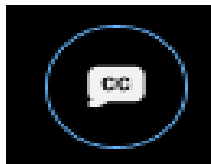


Webex Accessibility tools

To enable Closed Captions

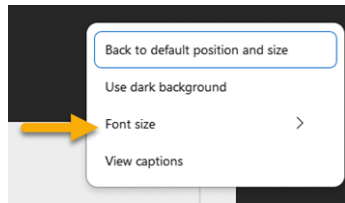
Select the **CC icon** in the lower-left of the WebEx screen



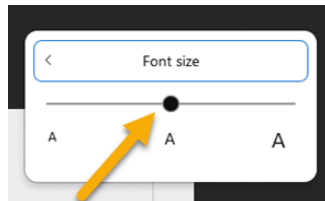
Note: CC is set individually by each person who wants to enable them.

Change font size

Select the **ellipsis** in the lower right



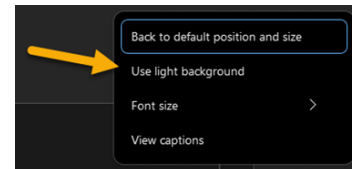
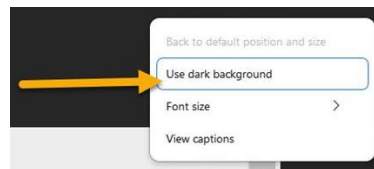
Select **font size**



Use the slider to select the desired size

Change background contrast

1. Select the **ellipsis** in the lower right
2. Select the **dark or light background**



Safety Moment

- The Rates Hearing Room has two exits.
- In the event an alarm sounds, please meet at Holladay Park across the street.





BP-26 INTEGRATED PROGRAM REVIEW

Columbia Generating Station

July 1, 2024





INTRODUCTIONS

Cherie Sonoda

Bonneville Power Administration
Supervisory Nuclear Engineer



Agenda

Topic	Minutes	Presenter
Columbia Generating Station (Columbia) Background	15	Cherie Sonoda Bonneville Power Administration Supervisory Nuclear Engineer
Energy Northwest & Columbia Overview	15	Danielle Dunigan Energy Northwest Vice President, CFO/CRO
Columbia BP-26 IPR Expense Forecasts	15	Danielle Dunigan Energy Northwest Treasury & Business Planning Manager
Looking Ahead – Columbia Capital Long Range Plan	15	Danielle Dunigan Energy Northwest Treasury & Business Planning Manager
Closing Remarks & Questions	15	Danielle Dunigan Energy Northwest Vice President, CFO/CRO

CGS Overview

- Columbia costs are included in the revenue requirements of Power Services rate structure
- Columbia is an 1174 net MW boiling water nuclear reactor located in Richland, WA
- Columbia is owned and operated by Energy Northwest
- Columbia began commercial operation in December 1984 and is licensed to operate through December 2043.
- BPA supports Energy Northwest's mission to operate Columbia in a safe, reliable, and cost effective manner.

Program Objectives in IPR

Projection of costs for the upcoming rate period reflect major reinvestment in Columbia. Higher costs are attributed to Columbia's longer than average maintenance and refueling outages, increased staffing, and accumulated impacts of inflation.

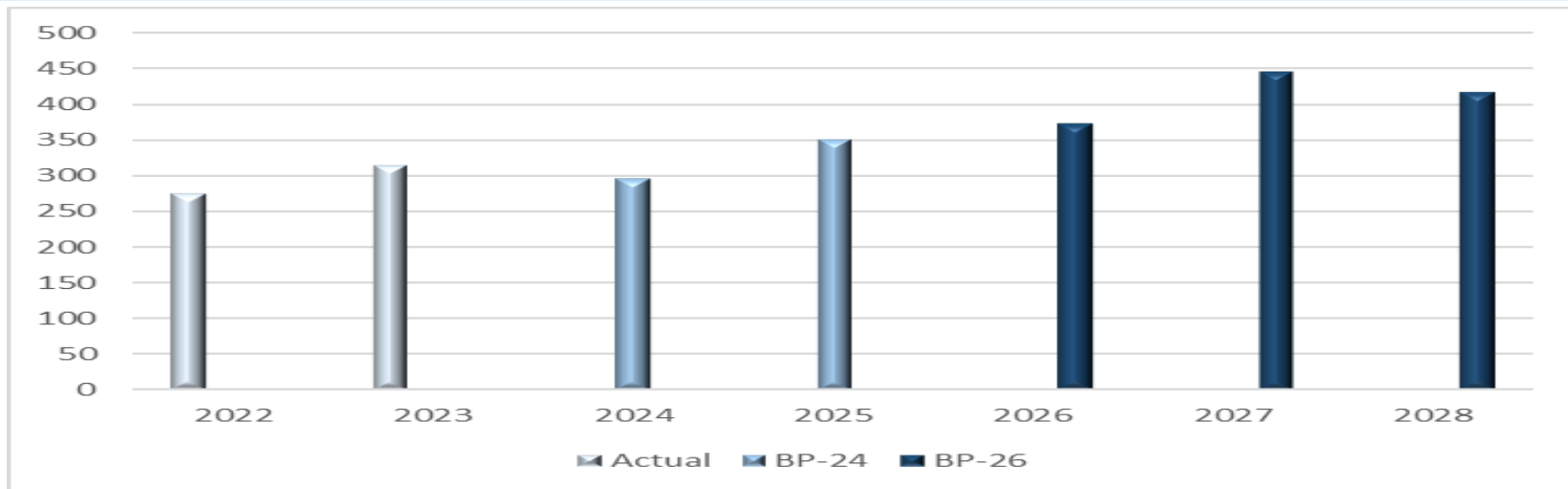
Forecasted O&M costs are based on Energy Northwest's Columbia Long Range Plan (LRP). The LRP is established through a rigorous internal process that looks at challenges and constraints needing to be overcome to meet Columbia's mission and support continued operation. O&M and capital projects are reviewed and ranked prior to inclusion in the LRP. The LRP is systematically monitored and updated annually to account for the needs of the plant based on defined life-cycle management requirements.

CGS O&M Expense

Columbia Generating Station	Actual	BP-24 Rate Case		BP-26 IPR			BP-24 Rate Case	BP-26 IPR FY 2026 & 2027	BP-26 IPR
	2023	2024	2025	2026	2027	2028	2 Year Total	2 Year Total	3 Year Total
Columbia Generating Station O&M	313,180,000	293,253,000	347,748,000	368,758,000	441,787,000	412,679,000	641,001,000	810,545,000	1,223,224,000
NEIL Insurance	1,982,000	3,224,000	3,385,000	3,785,000	3,941,000	4,099,000	6,609,000	7,726,000	11,825,000
Total	315,162,000	296,477,000	351,133,000	372,543,000	445,728,000	416,778,000	647,610,000	818,271,000	1,235,049,000

- **BPA acquires 100% of Columbia generation and funds 100% of its costs plus directly funds the Decommissioning Trust Fund, Independent Spent Fuel Storage Installation Decommissioning Trust Fund and NEIL insurance premiums.**
- **Columbia’s continued safe, reliable, and cost-effective operation is the key product.**
- **Columbia will have maintenance and refueling outages in Energy Northwest FYs 2025, 2027 and 2029. Columbia had an outage in FY 2023.**
- **The forecast costs for Bonneville FY 2026-2028 reflect continued operation and maintenance of Columbia and are consistent with the forecast provided by the Energy Northwest FY 2025 Long Range Plan.**
- **Forecasts are presented in Bonneville fiscal years.**

