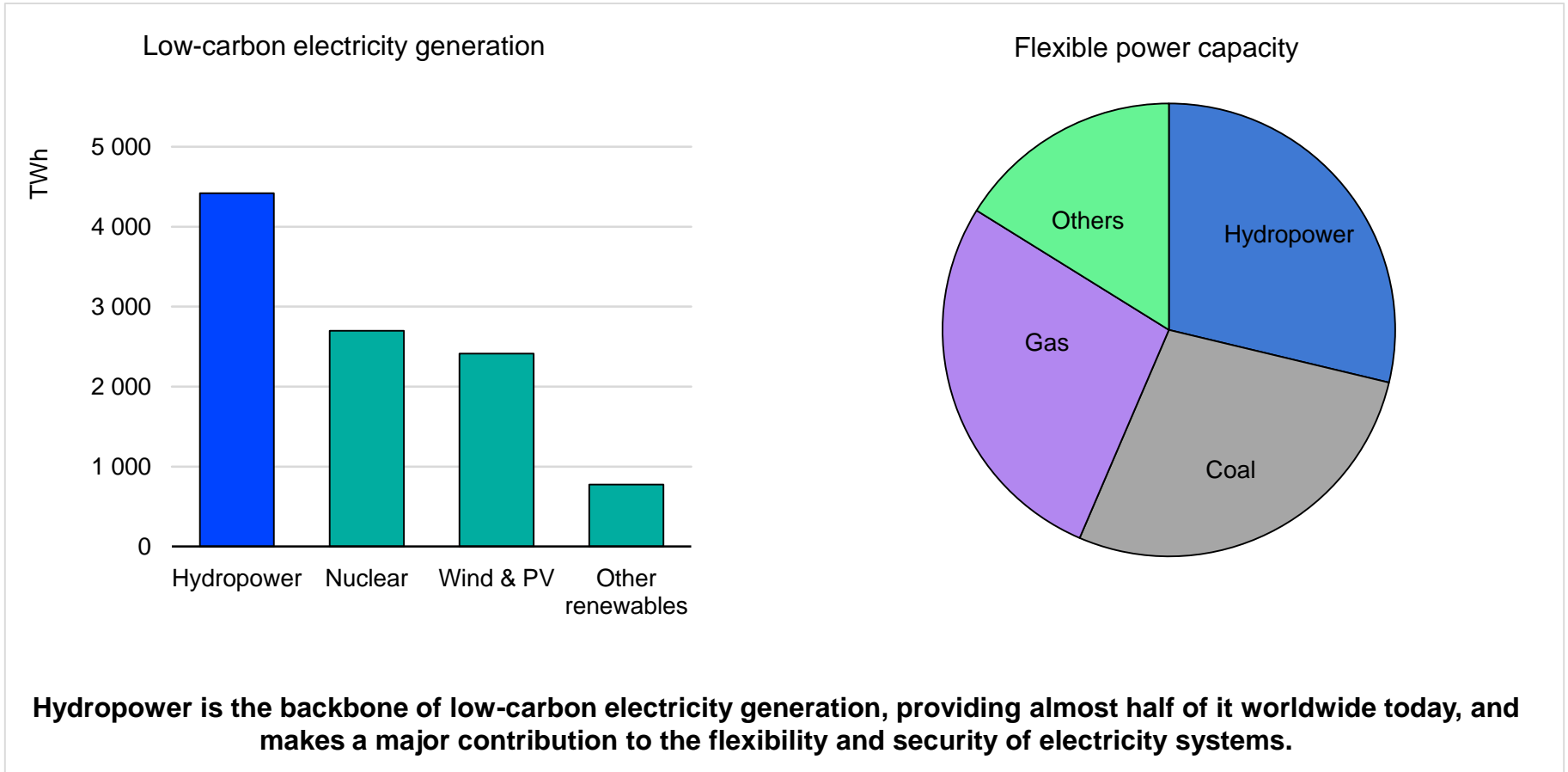




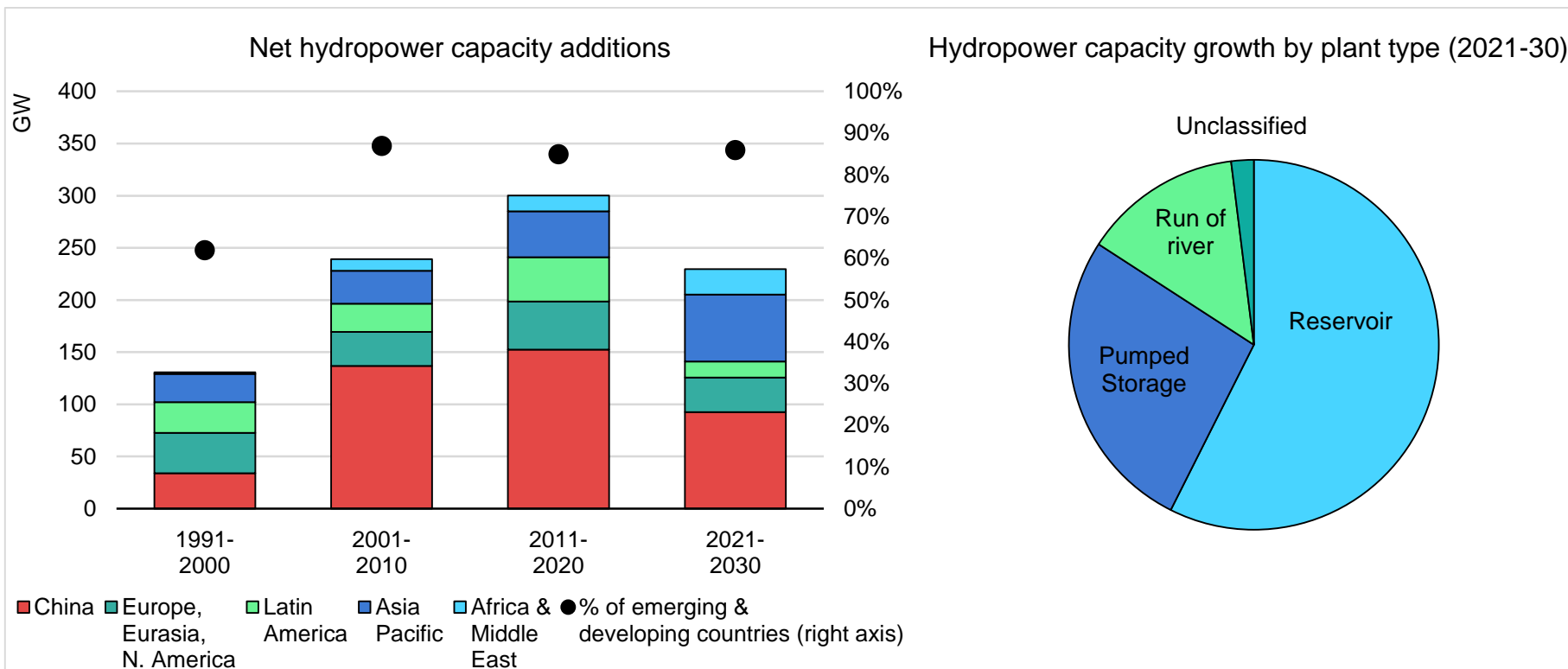
# Hydropower Special Market Report

Market analysis and forecasts to 2030

# Hydropower is the forgotten giant of the electricity