Slovenia

Main products

- Electricity Meters (for Residential, Commercial, Industrial application, prepayment)
- Water Meters
- Communication Tools
- Data Management Solutions (Symbiot)
- Support Services
- Managed Services
- Smart Energy Solutions (Smart Metering, Energy IoT, Digital Grid, Prepayment, Smart City Solutions)
- Smart Water Soutions
- eMobility Solution

Manufacturing/assembly plants in Europe

2

Markets where the company is present

Europe

30

Worldwide

+80

Number of employees

Worldwide

1 500

Highlights from the past year

Iskraemeco continues to work on numerous projects and maintains one of the leading positions in the energy industry in Europe while further developing its operations in Africa, Middle East, and India.

Iskraemeco expanded its commercial reach by entering the new energy and water business and developing comprehensive solutions

for efficient and reliable functioning of eMobility environment.

A new Technology Design Center was established to strategically manage future technology trends, to improve design processes, to foster innovation and creative thinking, and to lead and drive the global development of new smart solutions.

As part of the operational strategy, the company is constantly investing in opening and modernisation of the local manufacturing facilities; the most recent of which is India. Iskraemeco remains one of the few manufacturing companies in Europe that produces all of its product in one place.



Itron enables utilities and cities to safely, securely, and reliably deliver critical infrastructure services to communities in more than 100 countries. Their portfolio of smart networks, software, services, meters, and sensors helps customers to better manage electricity, gas and water resources for the people they serve. By working with customers to ensure their success, Itron helps to improve quality of life, ensure safety and promote the wellbeing of millions of people around the globe. Itron is dedicated to creating a more resourceful world.



www.itron.com



Liberty Lake, WA
USA

Main products

- Metering and sensing devices
- Secure IIOT networks
- Actionable data analytics
- Smart city solutions
- Outcome-based enterprise applications
- Global delivery and managed services

Manufacturing/assembly plants in Europe

Centres of excellence in Germany, France and Hungary

Markets where the company is present

A strong presence in the Nordics, Western and Southern Europe.

Itron customers are located in more than 100 countries world-wide.

Number of employees

In total

+7 000

Highlights from the past year

Broader challenges, such as the impact of more frequent natural disasters, is changing the relationships between utilities, technologies, and communities. Amid these challenges, Itron wants to keep building strong technology partnerships to improve safety, save money and expand services for communities.

They will do this through:

- Continuing to provide solutions that empower customers' ability to harness the power of intelligent, connected devices through advanced networks and data analytics to improve the efficiency of cities and utilities.
- Continuing to build on IIOT leadership in the smart energy and smart city space through innovative solutions and enabling a large partner ecosystem to better serve customers.

kamstrup

Kamstrup is a world-leading supplier of energy and water metering solutions. Their solutions support utilities and are also applied in properties with individual metering. For 70 years, Kamstrup has delivered reliable, cost-effective ways to measure and manage energy and water consumption worldwide. By anticipating customers' challenges, they enable them to run a better business and inspire smarter, more responsible solutions for the communities they serve. Solutions include consumption meters, smart metering systems, hosting and services, analytics, and smart grid applications. All products are produced with the highest certifications for environmental safety and quality in automated production facilities in Denmark and the US.

 www.kamstrup.com

 Skanderborg
Denmark

Main products

- Consumption meters
- Meter communication infrastructure
- Meter data management systems
- Smart Grid applications
- Hosted solutions
- Operation and meter data analyses within water heat, cooling, and electricity

Manufacturing/assembly plants in Europe

1

Markets where the company is present

EU countries

17

In Europe

1 500

Outside EU

8

In total

1 500

Highlights from the past year

- Kamstrup's water solution with acoustic leak detection, including the water meter flowIQ 2200, won the innovation award Aqua Pro Gaz in Switzerland.

- Several projects were completed including a partnership with Radius where one million remote-read electricity meters were installed in Copenhagen

and parts of Zealand, becoming Northern Europe's largest roll-out of a smart metering solution.