CGS O&M Expense

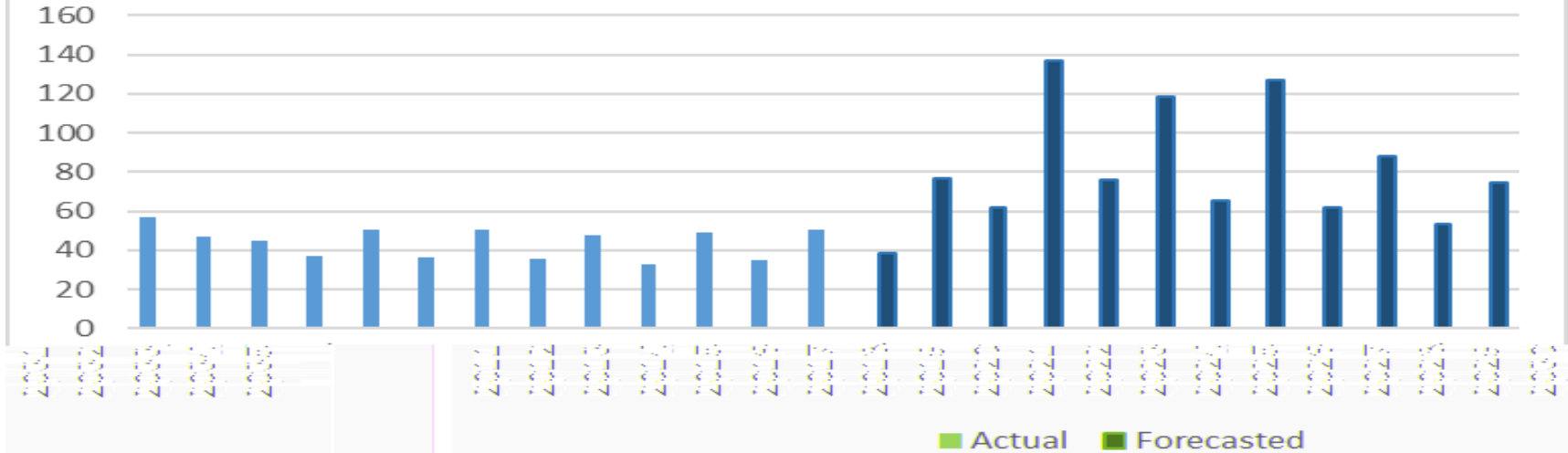


BPA FISCAL YEARS - DOLLARS IN MILLIONS

	2022	2023	2024	2025	2026	2027	2028
Actual	275	315					
BP-24			296	351			
BP-26					373	446	417

CGS Cost of Power

Generating Cost of Power
Energy Northwest Fiscal Years - Dollars per MWh



	2011	2012	2013	2014	2015	Actual								April LRE 2024	Budget 2025	Long Range Plan									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Actual	56.86	47.34	45.06	36.96	50.47	36.45	50.38	35.59	47.63	32.58	49.17	35.31	50.42												
Forecasted														38.73	76.74	61.63	137.11	76.38	118.84	65.75	126.96	61.68	87.99	53.66	74.47

Includes O&M, nuclear fuel amortization and capital
Also included in the capital costs are the Extended Power Uprate (EPU) and Second License Renewal (SLR).

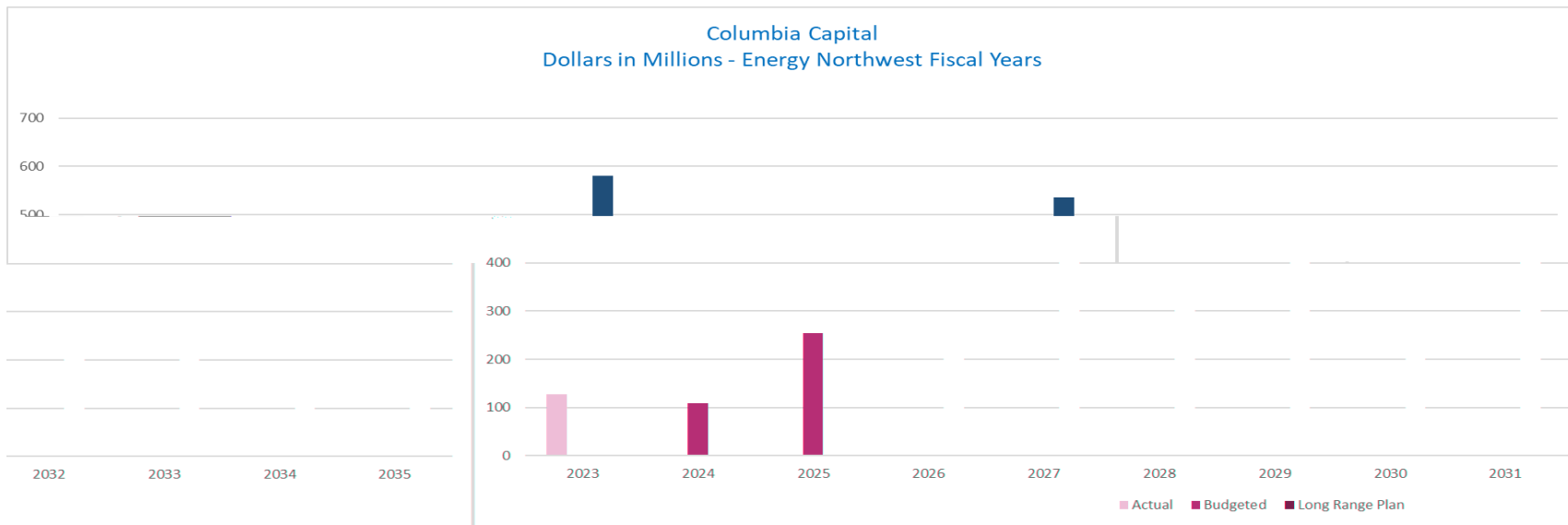
CGS Capital

Columbia's average capital forecast for BP-26 is \$422 million, which is an increase of \$307 million over the BP-24 average.

Major contributor of capital needs are large capital life-cycle management projects.

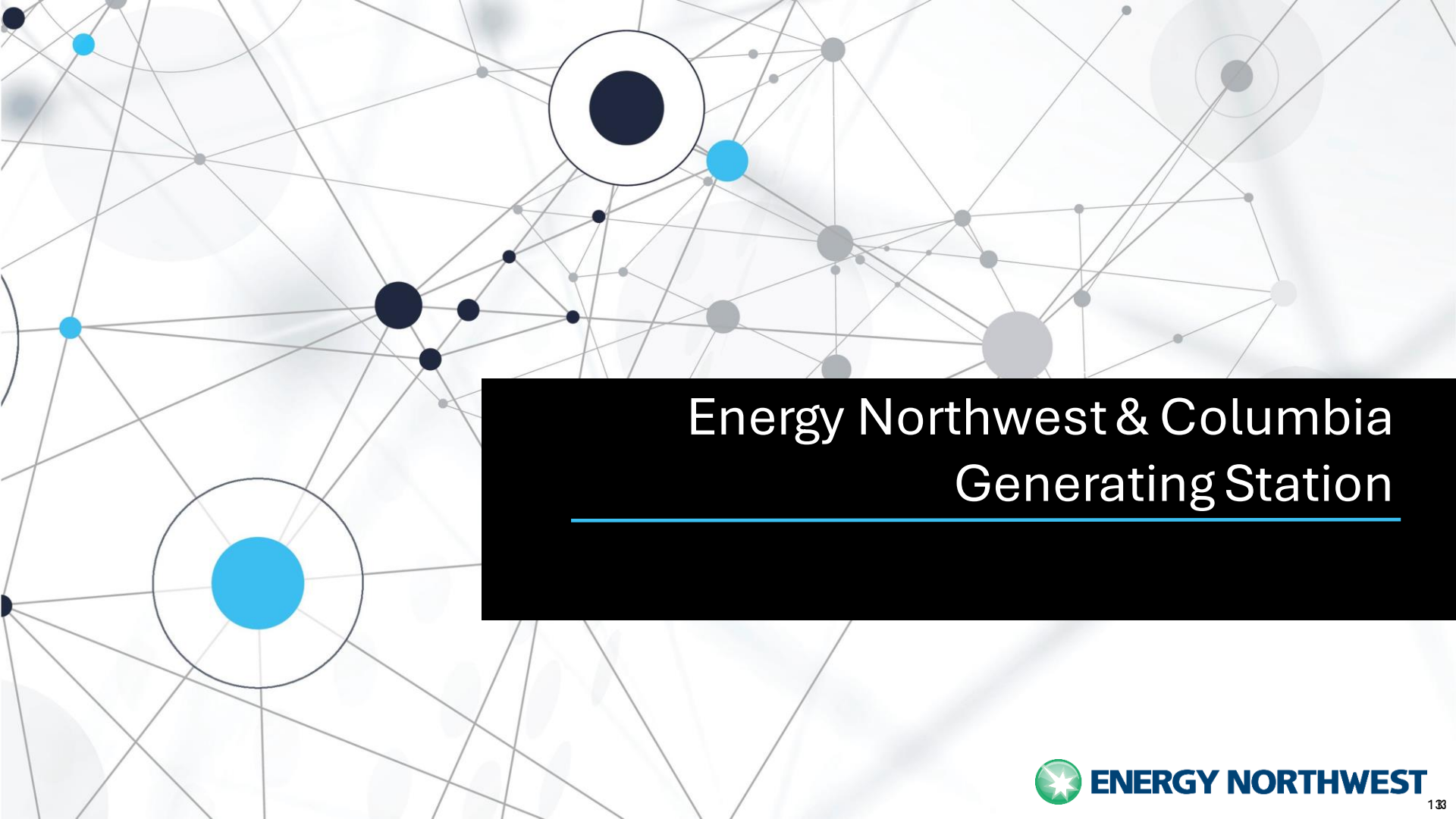
Costs associated with an Extended Power Uprate (EPU) to increase Columbia's generation up to 170-megawatt equivalent (MWe) are included in the IPR forecasts. A business case study is planned for completion in the spring of 2025 to determine the feasibility and cost effectiveness of an EPU.