sector



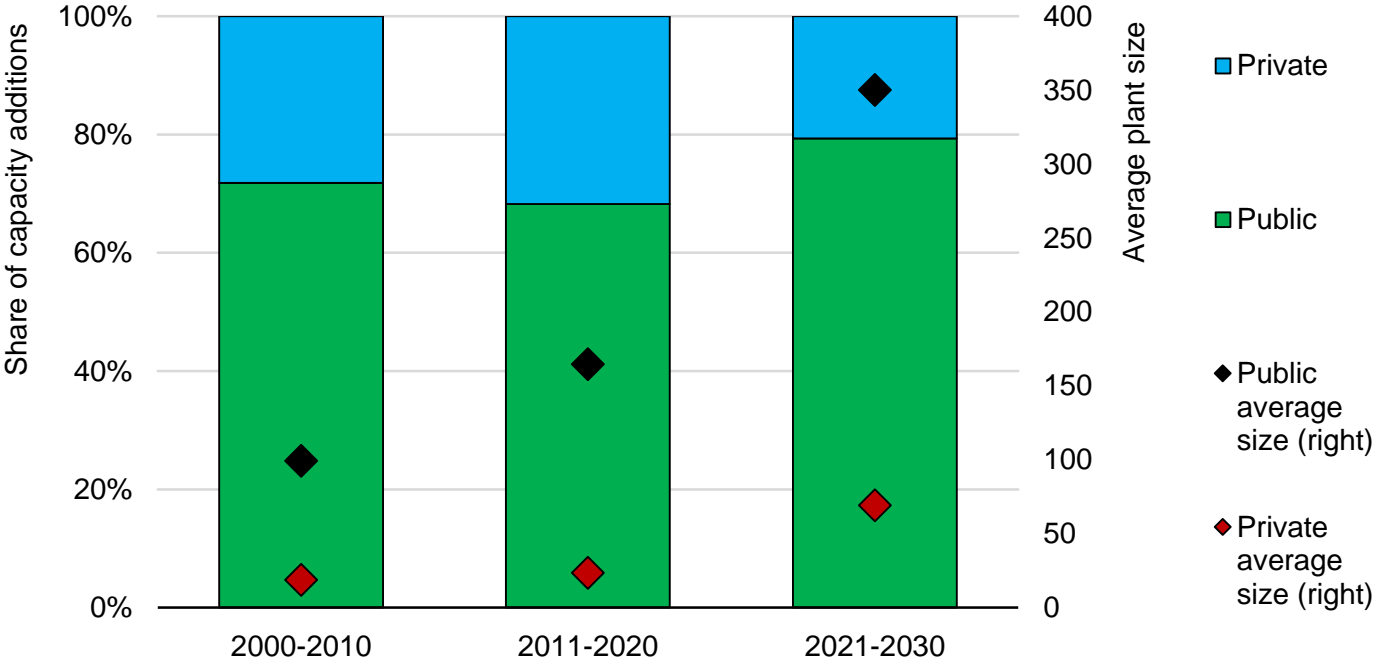
# Growth in India & ASEAN partly offsets declines in China



**Reservoir plants lead the expansion by increasing electricity access cost-effectively, providing export