RESOLUTION NO. 11-23

Background

A. In the years since its board of directors adopted the 2018 Resource Diversification Policy, Platte River Power Authority (Platte River) has taken many steps to advance the Resource Diversification Policy goals, including adding new renewable resources and battery energy storage systems, joining a real-time energy dispatch market, committing to join a full regional transmission organization by 2026, and collaborating with our owner communities to lay the foundations for a virtual power plant.

B. Dispatchable capacity is essential to maintaining reliability as intermittent renewable resources on Platte River's system increase. Dispatchable capacity has three components—energy storage and virtual power plant capabilities (which are in early stages and must continue to advance) and flexible combustion turbine technology (which is mature but has long lead times for permitting and construction).

C. While Platte River continues to evaluate and pilot promising energy storage options (both short- and long-duration) as they advance, battery storage technology and cost improvements have been slow since 2018 and virtual power plant development is a multiyear, ongoing process.

D. To maintain reliability and financial sustainability as coal-fired generation retires and effectively integrate increasing intermittent renewable resources, Platte River will need flexible combustion turbine technology.

E. Supported by independent expert analysis, staff evaluated a broad range of dispatchable resource options, including potential changes or upgrades to Platte River's existing coal-fired and natural gas-fired generators, which proved technically infeasible, cost prohibitive, or both—in some cases, involving more than $150 million in capital investments that would reduce efficiency without improving operational flexibility.

F. Comprehensive analyses show new aeroderivative combustion turbine technology is best suited to protect system reliability and financial sustainability in the near term as Platte River works toward fully noncarbon options for the long term.

G. Aeroderivative combustion turbines will use natural gas as their primary fuel source initially, but

- have the potential to use green hydrogen or other alternative fuels as the necessary technology and infrastructure develop,
- most effectively support variable renewable resource integration because they can start up and ramp from zero to full output (and back down again) within minutes, and
- will not become stranded assets because they can provide critical reliability support to the grid (in some cases, without consuming fuel) and help Platte River hedge ancillary services costs for decades to come.

H. Platte River must act promptly to meet state permitting requirements for the new aeroderivative turbines.

Resolution

By this resolution, the board of directors of Platte River Power Authority formally expresses support for Platte River's efforts to proactively develop the dispatchable capacity necessary to protect system reliability and financial sustainability (including battery storage systems, virtual power plant capabilities, and flexible aeroderivative combustion turbine technology) as Platte River continues to pursue the Resource Diversification Policy goal of a 100% noncarbon resource mix by 2030.

AS WITNESS, I have signed my name as Secretary and have affixed the corporate seal of the Platte River Power Authority this 26th day of October, 2023.

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Secretary