Landis+Gyr is a leading global provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios, they deliver innovative and flexible solutions to help utilities solve complex challenges in smart metering, grid edge intelligence and smart infrastructure. With sales of USD 1.7 billion in 2019, Landis+Gyr employs approximately 5,500 people in over 30 countries across five continents, with the sole mission of helping the world manage energy better.

 www.landisgyr.eu

 Cham
Switzerland

Main products

- Utility IoT and energy management solutions
- Intelligent IoT endpoints for Residential, Industrial and Commercial segments
- Flexible communications technologies
- IoT Connectivity as a Service
- Head End Systems
- Meter Data Management
- Managed Services (SaaS, MaaS, professional Services)
- Grid Edge Solutions
- E2E security solutions
- Advanced Load Management
- Training

Manufacturing/assembly plants in Europe

Corinth (GR), Montluçon (FR), Nuremberg (DE), Stockport (UK)

Markets where the company is present

EU countries

Outside EU

Number of employees

14 **5 700** employees worldwide
13

Highlights from the past year

- In France, more than 31m Linky smart meters were installed with a further 11m to be deployed, until 2026, to Enedis, overseas territories and medium utilities. Landis+Gyr will supply, as one of the 3 suppliers, approximately 20% of the volume.
- In Germany, Landis+Gyr has launched Infrastructure-as-a-Service to serve small and medium sized utilities.

- Landis+Gyr is strengthening its leading position in Managed Services by extending several customer contracts in Finland and broadening its customer base in Sweden and Denmark.
- Landis+Gyr AG and Google Ireland Limited (“Google Cloud”) have signed a strategic, multi-year partnership to accelerate Landis+Gyr’s transition to the cloud and co-innovate new products and services.

- Landis+Gyr and Vodafone Business announced partnership to deliver innovative cellular IoT capabilities for energy management.
- Landis+Gyr has earned the Gold Recognition Level in EcoVadis Sustainability Rating and scores Among Top 5% in the industry.

Logarex Smart Metering



Logarex Smart Metering is a Czech company established in 2011. Their main business scope is the development, production and supply of smart metering solutions, including the measurement, processing and transfer of data, offering complex, custom-made solutions according to customer's demands.

They are a member of professional associations, such as The Electrical and Electronic Association of the Czech Republic (EIA), Forum für Netztechnik/Netzbetrieb im VDE (FNN) and International Chamber of Commerce - Czech Republic (ICC Czech Republic).

www.safemeter.com

Prague
Czech Republic

Main products

- Electricity smart meters
- Software Solutions, Support Services, Charging Stations

Markets where the company is present

Czech Republic, Germany, Austria, Slovakia, Hungary, Bulgaria

Number of employees

In total

14

Highlights from the past year

- Next Generation Smart Meters

LUNA ELEKTRİK ELEKTRONİK SANAYİ VE TİCARET A.Ş



The corporate group including LUNA was founded in 1991, in the business of design and manufacturing of electronic circuits and products for controlling and measuring electrical energy.

LUNA carries out its design and production of electricity meters, the development of software and hardware for the communication between the meters, in its own registered R&D Centre and warehouse in Izmir, Turkey.

Currently with a monthly production rate of 400.000 meters, it is the biggest supplier to the public and government metering needs in Turkey with its ready plug n play smart grid solutions as a complete system for electrical energy management as well as water metering solutions.



www.lunatr.com



Izmir
Turkey

Main products

- Electricity Meters for Residential, Commercial, Industrial Applications
- Smart Electricity Meters
- Water Meters
- Operation and meter data analyses within electricity and water
- Meter Data Management Systems
- Head End Systems

Manufacturing/assembly plants in Europe

Izmir, Turkey

Markets where the company is present

EU countries

10

In Europe

10

Outside EU

48

In total

Number of employees

750

Highlights from the past year

Blueport: Meters can be read via optical port. This device has both optical port and also a bluetooth connection. Thus, meters are read via bluetooth hand held terminals. Luna also has a mobile application which is used as a hand held terminal.

IDIS/SML: Luna already have DLMS certification, working on both IDIS and SML protocols.