opportunities and multi-purpose use of dams. The need for flexibility stimulates strong expansion of pumped hydro plants.**

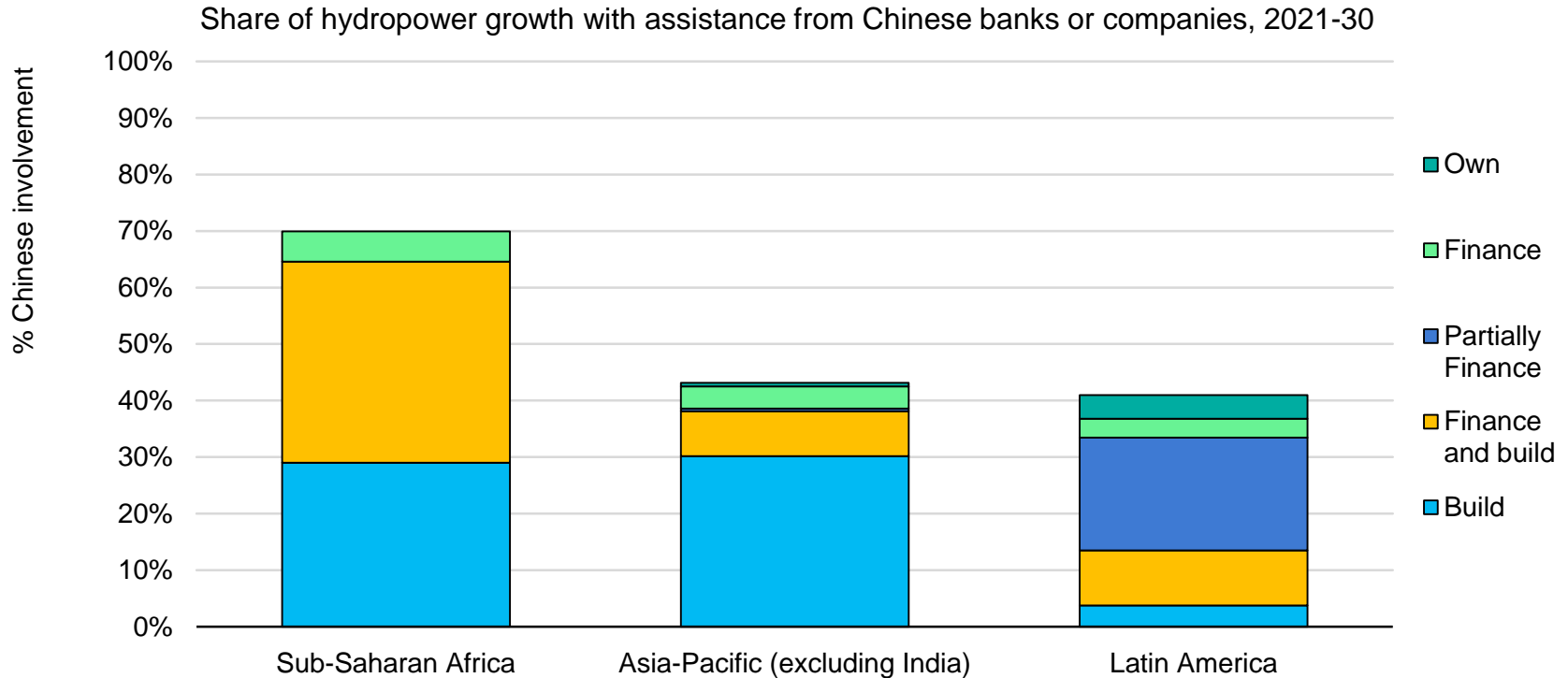
# Public sector role in hydropower remains key

