

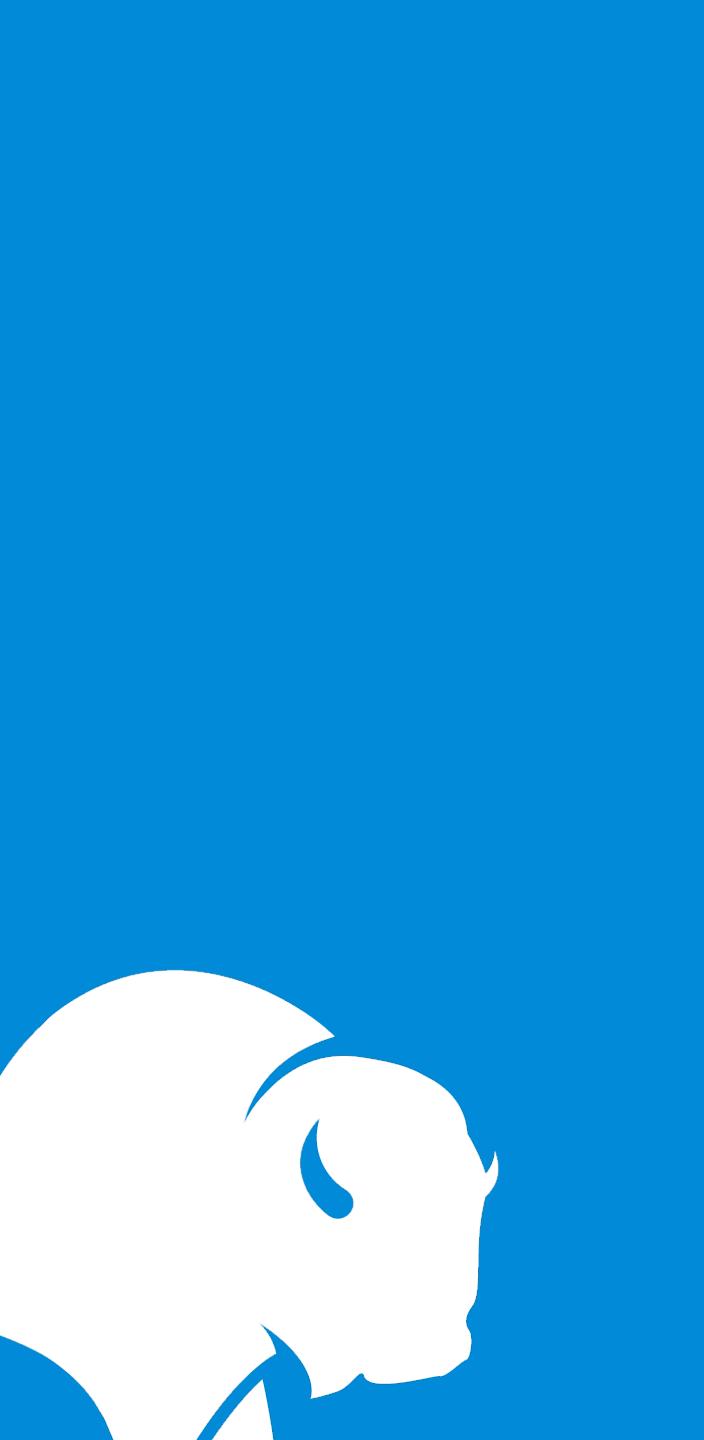


Platte River
Power Authority

Estes Park • Fort Collins • Longmont • Loveland

Board of directors

Aug. 25, 2022



Proposed 2023 rate tariff schedule charges

Wade Hancock, financial planning and rates manager

Discussion

- 2023 recommendations
- Rate structure overview
- 2023 firm power service charges
- Owner community impacts: budget to budget
- 2023 rate tariff schedules
 - Standard offer energy purchase tariff
 - Tariffs without rate changes
- Schedule