STS: On the water meter side Luna has STS certification, working on it for

the electricity meter side as well.

NBIoT: Luna is ready to promote their NB-IoT solutions.

Prevent Tampering: There are various tampering methods. On the east side of the Turkey Luna has prevented more than 60% of tampering attempts.

Medium Voltage Line Tracking: This is a special project where a device with rf, tracks consumption

of medium voltage line. There is a mechanical clamp to attach on the line.

Street lighting: Luna has street lighting solutions with dimming option communicating via PLC.

Monophase Meter Without Notr Connection: Luna is working on a project where the meter will continue to measure the consumption even if there is no notr connection.



Meter&Control manufactures state-of-the-art AMI devices and software for smart energy management in industrial and residential environments. Established in 2008, the entire research, development, production, testing and verification process takes place at their integrated facility in Belgrade.

Their broad range of products features integrated and modular smart electricity meters with PLC, G3-PLC and GPRS/3G/LTE communication, modems, disconnectors, data concentrators and gateways, as well as AMM/AMI software. Products are compliant with the leading industry standards and certificates, including IDIS 1/2, MID-B, MID-D, METAS, G3-PLC and DLMS/COSEM.

Meter&Control solutions support utilities in their efficiency and sustainability goals and help them to keep the pace with fast transitions in the energy market.



www.meterandcontrol.com



Belgrade
Serbia

Main products

- Integrated and modular smart electricity meters
- Communication modules
- Disconnectors
- Data concentrators
- HES software
- Solutions for local reading and parameterisation
- Smart public lighting solutions

Manufacturing/assembly plants in Europe

1

Markets where the company is present

EU countries: Romania, Slovakia

Outside EU: Switzerland, Serbia, Montenegro, Bosnia and Herzegovina, Russia, Kazakhstan, Azerbaijan, UAE, Bahrain, Colombia

Number of employees

In Europe

100

Highlights from the past year

- Development of sLUMEN smart public lighting solution.



The Netinium smart energy platform delivers exceptional cost savings to grid operators, energy retailers and third-party service providers that need to deploy, control, and operate multi-vendor, multi-utility smart metering and smart grid infrastructures. This next generation head-end system offers high quality data collection, comprehensive device management, industry-strength security and extensive automation. It readily integrates with third party software like SAP, MDM's or data analytics applications using industry standard interfaces and enables customers to optimise their IT-stack to process and fan-out massive amounts of data to various end-points. With the Netinium smart energy platform customers are able to address the smart grid evolution with less complexity, less integration and less operational costs than operating multiple head-end solutions.

www.netinium.com

Wormer
The Netherlands

Main products

The Netinium smart energy platform

Markets where the company is present

EU countries: Europe

Outside EU: Middle East, Africa

Number of employees

In Europe

25

In total

25

Highlights from the past year

- Building on over 20 years of R&D, Netinium enables you to take control of your smart meter network and monitor your LV power grid.
- Netinium reached 5.7 million fully managed smart meters and is adding 3000 more each day.

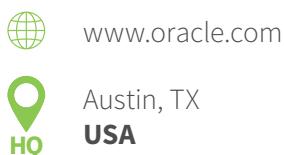
Oracle Energy and Water



Oracle Energy and Water delivers proven applications on-premises or in the cloud including electric, gas and water utilities worldwide, achieving performance excellence. Through the new Oracle Energy and Water brand, they are broadcasting commitment to do more when it matters the most, driven by the mission to provide the best set of solutions to the world's water and energy challenges.

Their customer, network, work and asset, mobile workforce, meter data, analytics and project management solutions integrate with Oracle's leading enterprise applications, BI tools, middleware, database technologies, servers and storage.

As the largest provider of cloud services in the industry, serving the utility value chain from the grid to the meter to end customer, their software enables customers to adapt more nimbly to market deregulation, meet ever-evolving customer demands, and deliver on environmental conservation commitments.



