

WORK SESSION AGENDA ITEM SUMMARY

City Council



STAFF

Kendall Minor, Utilities Executive Director
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SUBJECT FOR DISCUSSION

Platte River Power Authority Resource Planning Update.

EXECUTIVE SUMMARY

The purpose of this item is to update Council on Platte River Power Authority's ongoing resource planning, including pending decisions to add new natural gas dispatchable generation. Staff will also be available to answer questions regarding how electricity resource planning is anticipated to impact Fort Collins' Our Climate Future goals.

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. What feedback do Councilmembers have regarding Platte River Power Authority resource planning?
2. What additional information do Councilmembers need regarding impacts of electricity resource planning on Fort Collins' Our Climate Future goals?

BACKGROUND / DISCUSSION

Platte River Power Authority Resource Planning

In 2018, Platte River Power Authority (Platte River) Board of Directors approved the Resource Diversification Policy (RDP), which directed Platte River to proactively work toward the goal of achieving a 100% noncarbon energy mix by 2030, provided the organization's foundational pillars of reliability, environmental responsibility and financial sustainability can be maintained. This is one of the most progressive and aggressive carbon reduction goals in the United States for an electric utility. To achieve this goal—and comply with legislation and regulations regarding greenhouse gas emissions (HB19-1261)—Platte River will retire all its coal fired baseload dispatchable generation including Rawhide Unit 1 by the end of 2029. Since the approval of this policy, Platte River has added 225 megawatts (MW) Roundhouse wind, 52 MW of solar at the Rawhide site and contracted for 150 MW of Black Hollow solar, which will be operational by 2025. Roughly half of Platte River's owner communities' annual loads will be met with the addition of these new renewable generation resources.

It is important to note, with the intermittency of wind and solar and the loss of baseload dispatchable resources the challenge is to create a reliable, efficient, low-carbon, and financially sustainable resource replacement strategy to maintain reliability. This includes an identified need for new dispatchable

resources, i.e., facilities that supply on demand adjustable power outputs to the electrical grid. These new resources will also support Platte River's need to meet the reserve margin requirements of the regional energy Market it is preparing to join in 2026.

Currently, Platte River is developing a 2024 Integrated Resource Plan (IRP) that will ensure an adequate supply of reliable, financially sustainable, and environmentally responsible electricity to cover its member communities' load and meet the reserve margin requirements of the energy Market. This IRP is a continuation of the 2020 IRP and portfolio updates from 2022. The Western Area Power Administration (WAPA), one of four power marketing administrations within the U.S. Department of Energy (DOE), requires an IRP every five years.

The IRP process contains three major inputs:

- Assumptions including load forecast, distributed energy resource potential, power price forecast, resource cost forecast, extreme weather models and future renewable generation expectation;
- Development of portfolios that emphasize a renewable resource mix, lowest reasonable cost and maximum CO2 reduction while meeting required reserve margins;
- Reliability testing of the proposed portfolios under normal and extreme weather events and extended periods of low or no renewable generation, similar to the winter Storm Uri in February 2021.

To account for the loss of 431 MW of coal-fired generation with the closure of coal generation facilities, Platte River is modeling different generation portfolios that will accelerate renewable integration with support from highly flexible, dispatchable capacity that is anticipated to include a combination of energy storage, a virtual power plant and aeroderivative technology, capable of dual fuel operation, using natural gas initially and transitioning to green hydrogen in the future.

Based on the rigorous analysis of future portfolios, evaluation of different scenarios, and consultations with outside advisors, Platte River has recommended to its board of directors a resolution of support for dispatchable capacity that enables the acceleration of renewable integration while maintaining reliability and financial sustainability as they continue working toward the Resource Diversification Policy.

Our Climate Future Goals

Adopted by Council in April 2021, Our Climate Future (OCF) is an integrated update of the Climate Action Plan, Energy Policy, and Road to Zero Waste that articulates the community's vision for a sustainable future. OCF reinforces Fort Collins' deep commitment to mitigating and adapting to climate change and meeting energy and waste goals with a people-first systems approach. This means community members' voices and priorities are at the center of solutions, summed up in 13 visionary outcomes known as Big Moves. OCF is now a framework for accomplishing community and Council environmental priorities using a data-informed, systems-based approach.

The OCF primary carbon and electricity goals are to achieve:

- Carbon emissions
 - 50% below 2005 by 2026
 - 80% below 2005 by 2030
 - Carbon neutral by 2050
- 100% renewable electricity by 2030

Renewable electricity is a critical factor for achieving community carbon goals by directly reducing emissions from electricity use and enabling additional carbon emissions reductions from electrification of buildings and vehicles.

There are three frameworks which help to describe the structure between Fort Collins and Platte River goals and guiding principles. Together, they represent the interrelated objectives, metrics and reporting as well as the evolving relationships between the organizations and customers.

1. Fort Collins Our Climate Future Goals – City as consumer
2. Platte River Resource Diversification Policy – City as member owner of generation agency
3. Electric system and Market – City as part of Platte River planning and operations

Related to Platte River’s resource planning update, staff highlights the following points:

- Fort Collins is committed to achieving the community goals from Our Climate Future (OCF) of 80% community-wide carbon reduction and 100% renewable electricity by 2030.
- Fort Collins recognizes that additional dispatchable resources will be needed to ensure reliability after the closure of all coal-fired power plants at the end of 2029.
- Fort Collins is committed to facilitating more local generation and resources that reduce the carbon emissions and overall need for purchased electricity.
- PRPA’s proposed portfolio is still consistent with Fort Collins achieving its 2030 Our Climate Future goals.
- In addition to this new modern gas power plant, PRPA has a confirmed project to add 150 MW of solar by early 2025. Beyond 2025, planning continues to add another 150 MW of solar in early 2026, 200 MW of wind in 2027 and ongoing deployments of battery storage and virtual power plant capacity. This overall expansion of PRPA’s renewable energy portfolio will assist Fort Collins in achieving our OCF goals.
- This development of PRPA’s energy portfolio is in line with Fort Collins Utilities’ rate increase projections and overall philosophy of smooth, predictable rate increases.

NEXT STEPS

Platte River recommended a resolution of support during their September 28, 2023, board meeting for additional dispatchable capacity. Utilities Executive Director Kendall Minor and Mayor Jeni Arndt serve on the board of Platte River. Platte River is expected to bring a formal resolution of support to their board at their October 26, 2023, meeting.

ATTACHMENTS

1. Presentation - Fort Collins Our Climate Future Goals Introduction
2. Presentation - Platte River Power Authority Resource Planning Update