Philipppe Piron  GE Vernova - CEO of Electrification Systems

Our future is electric. What is electrification? It is about the process, substituting technologies, empowered by fossil energy with technology that use electricity. On the left side of this page, as you can see, 2 major domains at the center of electrification. Power grids, the electro-digital networks transferring and distributing electricity and Power-to-X, the electrical conversion storage and reconversion to other kind of energies, both addressable markets by GE Vernova growing double-digits. Reaching a decarbonized world with the net zero energy systems requires to mobilize several levers to reduce the 50 gigaton of CO2 equivalent emission before 2050. Electrification is serving each of these critical CO2 reduction drivers.

Let me providing some examples here on the right side of this page. First, for generation decarbonization, 26% of emission to be reduced. Electrification is obviously allowing renewable distribution and transmission and securing the grid to integrate this intermittent variable energy resources. Energy efficiency, 23% of emissions to be reduced. The less polluting and the most affordable energy is the energy you do not use. Through automation and digitization, electrical devices can set up to 20% and even 30% of energy consumption.

Third, electrification of the end use. Electrification allows obviously to convert heavy-duty industries and transportation to electricity. And allow as well the access of power, as mentioned, Scott, to new exponential demand like data centers. And finally the fuels, green hydrogen and its derivative, addressing the remaining 29% emission very hard to abate, for which electrification is allowing to provide the micro grid or the power conditioning systems for electrolyzer or carbon capture systems.

Overall, electrification is the backbone of the energy transition towards this net zero energy system and this is why we are benefiting from this fantastic growth. From $75 billion in 2022, we expect the addressable market by GE Vernova to more than double in 2030. GE Vernova is covering the full value chain of electrification from the point of generation to the point of consumption. I must admit we have a unique positioning here. Our equipment evacuates the electricity from conventional power plants or renewables transmitted at international or national level with high-voltage direct current or alternative current transmission systems and it flows afterwards to the distribution grid at regional or local level, to finally being converted into other kind of energies necessary for each end use. For instance, mechanical energy with electrical motors, thermal energy with electrical furnaces, chemical energy with battery storage or electrolyzer.

On power grids, orchestration allows to monitor and to conduct the full infrastructure. We are strong on grid transmission and primary distribution, but we are leading edge on grid orchestration and digitization to supervise electrical networks, which are becoming more and more complex.

From where it comes exactly this current outstanding growth. Well, obviously, it is fueled by the imperative of energy transition with the rise of the low carbon intensity energy for sure. but as well energy security. Think about the Ukrainian and Russian conflicts, 1,400 cyber attacks on the Ukrainian
grid only in 2022. At the moment, more than 50% of the transmission substation in Ukraine has been destroyed by Russian missile, far beyond any attacks on the Ukrainian power plants. The grid is a vital infrastructure for national security. No transmission, no transition. No energy resiliency, no energy security.

The second big growth driver behind that is obviously the need for grid stability and flexibility in use by the renewables. Viable energy resources in use and intrinsic instability of frequency and voltage into the grid, which could lead ultimately to blackout. This is why reinforcing the grid with different kind of equipment, energy storage, power for control, reactive power equipment is mission critical to restore this equilibrium.

And finally, the most obvious growth driver. The global increasing demand for electricity accounting for 20% of world energy consumption in 2022. Electricity would reached 50% in 2050 to reach the net zero objectives.

To capture efficiently this profitable growth, GE Vernova is committed to develop top-notch technologies that allow us to secure a leading-edge positioning. On the top side of this page, for power grids, we developed 2 gigawatt bipole HVDC system, a full range of grid stabilization solution, and we offer SF6-free switch gears, contributing to set the standards of the grid industry.

Last year if you remember we deep dive into our technological platform for HVDC. And 3 weeks after the Investor Day, we were very pleased to be awarded 5 major HVDC deal for the North Sea with TenneT the Dutch and German transmission system operator. This year, early this year, we have been awarded by National Grid U.K. EGL1 and we continue to develop a very solid pipeline of opportunities in Europe, but as well in the U.S.A and in India.

Regarding grid stabilization, we are now offering the most advanced technology, grid forming controls, and super capacitors for STATCOM. And when it comes to sustainability, we have been one of the first to offer high-voltage switch gears, not using SF6 analytical isolator used by OEMs, but a very important gas for the planet.

If we switch now to the bottom side of the page, Power-to-X, which is critical for decarbonizing end use. We are a core leader worldwide on converters for green steel electric arc furnaces. Our converter allows these giant furnaces to connect directly to the grid without creating electric harmonic pollution which is the regulatory obligation and as well, which allows the end user to save on power and on electrodes in the furnace.

