



FUND LAUNCHED

**2005**

FUNDS UNDER  
MANAGEMENT

**£522.9**  
MILLION

NET ASSET VALUE  
PER SHARE

**443.1%**  
SINCE INCEPTION\*



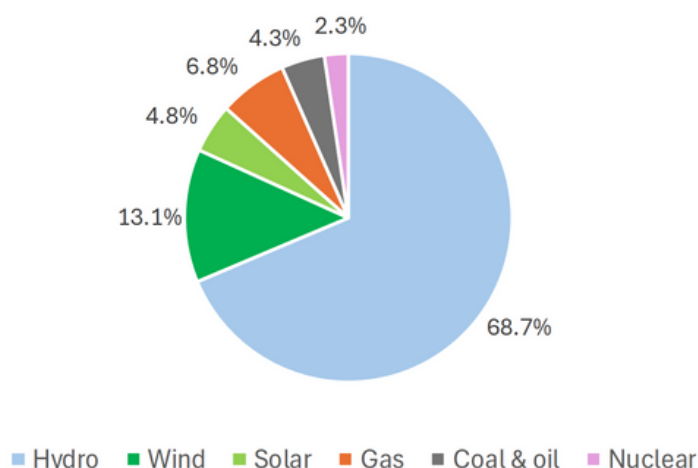
# Serena Energia – Brazilian Energy Transition growth engine

April 2024

Brazil is one of the largest emerging markets economies thanks to its enormous agricultural and mineral resources. But it is often overlooked that it is highly exposed to the Energy Transition Megatrend, being blessed with another extremely valuable resource – renewable energy. Brazil's continental scale and rich tropical climate means that it has a fantastic hydrological resource; steady trade winds blow along the coastal regions giving one of the highest load factors; and it has one of the highest levels of solar irradiance in the world.<sup>1</sup>

The Brazilian Ministry of Mines and Energy announced that 93% of Brazil's electricity generation in 2023 came from renewable sources. This is an improvement from 90% in 2022, two-thirds of which is from hydroelectric plants. Globally, Brazil is second only to China in installed hydro capacity, reflecting a decades-long history of investment in largescale dams, including the 14GW ITAIPU plant, the third largest in the world. But it is notable that solar and wind power also accounts for almost 20% of the country's output, a figure which is even more remarkable given this was almost zero just a decade ago. A key driver of this is that the benefits of high winds and irradiation mean that wind and solar infrastructure does now not need to be subsidised to be economically viable in the Brazilian market.