CGS Capital



	Actual 2023	Budgeted 2024	Budgeted 2025	LRP 2026	LRP 2027	LRP 2028	LRP 2029	LRP 2030	LRP 2031	LRP 2032	LRP 2033	LRP 2034	LRP 2035
Actual	128												
Budgeted		109	254										
Long Range Plan				277	581	378	403	266	535	275	299	162	196

Capital includes Extended Power Uprate (EPU) and Second License Renewal (SLR)

A complex network diagram with various sized nodes in dark blue, light blue, and grey, connected by thin grey lines. Some nodes are highlighted with larger circles.

Energy Northwest & Columbia Generating Station

AGENDA

- Introductions
- Who We Are
 - Columbia Generating Station Performance
 - Regional Savings
- BP-26 Integrated Program Review (IPR)
- Looking Beyond – Columbia Capital Long Range Plan (LRP)
- Key Takeaways

ENERGY NORTHWEST & COLUMBIA GENERATING STATION

Danielle Dunigan

Treasury & Business Planning
Manager

WHO WE ARE

Energy Northwest is a Joint Operating Agency of the state of Washington

Established by the state Legislature in 1957, authorized to operate generating facilities or provide energy services in any state, but our focus is on the Northwest

Our members are all public utility districts and municipalities in Washington, but our projects have participants in six states



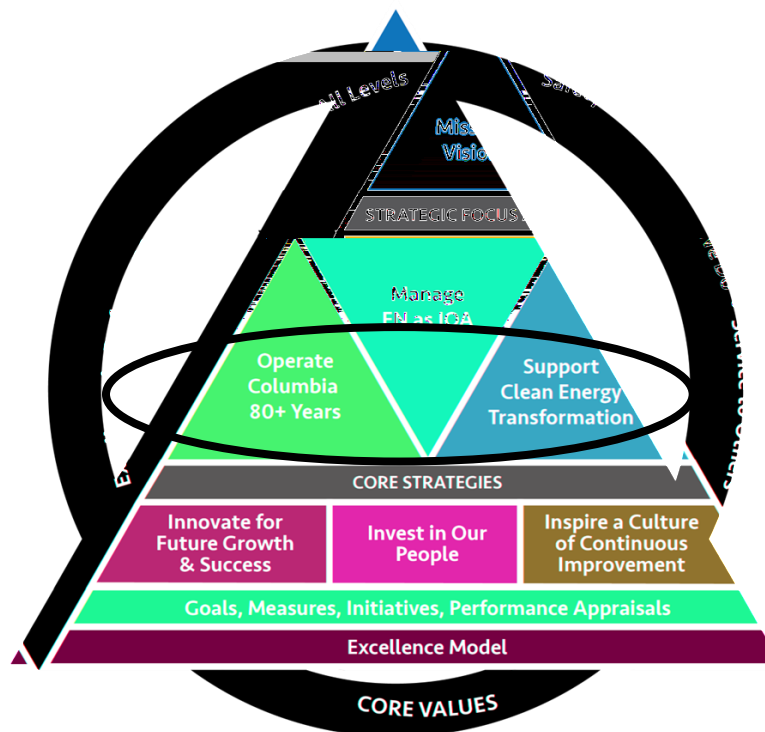
AGENCY STRATEGY

MISSION

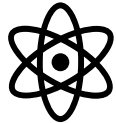
Providing our public power members and regional customers with safe, reliable, cost-effective, responsible power generation and innovative energy and business solutions

VISION

Leading the clean energy transformation for the regional public power community.