Hydropower capacity additions by ownership profile and size



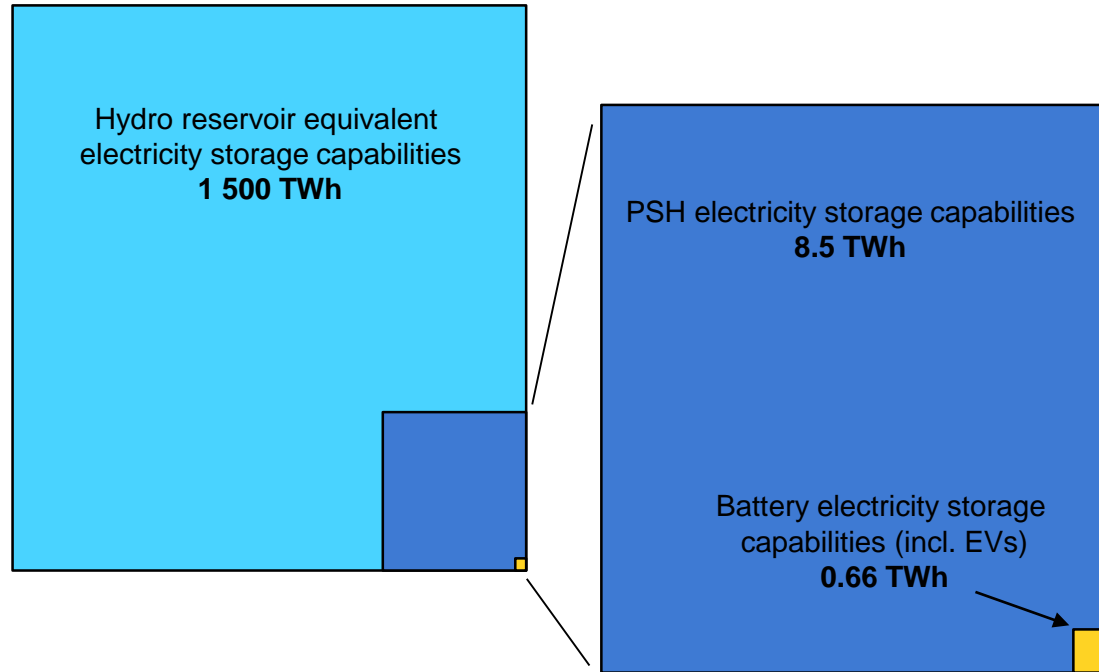
**The involvement of the public sector in large plants helps mitigate investment risks associated with permitting, social acceptance and long construction times, while the private sector deploys smaller plants with low risks.**