## Brazil electricity generation by source (TWh)

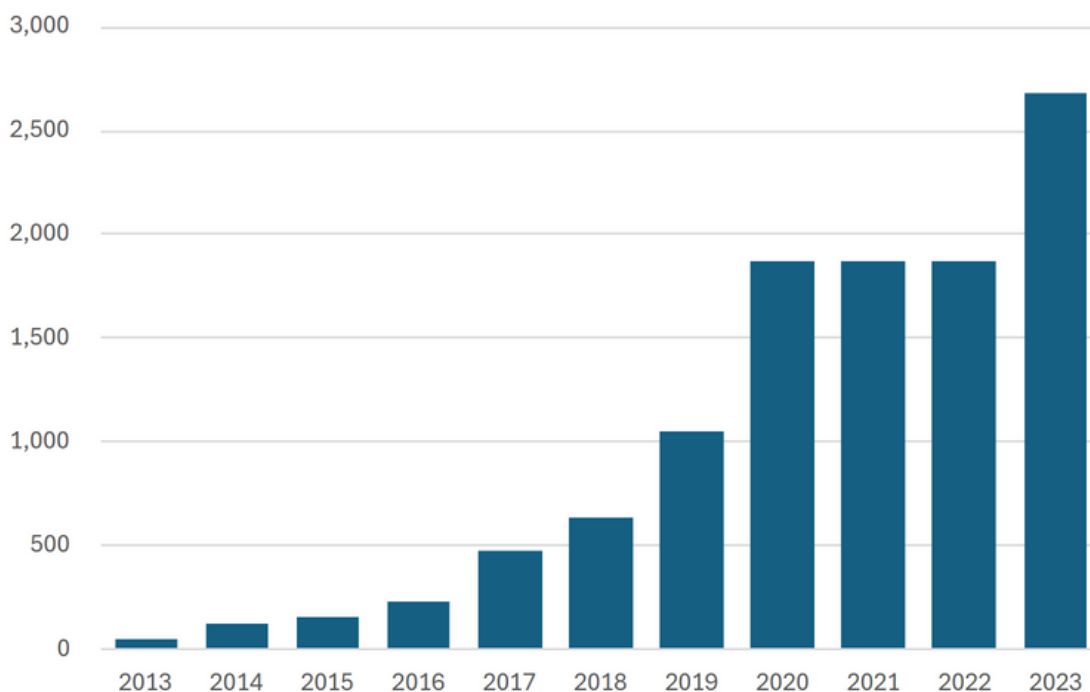


Source: Energy Institute Review of World Energy 2023<sup>2</sup>

One company which has been driving this incredible growth in wind and solar assets is Serena Energia, a top 30 investment at Utilico Emerging Markets Trust Plc. Founded in 2008, Serena Energia was established by CEO Antonio Bastos who had a vision of the abundant opportunity for hydro, wind and solar developments in Brazil. Identifying one of the windiest sites in the country on the north-eastern shore in Piauí and Maranhão states, Serena embarked on the development of the Delta cluster, with the first 70MW becoming operational some six years later. Complementing further expansion of Delta with additional implementations and acquisitions in the renewable segment, Serena Energia steadily grew to 225MW of assets at end-2016. As it sought to boost its growth, Serena Energia launched its IPO in 2017, in which UEM recognised the opportunity and was one of the first investors.

The IPO brought much-needed funds to Serena Energia, and sparked an astonishing acceleration of growth both via organic development and acquisitions. Between 2016 and 2020 its capacity grew eight-fold, compounding 70% annual growth, to 1.9GW. While tighter financing conditions and weakening energy price following the COVID pandemic put growth on hold, in 2023 growth resumed with continued expansion of its Assurua wind complex in Bahia and a 266MW project in Texas. Serena Energia is now the largest independent renewable operator in Brazil.

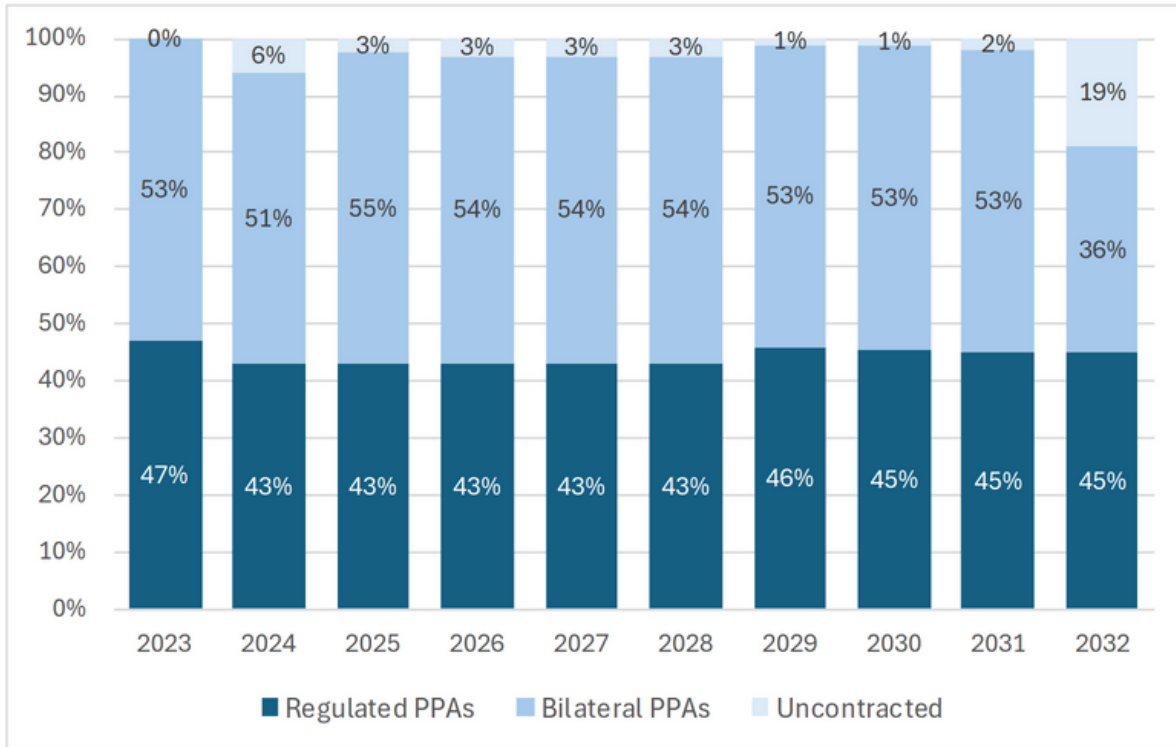
## Serena Energia installed capacity (MW)