Another example of our innovation is about marine electrification. We are going to disrupt the marine motorization, choosing power electronic drive and the motor into a very compact integrated electric network topology. We envision to save, thanks to this technology up to 70% of the footprint on the shift and 50% of the cost for the customer. And we continue just need to upgrade our battery storage solution with grid forming controls and a more flexible battery management system.
As you can see, GE Vernova renews its technological platforms to stay at the forefront of innovation. But innovating will be not enough in front of the outstanding growth. Today, we also invest in our industrial capacities and engineering capabilities to meet customer expectations. First, deploying our lean operating system for sure, to reduce our lead time like we did in 2023. We achieved 35% lead time reduction in Charleroi, for instance, one of our factories in U.S. in Pennsylvania to fulfill the accelerating demand, especially here in the U.S. market and simultaneously to reduce our cost and to expand our production output.

Second point, investing in our plants like Stafford, this UK site you've seen in the little video, to double our manufacturing capacity of both HVDC valves and transformers. And by redesigning the shop floor layout, adding a new production line, and modernizing our high voltage test laboratory.

Finally, growing services would be very important in growing services more aggressively for this segment. Debottlenecking our service workshops and enlarging our range of offering with more advanced services like asset performance management. Digital, indeed, another exciting domain of investment is our Electrification Software activities, for which Scott Reese is going to provide us an illustration, but first, a short video.

Philippe Piron GE Vernova - CEO of Electrification Systems

Thanks, Scott. During 2022 Investor Day, we promised to deliver a more acceptable financial performance for these electrification assets. Today, I'm very pleased to say that we overachieved this first objective, even better than the mid-single-digit revenue growth and modest profitability indicated during last year's Investor Day.

As you can see, on the left side of the page. This recovery has been based obviously on growth, thanks to a buyer market, which has become a seller market but also based on selectivity and premium pricing, more productivity and cost out, supported by a decentralized, more accountable organization and lean deployment. Having the benefit a very strong tailwind from a strong market growth is nice. But what really makes the difference is the action you are making with it.

To stay very simple. Over the last 2 years, we only booked the deals we liked and the deals we were capable to pursue and to execute. And in parallel, we contain our variable costs by redesign to cost to product and improving the labor efficiency and continue -- continuously reducing our fixed G&A costs. And the result is there on the right side. From a negative 9% adjusted EBITDA margin in 2021, we reached approximately 4% positive EBITDA margin in 2023. An improvement of 13 points from minus $0.5 billion to plus $0.2 billion adjusted EBITDA, while our revenues have grown by 25% between '22 and '23.

In 2 years, we've gone from a loss making business to a profitable business on a very strong growth trajectory.
And in parallel, we built a more resilient, better quality equipment backlog for the future while executing diligently or legacy lower-margin business. As Scott said, one of the most important indicator for profitable growth is the quality of your backlog.

And we focused over the last 2 years to build a new backlog, underwriting deals with better pricing -- much better pricing, more favorable conditions, T&Cs, liabilities, better protection and inflation, and at the same time lowering the execution risk exposure we have, both contractually and technically.

On the left side of the page, you can see that we more than double our backlog going from $5 billion to $13 billion in 2 years, while sequentially improving our margin up to 6 points in 2023 compared to 2021. Our book-to-bill ratio has improved in a similar way, giving always the priority to pricing, better T&Cs, margin quality versus the pure search of the volume.

On the right side, our backlog has now a longer convertibility profile and more than 50% to be converted over the next 2 years. It provides a significant visibility for future revenues. Our ambition is to continue in 2024 and the year after to build this backlog with the same quality. And we think that we have a unique opportunity because all our customers are claiming for more deliveries and even faster deliveries. So we are doubling down on deploying lead time reduction, productivity and capacity extension to serve this future growth. From a past highly cyclical and turbulent business, we are now offering a sizable long-term revenue and high-margin visibility.

As a conclusion, I would say that 2023 was a great year for the Electrification segment, no doubt. We grew revenues by double-digits and reached our first profit in a very long time. I'm very proud of what has been accomplished by all our teams. But it is only the true story, the true start of this story.

What is our vision? This profitable growth should keep on accelerating. Our guidance for 2024 is low-double-digit revenue growth and mid-single-digit adjusted EBITDA margin. The demand growth should remain strong at least for the next 5 years. And the megatrend for Electrification favors a bullish cycle for the next 2 decades, that's really exciting, our increasing backlog, both in volume and higher margins to secure these targets. Margin expansion will highly benefit of both volume and pricing sequential improvement in '24, but as well in '25 and the year after with even more profitable growth. We stay committed to delivering a predictable long-term value in a fast-growing market. And remember, our future is electric. Thank you.