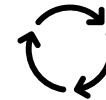
COLUMBIA GENERATING STATION GOALS



80+ Years Operations



Excellence in Equipment
Reliability = Predictability



Properly Resourced,
Sustainable and Stable
Long-Range Plan



Exceed Key Performance
Indicators



Increase Output Capacity
172 megawatts by 2031



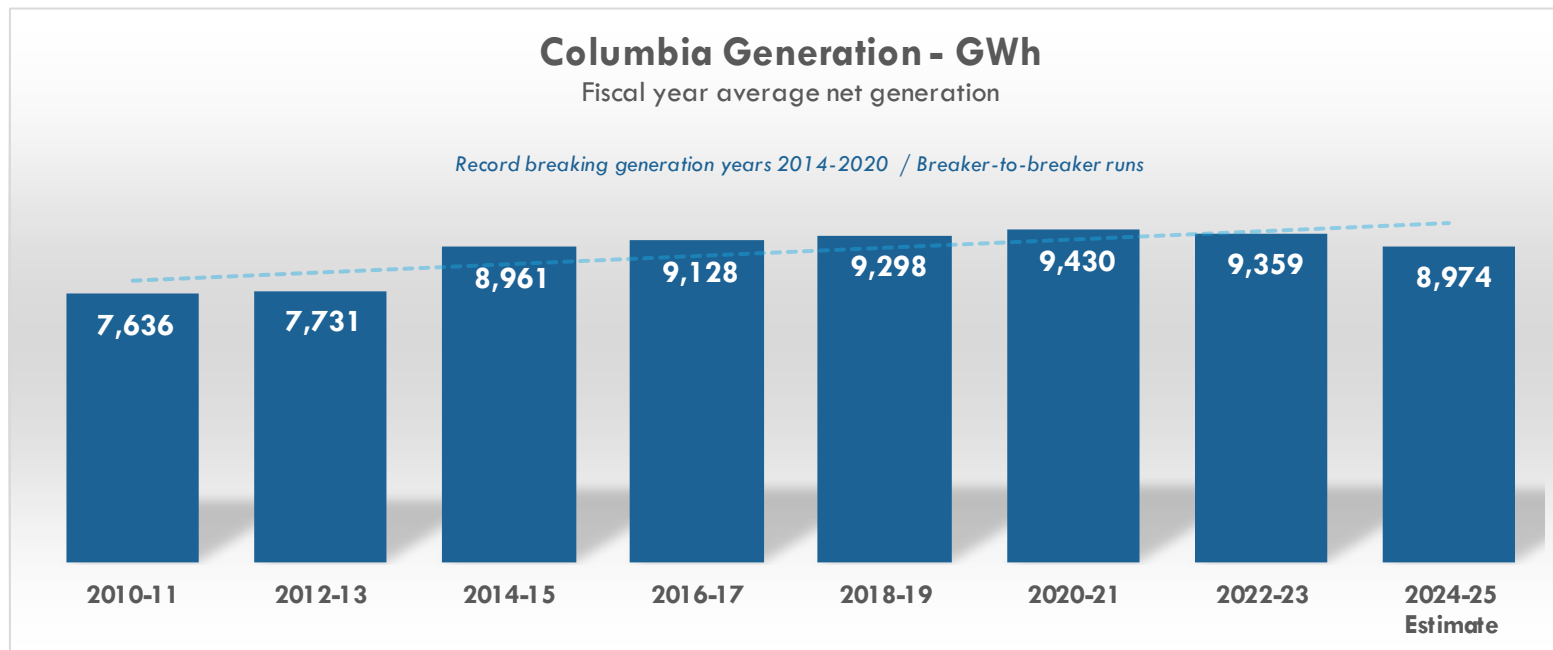
Predictable Costs

COLUMBIA GENERATING STATION

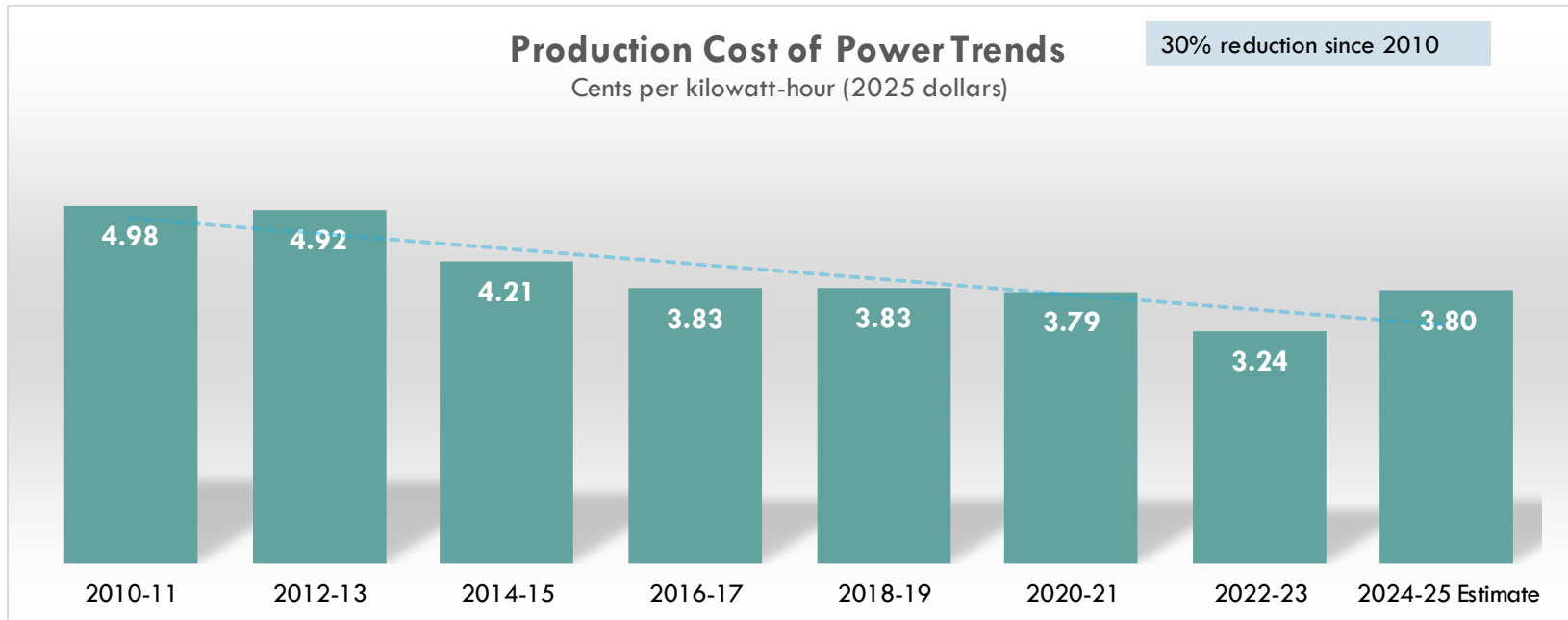
- Top performing plant
- 3rd Largest electricity generator in Washington
- Produces ~1 200 megawatts
- Available 24/7, refuels every 2 years
- Tier 1 asset



