



EDMOND  
DE ROTHSCHILD

# MORE AUTONOMOUS, LOCAL AND GREEN ENERGY SOURCES



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- Europe is accelerating its transition to a low-carbon economy. In 2021, the European Union revised the emission-reduction targets of its climate plan from 40% to 55% of 1990 levels, to be achieved by the end of the decade. On March 23, 2023, the EU Council and Parliament reached an agreement to raise the share of renewable energies to 42.5% of the EU's end use energy consumption by the year 2030, a giant leap from the 20% set in 2020.

Furthermore, the war in Ukraine has also prompted political leaders to work towards energy self-sufficiency in Western and Central Europe.



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In view of all these factors, there is a real need to significantly increase the renewable energy production capacity in Europe in the coming years. But while institutional investors are rightfully enthusiastic about renewables, there is an important feature of energy provision that often gets overlooked. This is the need of heavy industry and households for reliable supply of energy that matches their consumption profile. And this includes not only electricity, but also heat which represents circa half of the end energy use today.

Popular renewables such as wind and solar only produce electricity intermittently. In the absence of greater grid connectivity and long-term storage (hydro being limited by droughts), factories and households cannot depend on them completely, hence they resort to either gas-powered turbines to match electricity demand, or to demand-side management, as pitifully evidenced last winter. On the heat side, this is even more critical, as 70% of Europe's need is still currently met by burning oil, coal and gas.

At Pearl Infrastructure we see opportunities to move away from these fossil fuels in the crucial segments of industrial processes and municipal heating. In partnership with Edmond de Rothschild Private Equity, since 2019 we have been investing into projects to supply baseload electricity and baseload thermal energy that is local and affordable while fostering the circular economy. The sources we use are typically by-products from existing industrial sources such as pulp from paper production, left-over timber from the construction industry, unused agricultural feed, crop waste and manure. Either we burn this sustainable biomass to generate heat and electricity, or we generate biofuels, and feed them directly into the grid as a substitute for gas or burning material to generate heat.

In either case, no virgin commodities or products are exploited. We are instead taking excess materials or waste from existing human activities and repurposing them. If we get unused wood from a local sawmill, then the mill benefits economically too from these new, additional 'sales', so our activities are a win-win.

Pearl works with industrial partners to source materials locally to avoid heavy transportation costs. Some of our projects re-use waste to generate energy on the same site as the industrial processes from which they came, i.e. a truly circular activity.

Bioenergy is a significant part of Europe's power generation, contributing more than solar during winter months. Sustainable biomass has a vital role to play as we lower reliance on fossil fuels for baseload supply.

These opportunities require specific technical expertise on the part of the financier. Maintaining wind turbines or a solar panel farm is relatively easy compared to managing a thermal power plant. At Pearl, our work does not stop once the plant is up and running. Technical know-how and industrial experience can make a big difference in operational performance such as on the number of operating hours per year or on energy efficiency: human management matters where other forms of green energy are essentially reliant on the wind blowing or the sun shining.

The senior staff at Pearl are drawn from positions of expertise at energy utilities and industrials, including EDF, Suez, Veolia and Alstom. Our long experience in different countries on different continents enables us to work with the public and private sector on the design and maintenance of heating facilities. We have sometimes redirected heat and power projects to more efficient designs where we knew that reliability and efficiency would be improved.

Drawing on our experience, we also use more robust construction schemes that do not outsource construction risk to single contractors. The single contractor model can seem attractive on paper but risks losing control over construction progress itself and budgeting (and ultimately reducing returns to investors). The convenience of liaising with just one organisation can prove to be expensive, especially when the head contractor is bound to be outsourcing specialisms in the process – civil engineering, fuel handling etc – to other suppliers anyway. Pearl uses its in-house expertise and our own network of specialists in all aspects of energy generation to scrutinise the various parts of the process. Our model enabled us to manage construction risks efficiently during the Ukraine war by maintaining a real dialogue with construction suppliers set to find real solutions together, whereas a single contractor would have just declared a force majeure and stopped working.

This competence means that we can confidently invest into both greenfield and brownfield projects, without limiting ourselves to the renovation of existing operations. This approach brings more choices and opportunities to Pearl and its investors.

**Europe needs a whole raft of energy plants to continue the switch of baseload energy from fossil fuels to bioenergy. To keep greenhouse gas emissions as low as possible, we need the right kind of project management to ensure the right kind of biomass is being managed as efficiently and as sustainably as possible.**

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