Source: Serena Energia, ICM

A key attraction of Serena Energia's business model is that it can sell the energy it generates on long-term contracts or PPAs (Power Purchase Agreements). Whilst it still bears the risk on actual output, the PPAs de-risk the business from price fluctuations. Over the next ten years more than 93% its output is contracted with regulated entities (such as electricity distribution utilities) and bilateral PPAs with industrial and agricultural clients. Its average contract duration is approximately 12 years at R\$219 per MWh (c.US\$44.20/MWh), and the contracts are adjusted annually for inflation.

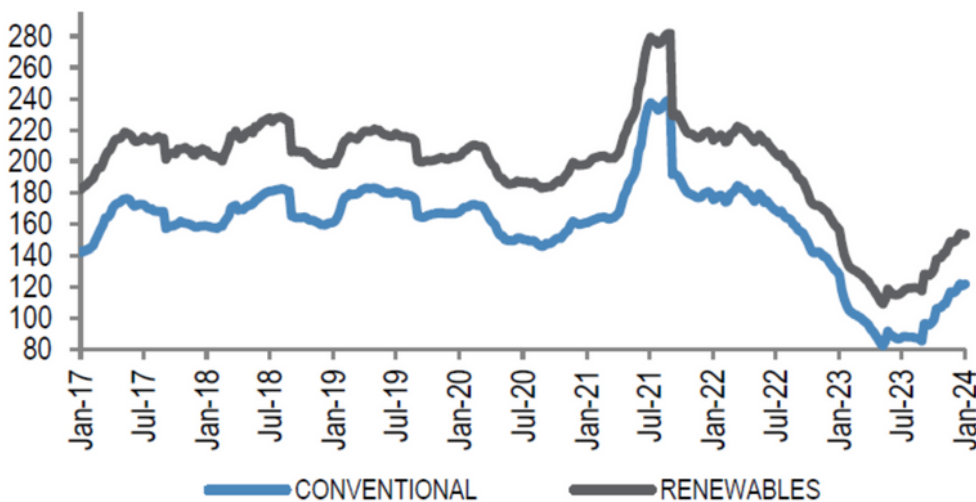
## Highly contracted Brazilian assets under long-term PPAs



Source: Serena Energia, ICM

Whilst the existing portfolio is highly contracted, it is notable that the rapid expansion of renewable wind and solar assets, and the recent recovery in hydrological conditions, have meant that electricity prices fell in late 2022 and 2023. Combined with a high interest rate environment, this meant that returns on investment in new renewable projects became unattractive.

## Long-term electricity prices (R\$/MWh)



Source: DCIDE

The prospect of weaker returns in Brazil fuelled Serena Energia's entrepreneurial management team to look for other opportunities in the renewables sector. This led to expansion into the US with the Goodnight project in Texas, and a move into distributed generation of small-scale solar projects in Brazil.

Goodnight-1 is a greenfield project in Texas which had stalled due to the distressed financial situation of the local developer. Serena's strong industry knowledge and execution capability enabled it to take over the project and take it to full commissioning within 16 months, financing and installing 59 Vestas turbines totalling 266MW capacity. Now operational, the project is expected to deliver double-digit USD nominal returns.

However, this is expected to be only just the start of Serena's ambitions in the US. The area around Goodnight can support a cluster of up to 1.4GW, and Serena is already embarking on Goodnight-2. This is a replica 266MW project which will share the existing substation infrastructure of Goodnight-1, and on completion this synergy should further improve the economics of the enlarged project. To maximise capital allocation, it is likely that Goodnight-2 will be entirely funded by a project debt and a partial sale of Goodnight-1. This demonstrates management's keen focus on capital discipline, returns and project execution.