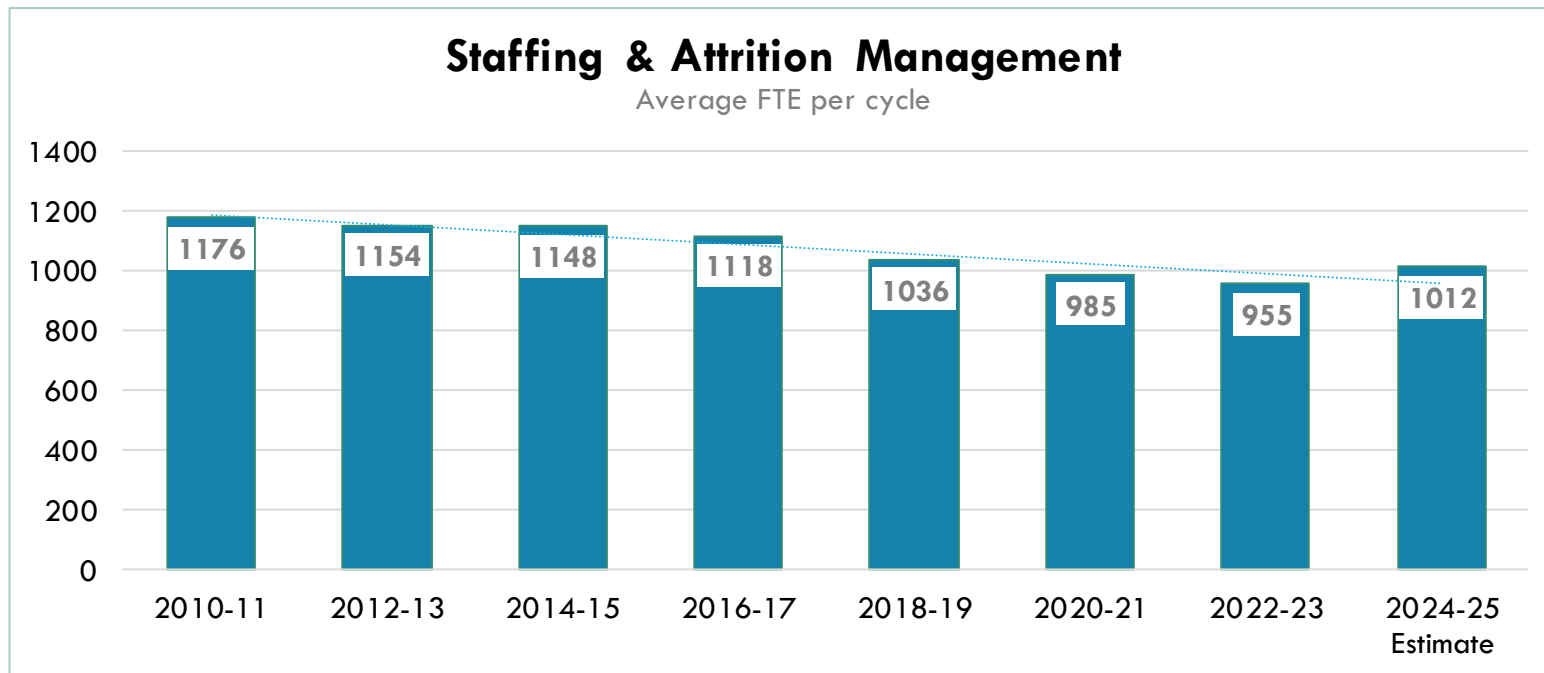
COLUMBIA PERFORMANCE



COLUMBIA PERFORMANCE

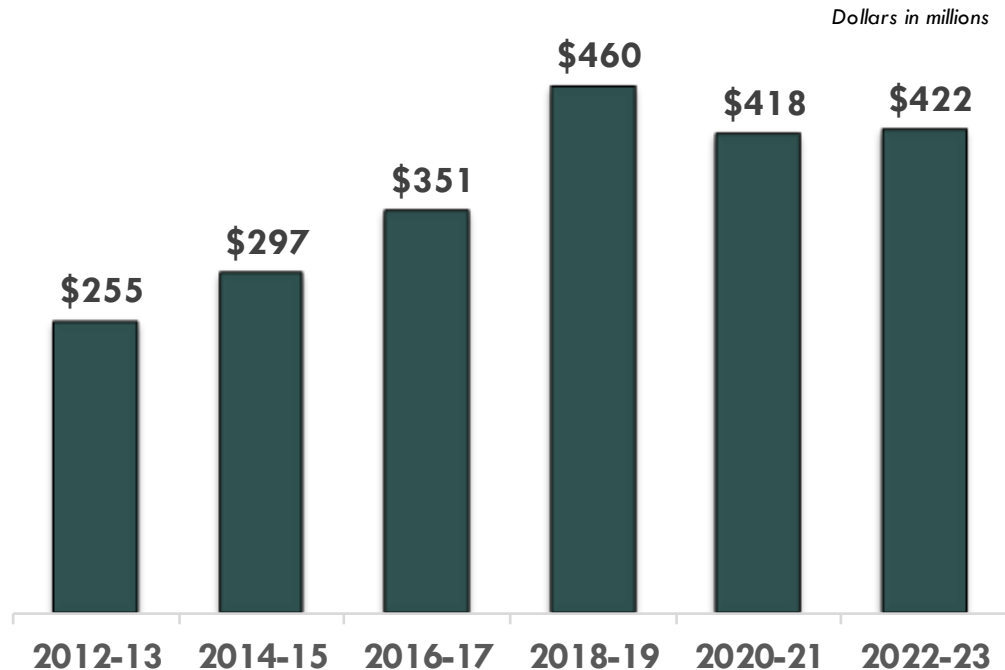
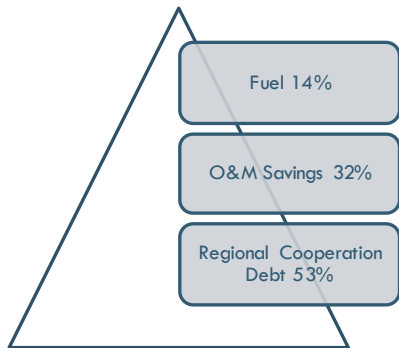


COLUMBIA STAFFING



REGIONAL SAVINGS / COST AVOIDANCE

More than \$2.2 billion in regional savings and avoided costs over 12 years (2012-2023)

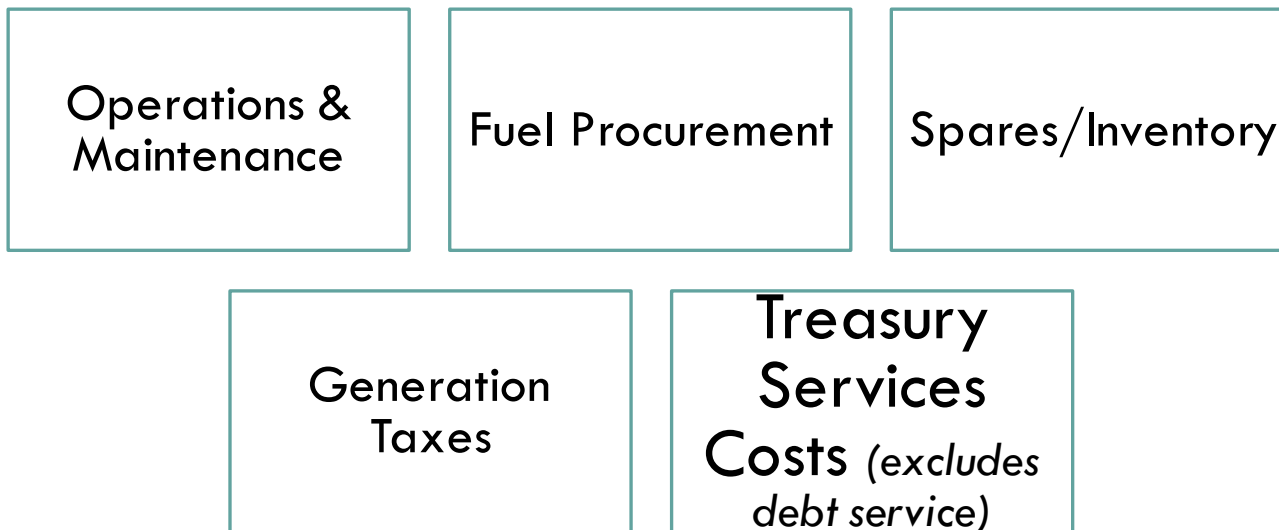


COLUMBIA BP-26 IPR

Danielle Dunigan

Treasury & Business Planning
Manager

COLUMBIA IPR COST ELEMENTS



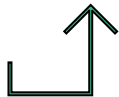
RATE CASE HIGHLIGHTS



Inflation and Escalation Impacts



Normal Operating Cycle Variability



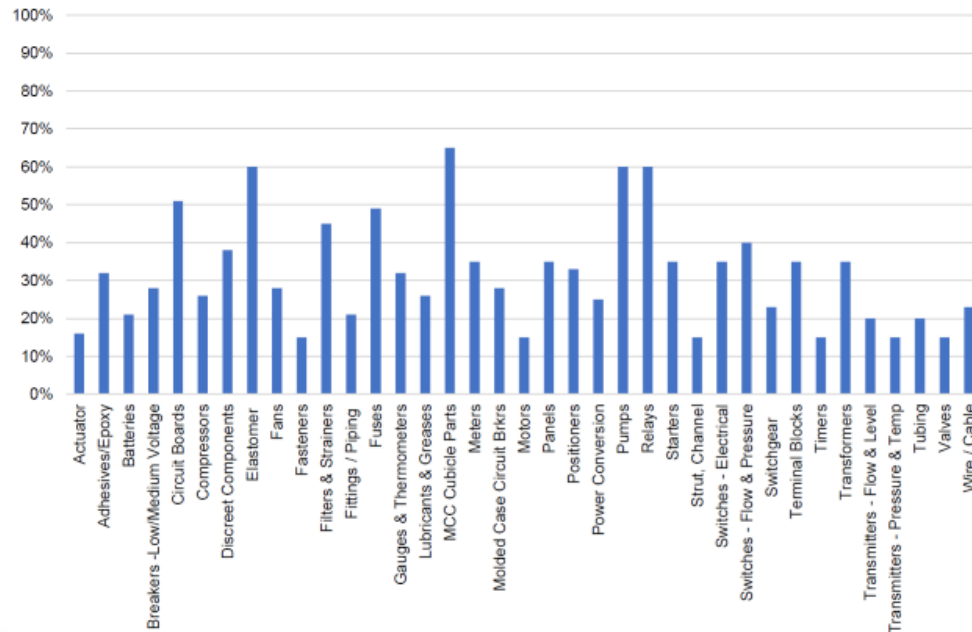
Equipment Reliability



Strategy and Risk Informed Operating
Budget

INDUSTRY ECONOMIC TRENDS

PRICE INCREASE BY PRODUCT CODE - 3 YEAR AVERAGE

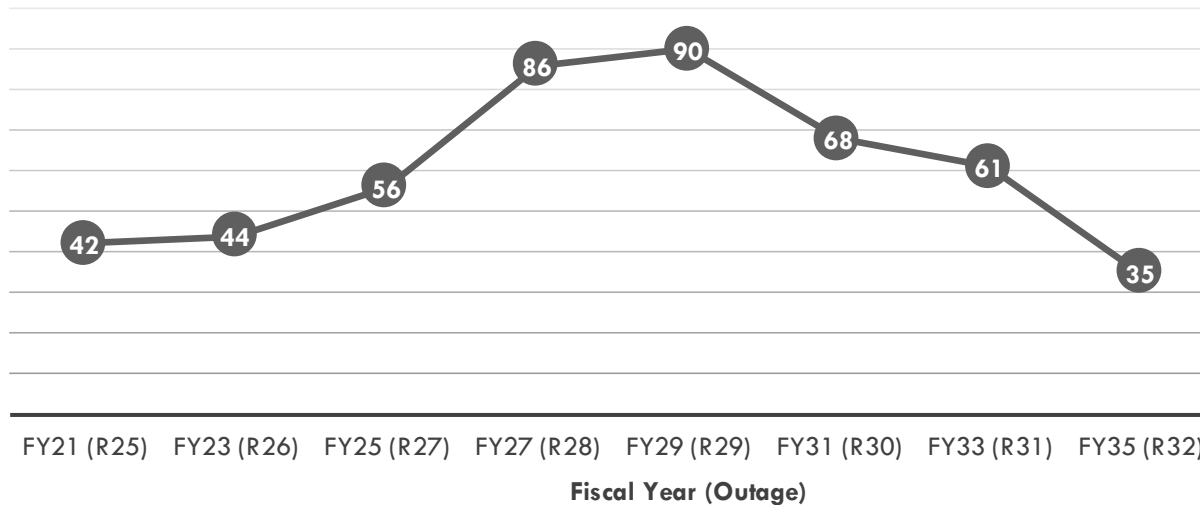


- Shortage/increase of raw materials – steel, copper, plastics, industrial semiconductors
- Capacity constraints
- Labor constraints
- Wage inflation – 15-30%
- Rising freight costs