# China backs over half of new hydropower plants in developing world



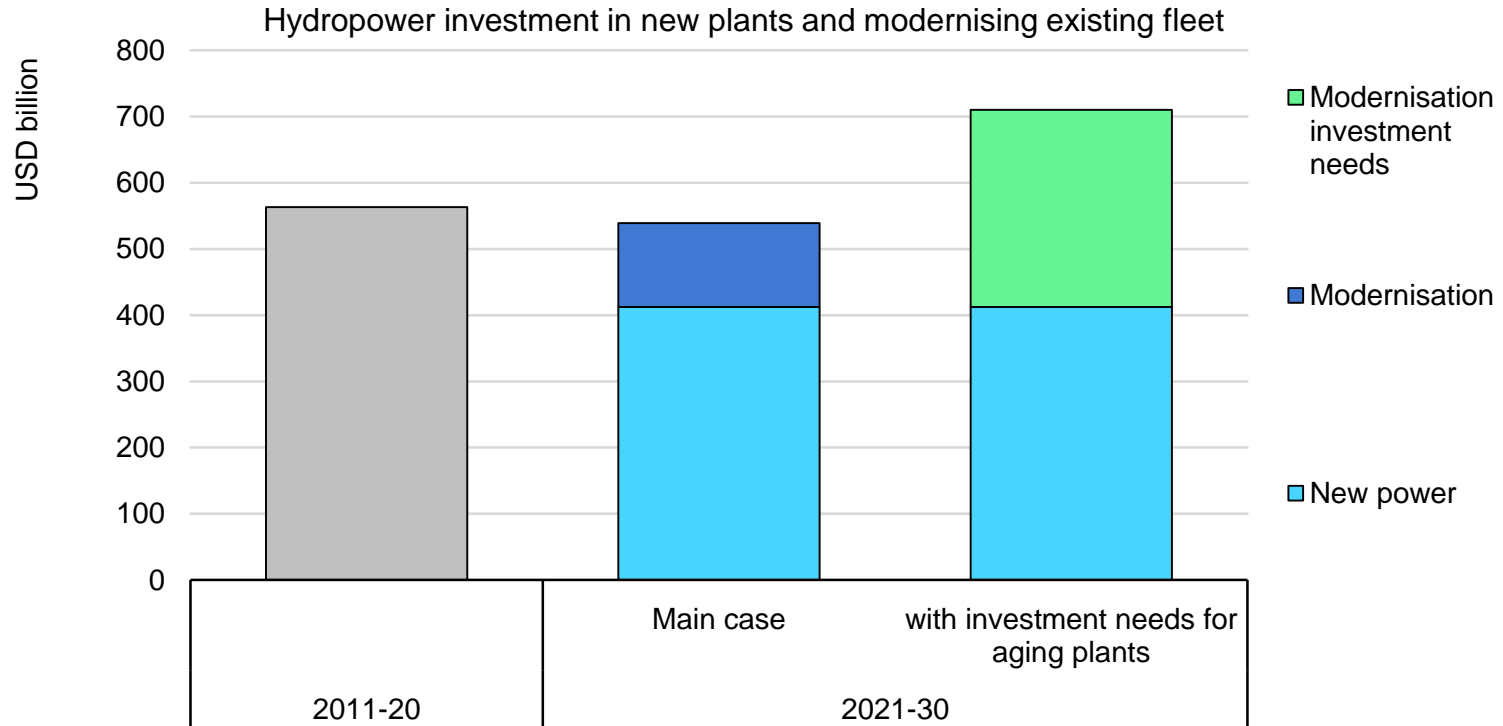
**Chinese state-owned enterprises bring affordable finance and the experience of building large projects. They also share project risks with the host country.**

Storage capabilities of hydropower plants and batteries (1 full cycle)