Main products

- Advanced Metering Solution (AMS)
- Advanced Metering Infrastructure (AMI) Analytics
- Advanced Meter Solution Clouds Service (MSCS)
- Smart Device Management
- Customer Cloud Service (CCS)
- Customer to Meter (C2M)
- Digital Self Service
- Customer Experience
- Analytics Insights

Markets where the company is present

Worldwide

Number of employees

In total

135 000

Highlights from the past year

- In 2021, Guidehouse named Oracle Utilities the leader in smart meter analytics.
- Latest Oracle Utilities Application Framework 4.4.0.3.0 released incorporating new features available for Oracle Utilities products.

Sagemcom Energy & Telecom

Sagemcom

Sagemcom Energy & Telecom concentrates Sagemcom's expertise in telecom and metering, enabling the supply of customised connected systems to utilities, telecom operators and services operators worldwide. Thanks to the talents of its R&D and its industrial capacities, Sagemcom Energy & Telecom operates in smart meter, smart grid, smart sites, smart infrastructure, and smart services markets. The combination of these activities allows addressing increasing needs of verticals markets and allows Energy & Telecom Business Unit to propose efficient end-to-end turnkey solutions through its high value-added equipment and platforms making easily smart environments a reality.



www.sagemcom.com



Rueil-Malmaison
France

Main products

- Electricity
- Gas and Water Smart Meters
- Communication modems
- Data Concentrators
- Head-End System
- Meter Data Management
- Energy Gateways
- Smart Grid sensors
- Energy Management Consumer devices and sensors

Manufacturing/assembly plants in Europe

Dinan (France), Rostock (Germany), Citta di Castello (Italy)

Markets where the company is present

EU countries

18

5 500

employees worldwide

Outside EU

19

Number of employees

Highlights from the past year

- In 2021, Sagemcom was awarded the second phase of the ESM meter roll out in Ireland and supplied Siconia™ Head-End System and Electricity Smart Meters.
- In 2021, Fluvius selected Sagemcom's electricity and gas smart meters for its second phase of the smart meter deployment beginning in 2023.
- In 2021, Sagemcom was selected by Liander to supply SMR5 next generation smart electricity meters in The Netherlands.
- In 2022, Sagemcom's Siconia™ Software Suite (HES + MDMS) was selected by Groupe E in Switzerland to deploy an end-to-end smart meter solution.



SAP is the leading provider of premise and cloud-based utilities solutions worldwide. SAP for Utilities solutions help improve operational efficiency, mitigate risk, and increase profitability, helping clients gain enterprise-wide visibility for better decision making and improved responsiveness in mission-critical areas. More than 4,600 utilities, in over 118 countries, in power generation, transmission, distribution, retail, gas, water, waste and recycling run SAP Utilities software focusing on improving energy efficiencies and sustainability.



www.sap.com



Walldorf
Germany

Main products

Enterprise Asset Management

- Portfolio and Project Management
- Asset Operations and Maintenance
- Asset Performance Management
- Asset Collaboration
- Environment, Health and Safety

Metering

- Device Operations and Maintenance
- Meter Reading and Energy Data Management
- Utilities Planning and Analytics

Customer Experience & Service Excellence

- Marketing as Growth Driver

- Customer Service Excellence
- Empowering Sales to Sell More
- Omnichannel Commerce

Bill to Cash

- Billing of Energy, Water and Services
- Revenue Management for Energy, Water and Services
- Subscription Management

SAP Cloud for Utilities

Procurement and Networks

Cloud and Data Platforms

Internet of Things (IoT)

Human Resources

Finance

Analytics

Manufacturing/assembly plants in Europe

SAP has locations of SAP offices in **130** countries

Markets where the company is present

SAP serves +440 000 customers in +180 countries and has locations of SAP offices in 130 countries.

Number of employees

109 798 employees worldwide

Highlights from the past year

SAP Utilities Core, the centerpiece of their offering, can be consumed end-to-end in the cloud, in a modular way, integrated to the SAP S/4HANA for Utilities On Premise suite. It provides seamless integration of the

relevant end-to-end processes.

More details to come during 2022.

Sustainability is a core value at SAP! The cloud-based software **SAP E-Mobility** joins the family

of solutions helping customers achieve their decarbonisation goals. It provides a complete package to Charge Point Operators CPOs to run the business efficiently and effectively.