Source: USA Paragon data 12.2023

COLUMBIA OUTAGE DURATION FORECAST

Outage Duration (Days)

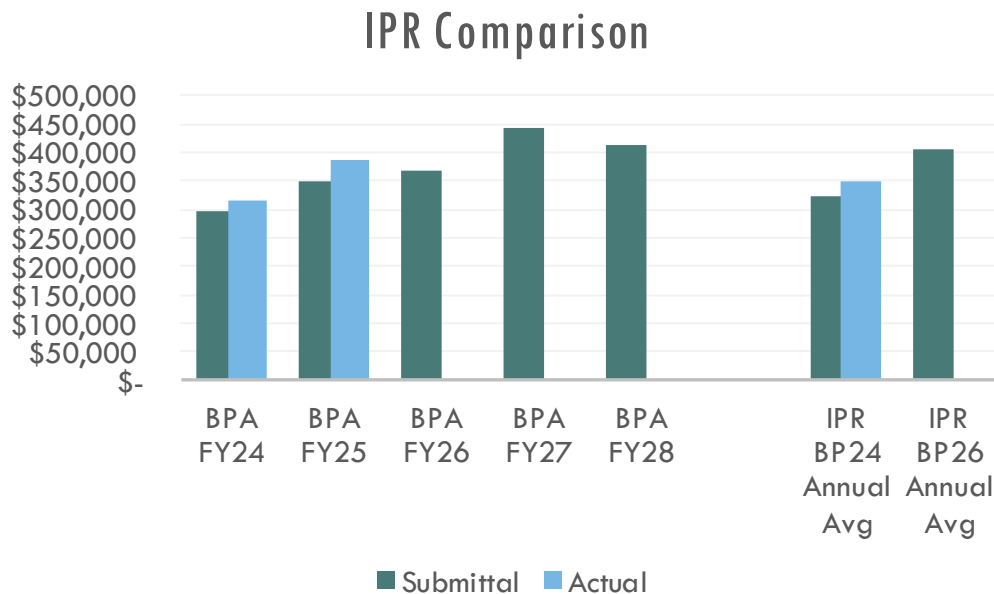


Next 5 outage durations driven by capital improvement projects

Standard maintenance outage FY35

IPR COMPARISON – BP24 TO BP26

Graph presented in BPA fiscal years, which includes Energy Northwest O&M FY24-FY26 for IPR BP24 and FY26-29 for IPR BP26

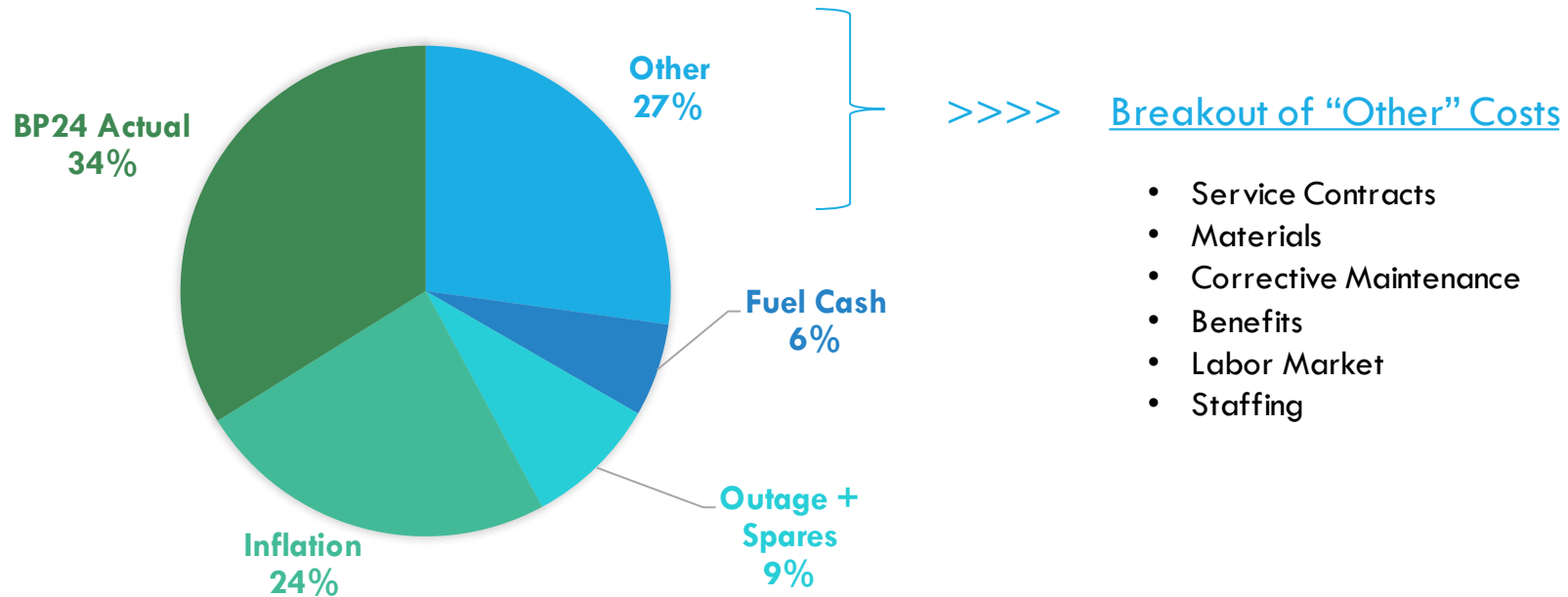


Take Aways:

- Iterative process
- Based on best estimates
- BP26 includes 2 outages, 86 and 90 days
- Fuel cycle Uranium purchasing + fabrication
- BP24 submission to actual represents 8%

AVERAGE ANNUAL INCREASE

Graph presents IPR BP26 submission cost drivers compared to IPR BP24 submission



LOOKING AHEAD: COLUMBIA CAPITAL LONG RANGE PLAN

Danielle Dunigan

Treasury & Business Planning
Manager

CAPITAL LONG RANGE PLAN METHODOLOGY & OVERSIGHT

10-year financial forecast for Columbia Capital funding requirements to supporting safe, reliable, predicable and cost-effective operation

Comprehensive, systematic, multi-phased and risk based

- Addresses known vulnerabilities and regulations
- Incorporates necessary risk reserve and escalation
- Annual update and challenge – monitor change
- Policies and procedures
- Internal Oversight – Authorization Committees, Executive Board
- External – Participant Review Board, BPA

CAPITAL LONG RANGE PLAN STRATEGY

Lifecycle Management Plan

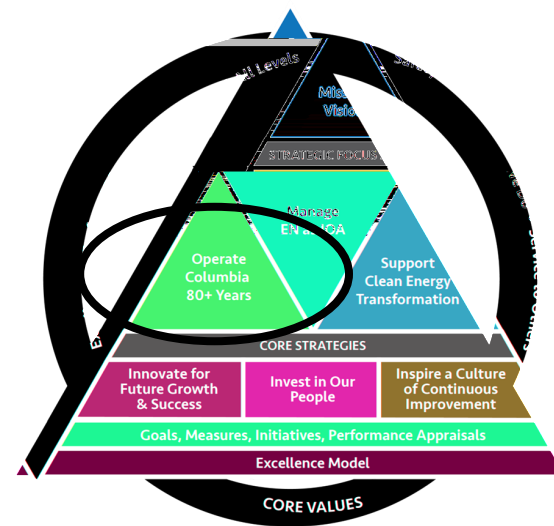
- Major Preventative and Corrective Maintenance
- End of useful life major system + component replacements
- Obsolete equipment replacements