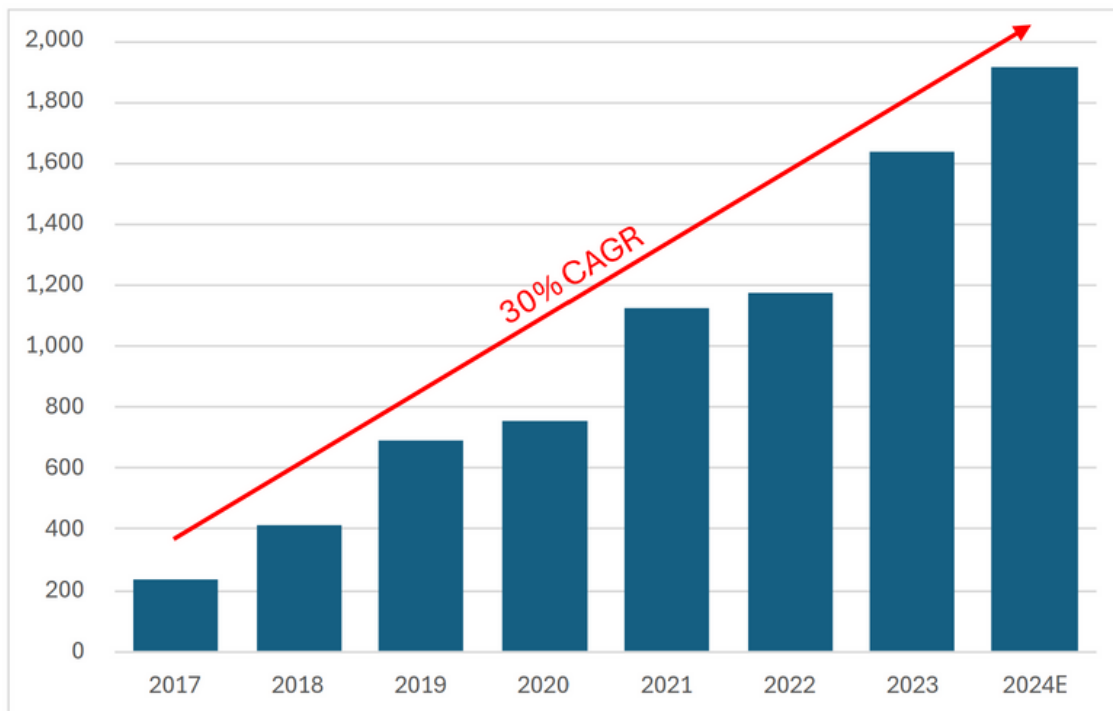
The other opportunities which Serena Energia is targeting are infill hybrid wind/solar plants and distributed generation in Brazil. The hybrid model sees the addition of solar panels on existing operational wind farms. This is very attractive from an economic perspective as Serena Energia already has the land rights, grid connection, and substation infrastructure in place. In addition, this can help smooth output, particularly in the North of Brazil, as typically it is most windy in the evening whilst solar bolsters generation in the daytime.

Distributed generation refers to small 3-5MW solar plants which provide electricity to local customers at highly attractive rates as they are levied at a reduced rate for transmission costs. Serena Energia has 34 projects under construction totalling 90MW, and could reach 200MW by the end of 2024. These projects are inexpensive and simple to execute, and offer excellent mid-teen real IRRs for Serena Energia. Whilst relatively small in the context of its current installed capacity, these additional returns will bolster margins and cashflow.

### **Growth delivered in financials – and more still to come**

Serena Energia's rapid growth in assets has been reflected in its financials. Between 2017 and 2023 group EBITDA increased seven-fold, compounding at an astonishing 30%+ annually. Robust growth is expected to continue, with the mid-range of guidance for 2024 forecasting EBITDA to rise a further 17%.