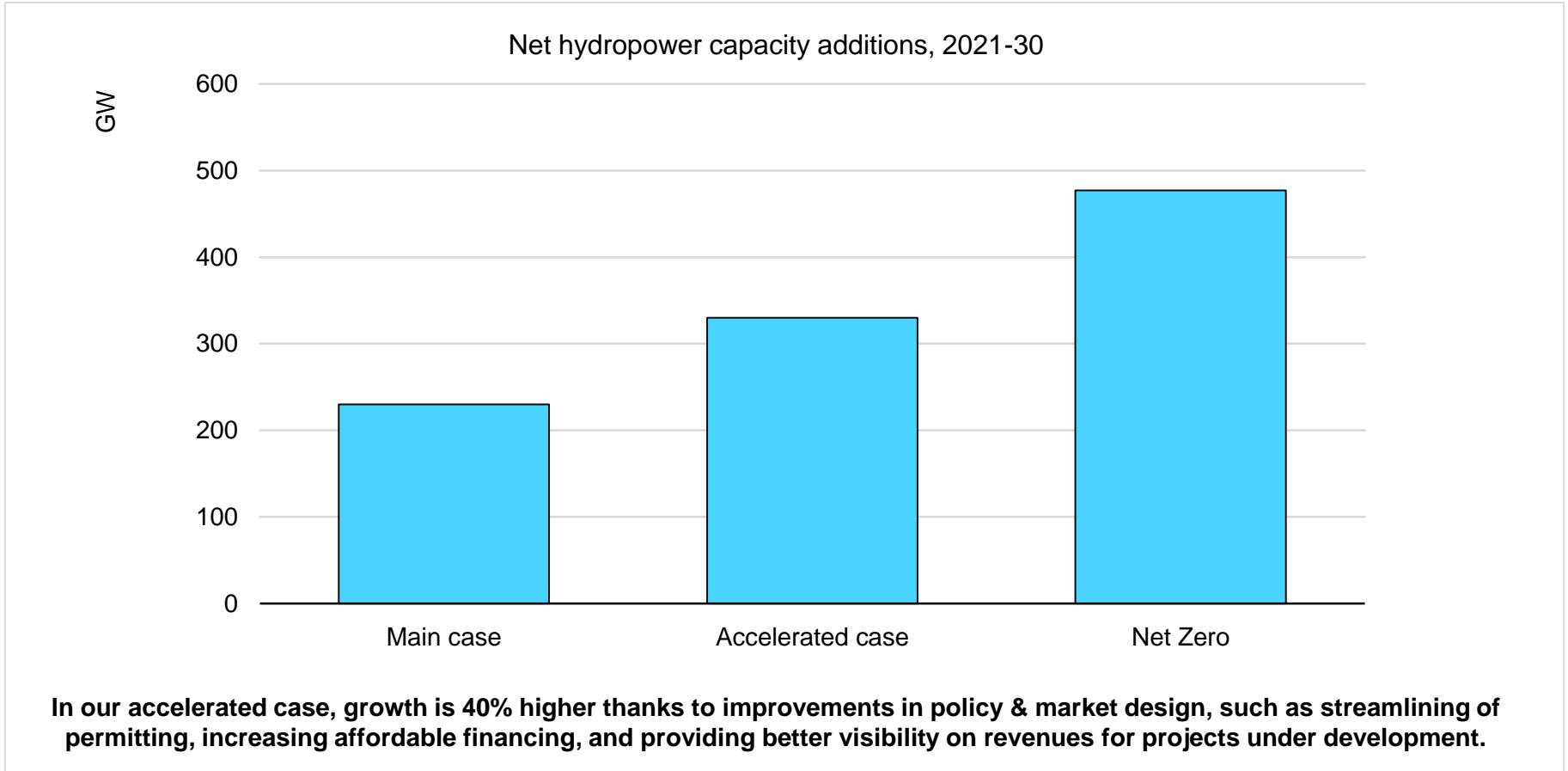
**With low operational costs, existing reservoir hydropower plants are the most affordable source of flexibility today, while pumped storage and battery technologies are increasingly complementary in future power systems.**

# More investment is needed to modernise an ageing hydropower fleet



**By 2030, more than 20% of the global fleet's generating units will be over 55 years old. Modernising all ageing plants would require investment of USD 300 billion, more than double the amount in our forecast.**

# Faster hydro growth is possible but net zero requires higher ambition





# 7 policy considerations

---

- Move hydropower up the energy and climate policy agenda
- Enforce robust sustainability standards for all hydropower development with streamlined rules and regulations
- Recognise the critical role of hydropower for electricity security and reflect its value through remuneration mechanisms
- Maximise the flexibility capabilities of existing hydropower plants through measures to incentivise their modernisation
- Support the expansion of pumped storage hydropower
- Mobilise affordable financing for sustainable hydropower development in developing economies
- Take steps to ensure that the value of the multiple public benefits provided by hydropower plants is priced in



Report: <https://www.iea.org/reports/hydropower-special-market-report>

Data explorer: <https://www.iea.org/articles/hydropower-data-explorer>