Subsequent License Renewal

- Evaluation/Study starts 2029

Extended Power Uprate

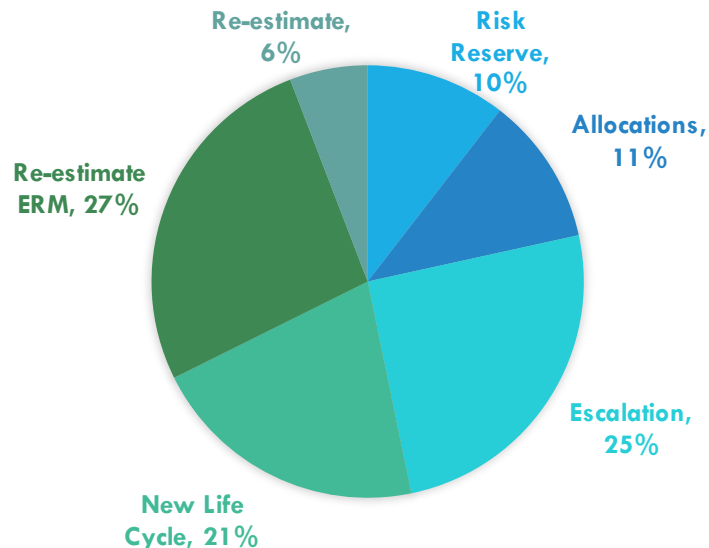
- Fiscal Year 2026-2031
- Project addition



CAPITAL 10-YEAR LONG RANGE PLAN CHANGES

Excludes EPU, includes Subsequent License Renewal

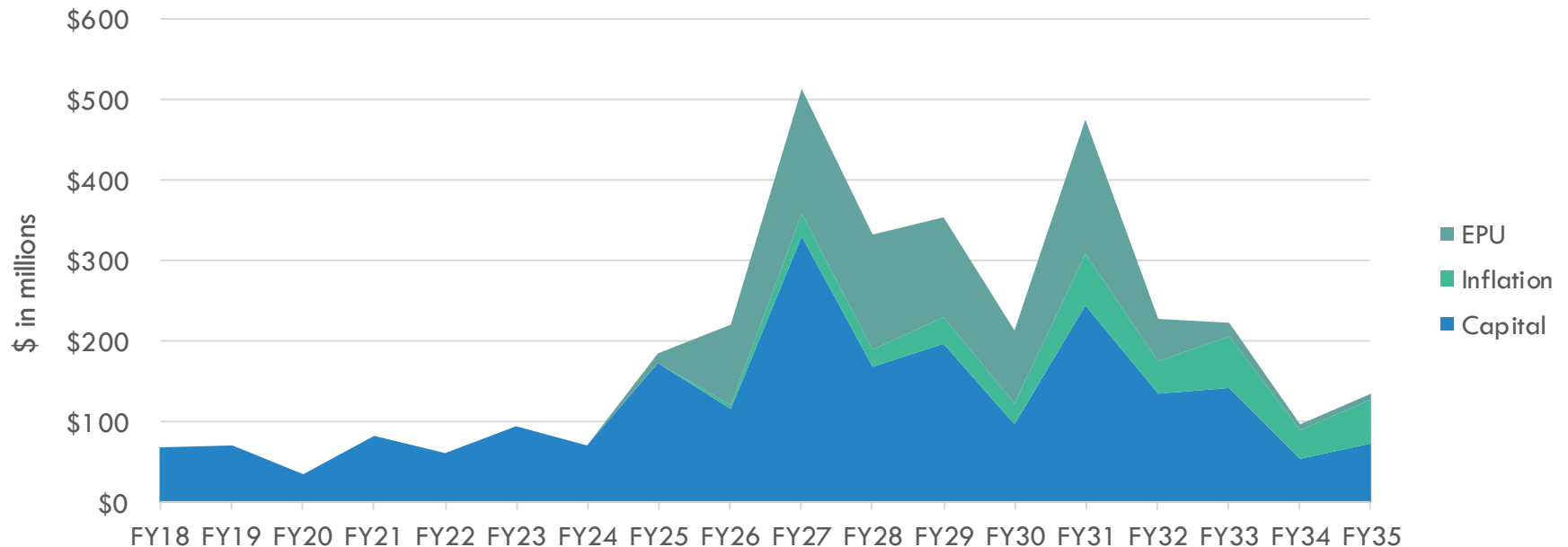
Portfolio Increase Statistics



Program Updates

- 12 Enterprise Risk Projects (ERM)
- ERM projects = 41% of portfolio costs
- Adopting AACE Cost Estimating Classification System best practices
- Financial analytics of project risk
- Project complexity and market risks
- Resources to support effective implementation

CAPITAL PROJECT TRENDS BY COST



COLUMBIA'S INVESTMENT CYCLE - IMPLEMENTATION TIMELINE

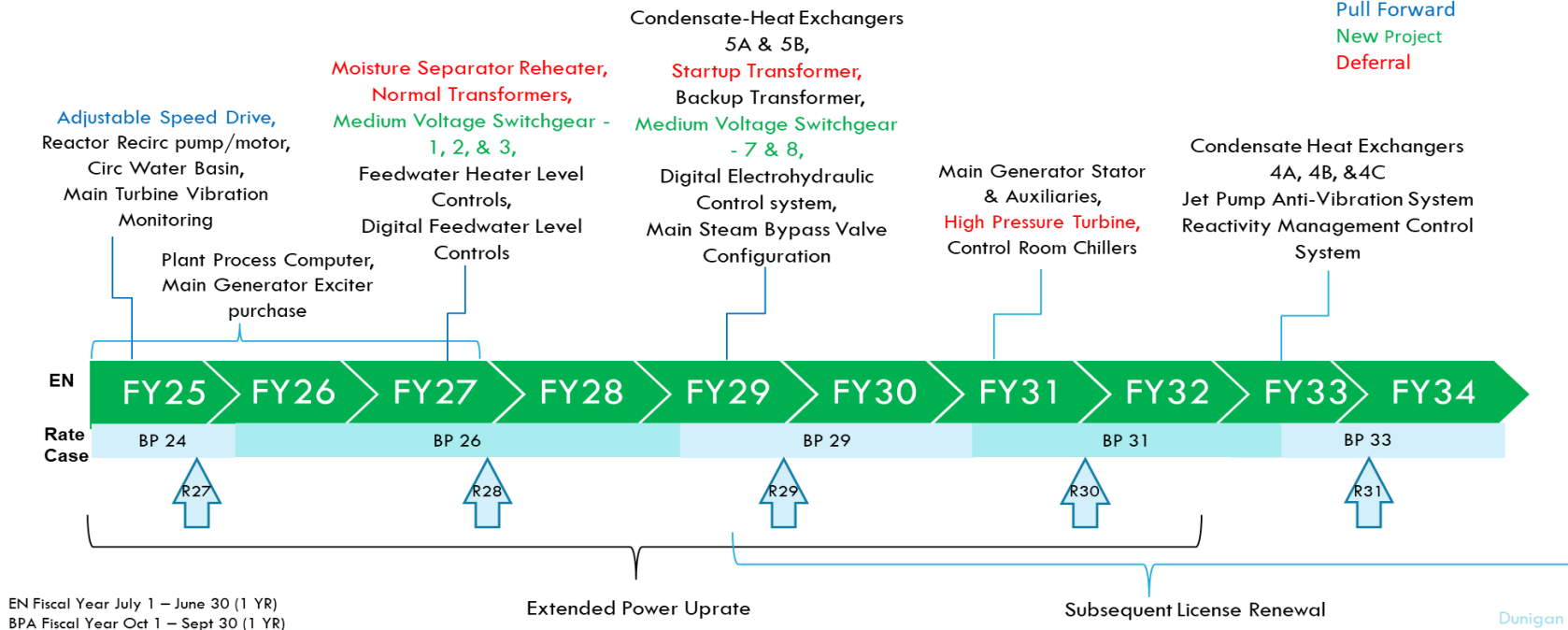
Includes EPU and Subsequent License Renewal

