

Electric mobility to accelerate the energy transition

3-3 | DMA EU (former EU24)

We actively promote electric mobility as a key factor in reducing road transport emissions and contributing to the achievement of the European Union's energy efficiency goals.

Mobility is also a critical aspect of social inclusion and an important determinant of human well-being, especially for disadvantaged groups. Indeed, recognized as an essential service in the European pillar of social rights, transport meets a fundamental need in enabling citizens to integrate into society and the labor market.

We believe that an ecosystem of interconnected, intelligent products and services needs to be developed to

spread the world of e-mobility. Our aim is to improve, simplify and make the world of e-mobility accessible, and to do this we have developed smart charging solutions to suit every need.

Our journey in this direction started a long time ago, but in 2022, in order to cater to the rapidly growing market, we decided to create a separate Business Line, Enel X Way, fully dedicated to the expansion of infrastructure for charging electric vehicles, the development of advanced charging technologies and flexible solutions to improve the customer experience and support the electrification of transport for consumers, businesses and cities.

New frontiers of electric mobility: e-boating in Portofino

Lorenzo Rambaldi

Head of Innovability Enel X Way



"Through this installation we give continuity to our project of having a comprehensive infrastructure for the marine sector, both on the sea and on the lake. Equipping ourselves with these new technologies allows us to enhance the area and increasingly turn our sights toward sustainable tourism."

Our goal is to make electric mobility affordable and increasingly efficient, including in areas such as:

- **Urban Air Mobility (UAM):** we have signed an agreement with Urban V, the company founded by Aeroporti di Roma, to develop efficient and effective charging solutions for electric vertical take-off aircraft, the air mobility of the future;
- **electric boating:** we have developed charging infrastructure for electric boats now present in Portofino and Cernobbio (Italy) and on Lake Tahoe (California).

The electric boating market is booming, driven in part by increasing customer interest in sustainable tourism that reduces air and noise pollution, among other things.

It is precisely in this context that Enel X Way's initiative to support the Ligurian municipality's "Portofino Carbon Free" project was born, thanks to which a fast charging infrastructure for electric boats located at Molo Umberto I is now operational. This initiative represents a tangible sign of Enel X Way's commitment to an increasingly sustainable future for the area.



The transition to a decarbonized economy passes through sustainable transport for all

The full transition to e-mobility will only be possible through the widespread deployment of safe, reliable and user-friendly charging stations. This is why we have developed a wide range of public and domestic charging infrastructures, capable of charging electric vehicles anywhere at any time. We have also developed a business model that spans from the installation and management of charging points, the so-called **Charging Point Operator (CPO)**, in which we already rank among the most pervasive companies in the world, directly managing more than **22.6 thousand public charging points**, the provision of direct electric charging services to end customers (**Mobility Service Provider – MSP**), through more than 260,000 charging points, accessible through the Enel X Way APP™. Our solutions **in the public sector** are the **Enel X Way Waypole™**, for charging up to 22 kW in alternating cur-

rent, while for electric mobility on roads with a high volume of traffic, we have launched the **Enel X Way Waypump™**, which, thanks to a modular approach, can reach powers of up to 350 kW⁽⁵⁾ in direct current, enough to charge an electric vehicle to 80% in about 15 minutes.

In the **private sector**, on the other hand, we have developed the **Enel X Way Waybox™** to meet domestic charging needs. This can detect the consumption of other household appliances connected to the home meter, so that the maximum available capacity is never exceeded. In the world of relevant business offerings, there is the Set&Charge solution, which enables the creation of shared value for our B2B customers, allowing them to turn their charging infrastructure also into a source of revenue by making it available to the public and setting their own service tariffs.



Guillermo Fumanal Achon

Head of Sustainability Enel X Way



Circular by design by Enel X Way

“Circularity is a natural feature of our design, as we know that the use of innovative and sustainable materials increases the resilience of our product supply chains, mitigates impacts on the geopolitical and social front (less need for materials, less exposure to the risk of human rights violations), and finally allows us to foreshadow ourselves as a Net-Zero company.”

The Group’s circular strategy is also applied in Enel X Way. Our main AC charging products use recycled polycarbonate as the main material (100% for Waybox and 75% for Waypole). In addition, we have optimized the use of raw materials on our Waypole™ and have reduced the overall product weight by about 32%.

Another example of a circular solution we have implemented is the recovery through remanufacturing of end-of-life components to be reused as spare parts.

(5) For vehicles with 800V batteries (under the plan only Audi, Kia, Hyundai, Genesis, Porsche, Volvo, Polestar, Stellantis, General Motors, BYD and Lotus have so far announced or launched electric cars with this feature).

Increasingly inclusive mobility

There is no real revolution in mobility if it is not truly accessible to everyone. That is why we promote and devise solutions that solve all mobility needs, so that even people with disabilities or reduced mobility conditions can benefit freely and independently from the opportunities offered by modern e-mobility, starting with the charging infrastructure. Our charging points dedicated to electric vehi-

cles can now also be used to charge electric wheelchairs, thanks to our **Enel X Way Wayability** device, a charging cable that enables use of the same infrastructure dedicated to electric cars. In this way, can take advantage of any charging point by booking through our app in the same way as for electric cars.

Creative common Universal Design

When it comes to designing electric car charging points, we cannot overlook motorists and passengers with reduced mobility. This is why our infrastructure has been redesigned in cooperation with ANGLAT (National Association of Transport Handicapped Drivers) on the basis of an inclusive design, called **Universal Design**, which provides parking stalls with an additional signposted maneuvering area for wheelchairs and bollards to protect the charging stations from impacts resulting from any incorrect and accidental maneuvers. In addition, the charging cable is lighter, so that it can be handled more easily by wheelchair users.



On the occasion of the International Day of Persons with Disabilities on December 3, 2022, we made the intellectual property of Universal Design accessible for free, allowing anyone to download our guidelines directly from our website.

E-mobility Emission Saving

Over the past year, Enel X Way has adopted the calculation methodology of the “**e-mobility Emission Saving Tool 4.0**” version, the tool developed to provide evidence of the organization’s commitment to sustainable mobility through the electrification of the vehicle fleet on the road. The algorithm was certified by RINA on December 28, 2021 according to the principles set out in the UNI EN ISO 14064–2:2019 Greenhouse gases Part 2 standard. In version 4.0, the tool has added, compared to

the previous version, quantification of the environmental benefit in terms of CO_{2eq} (CO₂, CH₄ and N₂O) savings. Version 3.0 of the tool already made it possible to determine the savings, generated by the distribution of public and private charging stations on the territory, of CO₂, equivalent trees per year, pollutants (NO_x, PM_x), noise and the associated economic quantification on health and environment. Compared to 2021, there has been an increase in the energy delivered by charging stations resulting in a significant increase in CO₂ savings, due to the increased deployment of both electric vehicles and Enel X Way’s public and private charging points connected to the grid.