Sense's mission is to reduce global carbon emissions by making homes smart and efficient. They empower people to care for their homes and families while contributing to a cleaner, more resilient future.

Sense uses machine learning technology to provide real-time device detection and insights, even for those devices that are not "smart."

Customers rely on Sense for a wide range of uses including monitoring their home appliances, determining whether they left appliances running and identifying how to reduce their energy costs. For energy suppliers and grid operators, Sense's artificial intelligence helps engage customers, enables flexibility at the grid edge, identifies anomalies on the network, and reduces operating and power costs.

Sense runs from a single monitor attached to the consumer panel or as software provided on next generation smart meters.



www.sense.com



Reading
United Kingdom

Main products

Real time energy intelligence for the home

- Improved customer engagement and satisfaction with real-time, detailed device detection, consumption insights, and in-home intelligence
- Flexibility behind the meter with Behavioural and Automated Demand Side Response

- Detection and geolocation of faults on the grid e.g. vegetation brush, faulty components
- Enhanced demand forecasting for grid operators and energy suppliers
- Improved consumption reduction for mandated energy efficiency programmes

Markets where the company is present

EU countries: Netherlands, Germany, Spain, Austria, Switzerland, Italy

Outside EU: United Kingdom, United States, Japan, Middle East and Australia

Number of employees

In Europe

7

In total

90

Highlights from the past year

- In April 2022, Sense announced a \$105m Series C investment led by European investor, Blue Earth Capital.
- Start Up Energy Transition (SET) selected Sense as one of the world's top 100 energy start-ups of 2022.
- Sense expanded its operations to APAC.



Sigma Telas, founded in 1992, is a smart metering and AMI/MDM software developer and system integrator, with extended expertise in large-scale projects. Sigma Telas have their own software product - EMCOS Corporate.

Reference projects include four National level systems: Transmission System Operator LitGrid in Lithuania, national electricity operators BelEnergo in Belarus, Transmission System Operator KEGOC in Kazakhstan, national system in Kyrgyzstan, large installations for electricity, gas and heat distribution companies, national railway companies, large industrial corporations, telecommunication companies and retail chain operators.

Sigma Telas has over 700 implemented projects, with more than 400,000 meters in bigger projects. System capability - up to 20,000 000 meters.

www.sigmatelas.eu

Vilnius
Lithuania

Main products

EMCOS Corporate HES/AMI/MDM software

Markets where the company is present

EU countries: Lithuania, Latvia, Estonia

Outside EU: Kazakhstan, Kyrgyzstan, Uzbekistan, Ukraine, Turkmenistan

Number of employees

In Europe

48

In total

48

Highlights from the past year

- Among the completed projects, there are many significant corporate systems. These are projects implemented in big energy companies, large enterprises (e.g. Oil refinery, chemical industry), railroads (e.g. AB Lithuanian railways), supermarket chains (Maxima in Lithuania, Latvia and Estonia).
- In addition, there are systems of mobile communication providers

with hundreds and thousands of connected sites: in Belarus at the mobile communication provider Velcom (up to 7,800 sites), in Lithuania (communication provider Omnitel, now Telia), in Uzbekistan at UzbekTelekom (up to 4,000 sites) and UMS (up to 6,000 sites).
In Kazakhstan, Sigma Telas has installed systems in Kazakhmys Corporation (includes mining

companies, metallurgical plants, power plants and cities), oil companies and power plants.

- The Sigma Telas EMCOS Corporate solution supports more than 390 types of meters and data concentrators and supports 7 languages (Lithuanian, English, German, Polish, Ukrainian, Uzbek and Russian).



As a global leader in digital security, Thales connects and secures billions of assets in sensitive sectors including banking and aerospace. Thales solutions have already been deployed in millions of smart meters and energy assets around the world.

Thales's dedicated smart energy offer encompasses future-proofed cellular connectivity and cybersecurity solutions to connect, protect and easily manage massive smart metering deployments.

