

Our ref: 58286685
Contact: Zahra Jabiri

1 February 2022

Steve Edwell
Chair
Economic Regulation Authority
Level 4, Albert Facey House
469 Wellington Street
Perth WA 6000

Dear Mr Edwell

AA5 Proposal

Summary

Western Power has today submitted its proposal for the fifth access arrangement period (**AA5 proposal**). The AA5 proposal meets customer needs, balances the cost of delivering safe and reliable services and proactively responds to the rapid pace of the changing energy environment.

The energy landscape and electricity supply chain has been progressively changing over the past decade. This change has accelerated recently, and momentum will increase during the AA5 period driven by the decarbonisation demands of government, industry, the business community more broadly, investors and customers'; in line with the "Net Zero by 2050" commitment, which has been embraced by Australia.

The uptake of rooftop solar PVs continues to accelerate. Large-scale renewable electricity generation will also grow to support replacement of coal-fired generation and electrification of industrial processes. This has fundamentally changed the way the grid functions and operates. Western Power is now dealing with the combined effect of lowering minimum demand levels during the middle of the day, which are increasing in frequency and magnitude, followed by steep ramping to an evening peak, with the Western Power network experiencing the highest maximum demand on record in early 2022.

We are experiencing more extreme weather conditions attributed to climate change. These negatively impact the reliability of supply and increase safety risk. Our response includes installing standalone power systems (**SPS**) in remote and rural areas which will provide superior reliability performance for our rural customers together with improved network resilience and a reduced carbon footprint. SPS is the least cost technology to service customers in low density areas of our network which will improve affordability for all WP customers over the long term.

The electricity transmission and distribution sectors have not remained static whilst changes are happening at either ends of the electricity supply chain, including both generation and consumers. Significant developments in the technological options available to improve network performance and facilitate customer choice have been occurring and Western Power will utilise these solutions to transition efficiently and safely to a modular version of the grid as it affords the least cost technology, whilst maximising benefits. The modular grid reflects a move from a traditional network towards one which



363 Wellington Street Perth 6000
GPO Box L921 Perth WA 6842
westernpower.com.au



† 13 10 87
f (08) 9225 2660
TTY 1800 13 13 51
TIS 13 14 50

Electricity Networks Corporation
ABN: 18 540 492 861

incorporates a mix of new solutions, such as SPS, microgrids and battery storage systems, that can serve better different parts of our network.

The impact of batteries on the network is small today but is expected to become significant over the next 10 years. During the AA5 period we need to proactively plan and invest to ensure we are ready for the growth in electric vehicles, behind the meter batteries and grid-scale batteries.

Consequently, Western Power's investments over the coming decade will be both transformational; modernising the electricity delivery system to meet the changing needs of our stakeholders, and traditional; maintaining the core of the grid which underpins supply. To achieve this our AA5 proposal includes greater investment than in the prior access arrangement period (**AA4**). However, the price impact on customers will be mitigated by market conditions that reduce the cost of financing the investment.

The AA5 proposal provides price decreases for customers (in real terms). This means nominal price increases for the average network bill will be lower than the rate of inflation over the AA5 period.

AA5 Context

The Western Australian Government launched the Energy Transformation Strategy in March 2019 with the objective of delivering cleaner, affordable, and more reliable energy for decades to come. Through its Climate Change Policy, the state Government also expects its taxpayer-owned utilities to help decarbonise the Western Australian economy by 2050.

Our residential and commercial customers tell us they want the same thing – indeed, they are voting with their wallets and investing in ever greater amounts of renewable energy and expect us to enable a renewable-powered future. By way of example:

- more than one in three homes currently have rooftop solar PVs, with connections forecast to grow by 60% to 3 GW of grid connected solar by the end of the AA5 period
- there are more than 3,500 approved battery applications for residential customers on the Western Power network, with combined storage capacity of both community battery storage and third-party storage solutions forecast to reach 1GW/3GWh by 2031
- demand for large-scale renewable projects (wind, solar and waste-to-energy) to connect to the Western Power Network continue to increase, with almost 1 GW currently under development, representing a significant increase in renewable generation from 4% of total generation in 2008 to 30% in 2021

Western Power has delivered on our AA4 proposal promise balancing maintaining network safety and reliability whilst keeping costs lower than expected and transforming to meet the increasing and emerging industry and environmental challenges. We were able to achieve efficiencies during the AA4 period delivering our capital expenditure program for 3 per cent less than forecast.

The AA5 proposal has been prepared on the above basis and that of the current regulatory framework, including the proposed reforms that have been completed under the Energy Transformation Strategy (Stage 1). We are cognisant that further transformation is required, reflecting the changes in the energy sector driven by customer choice, decarbonisation, and technological advancement.