Color Key

Pull Forward

New Project

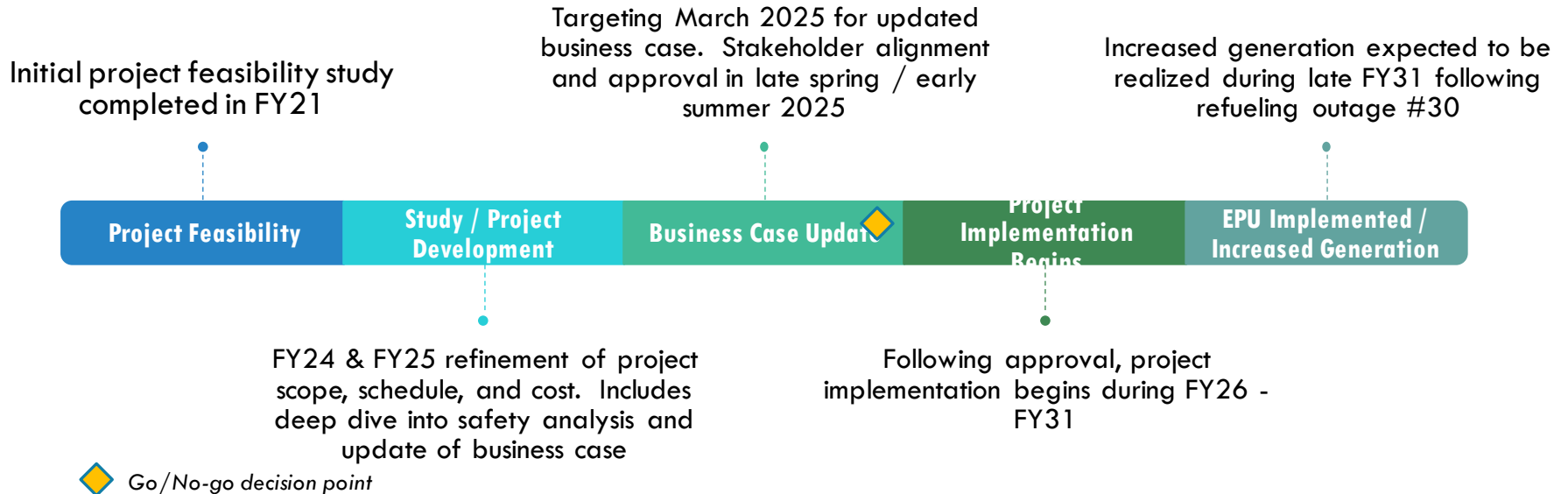
Deferral



Dunigan

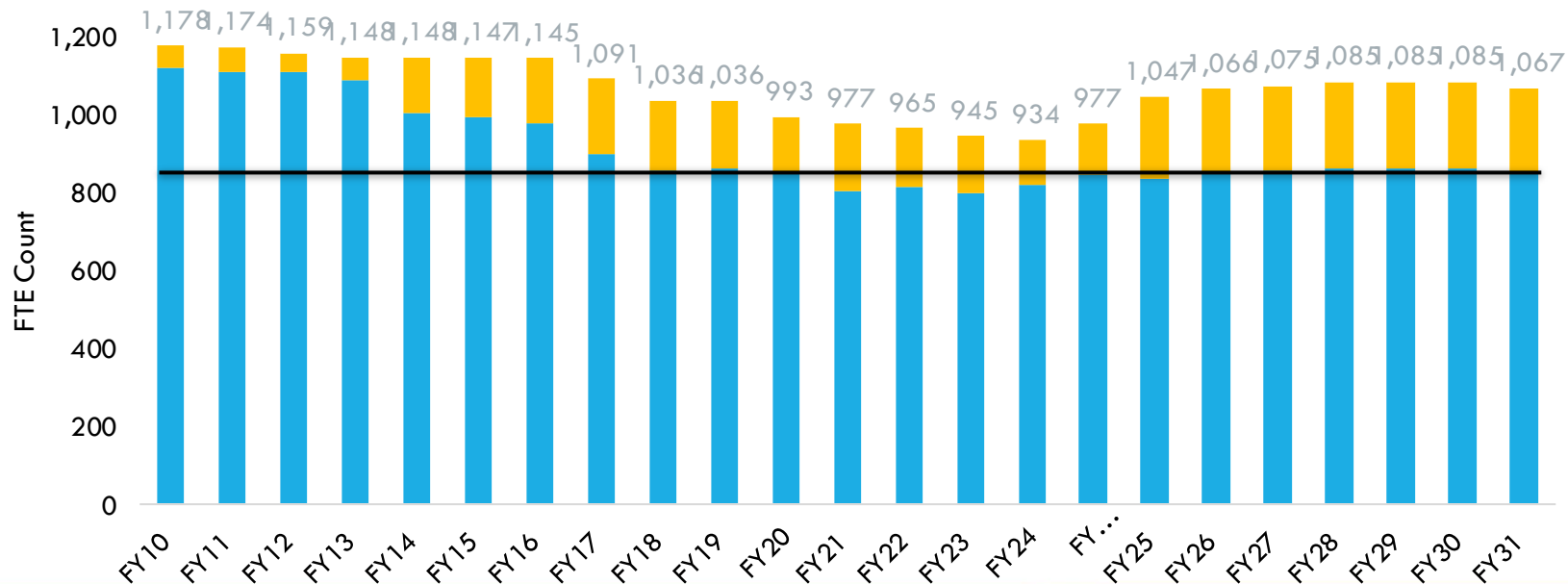
EXTENDED POWER UPRATE DECISION TIMELINE

Capital Addition



COLUMBIA STAFFING COMPOSITION

Excludes staff augmentation resources. Corporate resources are allocated within the business units. "A" indicates a cycle adjustment.

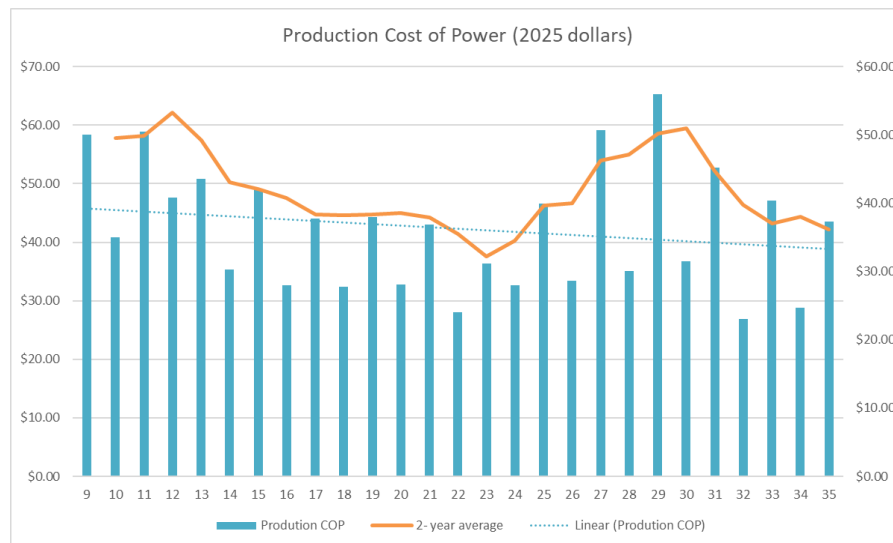


VALUE TO THE REGION

16% increase generation

Production COP 2-year avg
=
Rate of inflation by 2035

Equipment Reliability top
Quartile



KEY TAKE AWAYS

- Trusted regional partners in providing cost-effective clean energy
- Funding requirements align with known business requirements
 - Focus of plant reliability = Predictable power
- Innovation to increase regional generation output (i.e., Extended Power Uprate)



DISCUSSION

A complex network diagram with various sized nodes (black, blue, grey) and connecting lines, set against a light grey background with faint circular patterns.

Thank you.



QUESTION AND ANSWER



Submitting Comments

- Comment Period: July 2nd – August 5th
- Comments can be submitted through:
 - Online: www.bpa.gov/comment
 - Mail: BPA Public Involvement, P.O. Box 14428, Portland, OR 97293
- Webpages:
 - IPR: <https://www.bpa.gov/about/finance/bp-26-ipr>
 - SAMPs: <https://www.bpa.gov/about/finance/strategic-asset-management-plans>

Publication

The BP-26 Initial Publication and other materials are available at:
<https://www.bpa.gov/about/finance/bp-26-ipr>

Strategic Asset Management Plans (SAMPs) are available at:
<https://www.bpa.gov/about/finance/strategic-asset-management-plans>

Questions can be submitted to BPAFinance@BPA.gov

FINANCIAL DISCLOSURE

This information was publicly available on June 25, 2024, and contains information not sourced directly from BPA financial statements