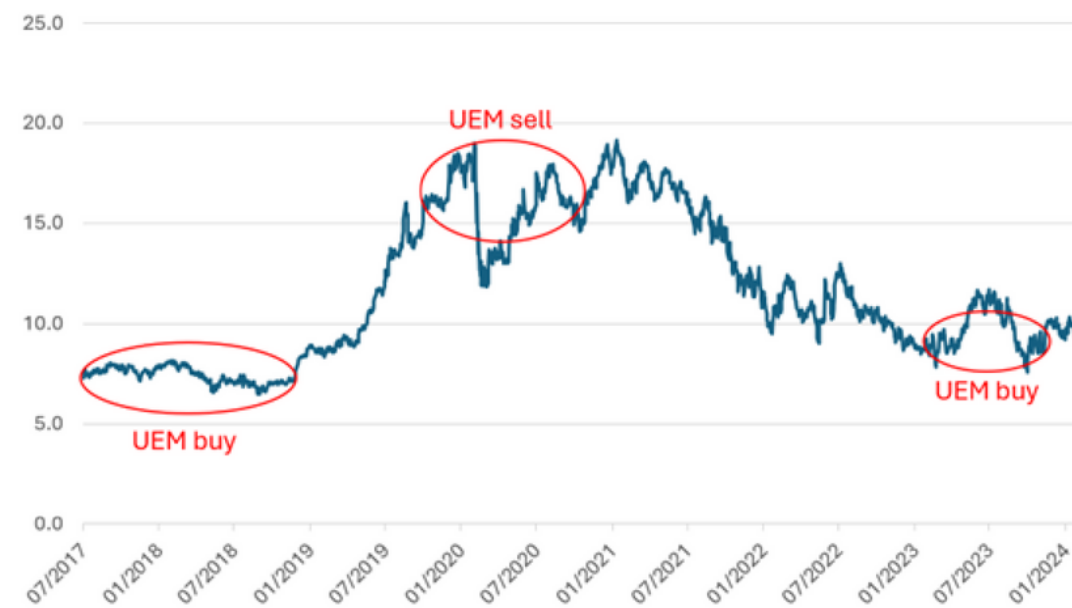
## Serena Energia EBITDA (R\$m)



Source: Serena Energia, ICM

Beyond 2024 we believe Serena Energia is well-placed to execute on additional growth opportunities with ambitions to grow installed MW by up to 20% annually through 2027. Pleasingly, the investment required for this growth can be fully funded by contracted cash generation from its existing asset base and standard project finance.

## Serena Energia share price (R\$)



Source: Factset, ICM

Having doubled its money UEM exited its position in Serena Energia in 2020 as, in our view, valuations had become stretched. But after share price weakness during 2021-22, during which financials improved rapidly, valuations became attractive again and UEM started accruing a position again in 2023.

Serena Energia is again a top 30 position for UEM, and on FY24 forecasts the company trades at 7.8x EV/EBITDA and 15.6x P/E. We believe this is highly attractive in the context of robust double-digit growth rates, improved cashflows, reduced leverage, all in a lower interest rate environment and a mounting recovery of energy prices in Brazil. The company's remarkable journey over the past decade reflects the significant growth potential in delivering the Energy Transition Megatrend, and we see much more yet to come.

## Jonathan Grocock

17 April, 2024

Source Data: ICM Limited

[1] Brazilian Atlas of Solar Energy atlas\_final\_pdf\_R1 (energypedia.info)

[2] Energy Institute Review of World Energy Home | Statistical Review of World Energy (energyinst.org)

\*Total return is calculated based on undiluted Net Asset Value, plus dividends reinvested and adjusted for the exercise of warrants and subscription shares

### Risk Warning

The information presented on this document is solely for information purposes and is not intended to be, and should not be construed as, an offer or recommendation to deal in Utilico Emerging Markets Trust plc ("UEM"). Investments in UEM are subject to investment risks, and the value of investments and the income derived from them may fall as well as rise and investors may not get back the principal amount invested. Past performance is not indicative of future performance. Investors should read the prospectus along with the supplement(s) and seek relevant professional advice before making any investment decision. The information presented has been obtained from sources believed to be reliable, but no representation or warranty is given or may be implied that they are accurate or complete. UEM is managed by ICM Limited and ICM Investment Management Limited. The Investment Managers reserve the right to make any amendments to the information at any time, without notice. Issued by ICM Investment Management Limited (registered in England: 08421482), which is authorised and regulated by the Financial Conduct Authority (FRN: 630094). The information in the title banner is as at 31 March, 2024 and approved by ICM Limited.

### Utilico Emerging Markets Trust plc | Registered Office

The Cottage, Ridge Court, The Ridge, Epsom Surrey, KT18 7EP, United Kingdom

Company registration number: 11102129

[www.uemtrust.co.uk](http://www.uemtrust.co.uk)

**[Subscribe to our newsletter on uemtrust.co.uk](#)**