Customer and community engagement shaped our AA5 proposal

Western Power has undertaken extensive consultation to understand the values and priorities of our customers and key stakeholders. Our customers and the community tell us they expect electricity to be there when they need it. They expect safe, reliable and increasingly renewable energy, delivered at an affordable price.

The AA5 proposal has prioritised expenditure based on what our customers and stakeholders have told us they expect of the services we offer and the role that Western Power plays within the rapidly changing energy landscape.

Safety and reliability performance will be maintained

Given the nature of our business and assets, safety is paramount for Western Power and is considered critical by customers. We will continue to use our risk-based approach and experience to maintain safety for our customers, our people and the community at the most efficient cost.

Reliability is front of mind for our customers and Western Power. The AA5 investment plan will maintain overall reliability levels and manage the technical challenges associated with the integration of high levels of distributed energy resources (**DER**). Our customers have reiterated their support for further investments to improve network resilience in response to extreme climate events. We are resourcing to ensure there is sufficient staff and the right expertise on the ground to support identified solutions including undergrounding and standalone power systems.

AA5 forecast investment plan

Western Power is contending with a growing proportion of aging assets with deteriorating performance and many newer challenges driven by customer choice, decarbonisation, and technological advancement.

Accordingly, Western Power has developed a prudent and efficient capital expenditure plan (**capex**) which includes investment programs that work together to collectively deliver outcomes for customers and the community.

The AA5 proposal includes forecast capex of \$5,376 million¹, funded in part (\$1,035 million) by new connecting customers, which means the net expenditure to be paid for by customers is \$4,341 million. Western Power has the capability to undertake the large capital works program which represents a 31% increase over the AA4 period.

Key outcomes of the AA5 capex plan to be undertaken by Western Power are provided below. In addition, during the AA5 period Western Power is also required to address increasing technical compliance requirements and reform obligations, maintain our ageing depots to meet workplace safety practices and continue to connect customers to the network. Examples of key investments include:

- addressing the safety and reliability impacts of deteriorating performance from Western Power's ageing asset base through key investments including:
 - \$423 million to replace and reinforce at risk wood poles and \$572 million to address conductors and other critical distribution assets, including streetlights, to ensure safety and reliability performance can be maintained and manage risk to the public of failing assets
 - \$343 million to address at risk transmission assets which, if untreated, have the potential to increase unplanned network outages and place pressure on network performance and system security
 - \$483 million to replace critical SCADA and Telecommunication network infrastructure to identify and respond to faults more quickly, improve workforce safety and lower the cost of service delivery through network optimisation. This investment will also enable greater DER penetration.

¹ Gross capital expenditure including capital contributions, real cost escalation and indirect costs, \$ million real, 30 June 2022

- implementing the outcomes of the Energy Transformation Strategy, facilitate greater DER integration and address additional obligations including managing cyber security risks and technical compliance requirements through key investments including:
 - \$317 million to complete the deployment of Advanced Metering Infrastructure (**AMI**), which will enable a network-wide platform for DER integration and deliver immediate benefits to customers from improved fault detection, fewer estimated bills, more detailed energy usage information, faster reconnections and improved efficiency in integration of new technologies
 - \$389 million in information technology solutions to support the deployment of AMI, integrate DER and other renewable devices to meet customer expectations, enhance customer systems to respond to a more complex future where big data, visibility through SCADA and Telecommunication network infrastructure and online digital communications will be paramount and improve foundational cyber security controls to better manage cyber security risks
- improving Western Power’s ability to respond to extreme weather events, which will see a need for greater emphasis on disaster preparedness and network resilience, and supply to remote communities through key investments including:
 - \$330 million to install 1,860 standalone power systems, or equivalent units, and \$685 million (including \$245 million of customer contributions) to underground 875 km of distribution conductors. These investments will replace or support overhead network infrastructure where it addresses a network performance need (safety or reliability) and improves network resilience against extreme climate events

Western Power’s proposed AA5 capex plan represents a balanced approach between investing in ‘traditional’ and ‘new’ assets to deliver on the requirements of customers and the community. In areas where it makes practical sense, Western Power is committed to proactive and ongoing trials of alternative solutions, such as disconnected microgrids, that will deliver better outcomes for customers.

Western Power is cognisant of the emerging delivery challenges presented by the current world context, including competition for local resources and global supply chain issues, and have developed resourcing and workforce strategies to mitigate these potential challenges accordingly. Western Power utilises a composite resourcing approach which leverages a mix of internal resources and external resources engaged through preferred vendor arrangements or standard contracts.

Today marks the first day of the formal determination process for the AA5 period. We have a shared responsibility across government, policy makers, regulators, and industry to support, enable and deliver on the energy transformation our community needs for a prosperous future. We look forward to working collaboratively with the ERA throughout the determination period to ensure the final decision for the AA5 period enables Western Power to maintain our commitment to the government and deliver on community expectations both short and long term.

Yours sincerely



Colin Beckett
Chair