Latest cellular connectivity innovations ensure reliable data transfer among connected assets as well as highly flexible connectivity management. Thales leverages leading-edge authentication and encryption technology to protect energy assets and ensure integrity and confidentiality of the data they exchange.



www.thalesgroup.com



Meudon Cedex
France

Main products

- Cellular connectivity modules (incl. LTE-M and NB IoT modules)
- Dedicated IoT eSIM, Remote connectivity activation and provisioning
- Trusted Key Manager (incl. digital ID generation & provisioning, access credential management, data encryption, award-winning HSM)

Manufacturing/assembly plants in Europe

24

Markets where the company is present

EU countries

27

Outside EU

+180

Number of employees

81 000

employees worldwide

Highlights from the past year

- Thales has been supporting smart meter manufacturers, DSOs and utilities for a quarter of a century, with solutions deployed globally.
- Thales has been holding the Chair position of ESMIG's Data Communication and Privacy group over the past few years.

- Thales is actively pushing a revolutionary **Connectivity Activation** solution that introduces the best of eSIM features to the metering field. This **greatly simplifies connectivity deployment** and reduces meter variants while optimising

manufacturing, installation and maintenance, with a one-fits-all connectivity solution.

- Thales's offer strengthens reliability, mitigate risk, and simplify deployments and lifecycle management.



Ubiik is a global IoT solution provider with expertise in LPWAN, cellular connectivity and services to cover the multi-modality of the IoT market. Ubiik has the most comprehensive range of connectivity services, including Weightless™ LPWAN and LTE technologies, which have already been successfully utilized in AMI projects across Asia. From data collection to data analysis, and from meter reading to energy management, our expertise ranges across the entire smart grid value chain, with more than 300,000 meters connections already deployed. Ubiik is also committed to providing vertical solutions for a variety of industries, such as utilities and energy management.

www.ubiik.com

Taipei
 Taiwan

Main products

- Smart metering
- AMI solutions
- IoT network solutions
- Energy management solutions
- LPWAN and cellular connectivity services
- Head End Systems
- Meter Data Management

Markets where the company is present

EU countries: France

Outside EU: Taiwan, US, Japan, India, UK

Number of employees

In total

95

Highlights from the past year

- Announcing world-first release 15 LTE-M/NB-IoT Small Cell for private networks.



Wirepas is changing the face of IoT. To set a new standard. To get infinitely scalable connectivity. Gentle on your wallet and way better than cellular 5G. In a network that never fails. Without middlemen or infrastructure. Totally self-managing. Tailored for commercial and industrial applications. Just more than you need. For less. Wirepas gives you very very good IoT.

www.wirepas.com

Tampere
Finland

Main products

Wirepas Connectivity Suite combines field-proven mesh with built-in end-to-end services. The connectivity suite comes in 3 different profiles to best fit clients' needs:

- **5G Mesh** pushes the boundaries of massive IoT with even more reliable and cellular-grade mesh-based communications, based

on the new global IoT standard, DECT-2020 NR.

- **Mesh 2.4GHz** uses the 2.4GHz global spectrum and support for low-power or low latency use cases.
- **Mesh Sub-GHz** are designed for long-range and reliable application in the ISM Sub-GHz bands.

Markets where the company is present

EU countries: Germany, Finland and France

Outside EU: Australia, India and USA

Number of employees

In Europe

61

In total

69

Highlights from the past year

- Wirepas Massive is the foundation for the world's largest mesh network: 920 000 smart meters in an infrastructure free communication network in the Greater Oslo Area in Norway.
- Wirepas Massive is one of the leading technologies connecting smart meters in the fast-growing market in India.
- As the main contributor to the DECT-2020 New Radio standard in ETSI and ITU, Wirepas develops a new generation of autonomous and decentralised communication layer fitting the needs of active grid management, smart metering, and distributed energy resource integration. First research projects in the area of solar integration are underway.
- Wirepas is acting as the validator within the Energy Web Foundation. It contributes to an energy blockchain standard by adding decentralised communication networking to decentralised settlement ledgers.



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Design by lyon.nu



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