2023 average wholesale rate recommendation

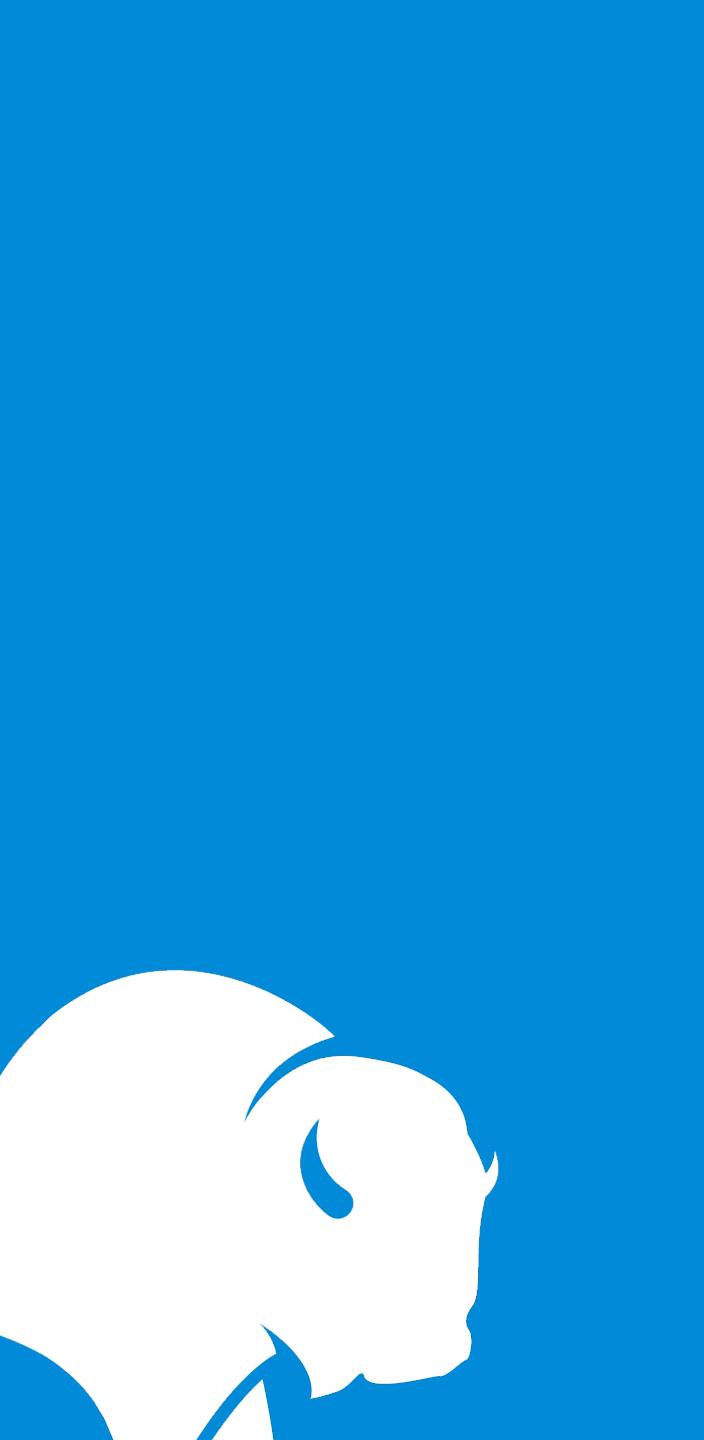
- 5.0% average rate increase (2022 Strategic Budget to 2023 proposed budget)
- Assumes adoption of deferred revenue and expense accounting policy
- Approval requested for 2023 rate increase only

	2022 budget	2023 proposed budget	% change
Revenues (millions)	\$208.0	\$224.1	7.7%
Energy sales (GWh)	3,218.5	3,301.4	2.6%
Average rate (\$/MWh) *	\$64.63	\$67.88	5.0%

*Based on projection for owner community energy and demand forecasts

Managing intermittent risk

- Current rate structure
 - Transparent intermittent and dispatchable variable cost to allow flexible service offerings
 - Load ratio allocation and billing of intermittent and dispatchable energy
 - Owner communities assume risk of intermittent generation variances
- Platte River has ability to manage intermittent generation variances
- Staff recommends blended variable energy charge
 - Blend dispatchable and intermittent variable costs
 - Continue to provide unbundled variable energy and cost information
 - Platte River assumes risk of intermittent generation variances and associated costs
 - Discussed with Utility Directors and owner community rate staffs



Rate structure overview

Firm power service

Cost components

Monthly charge	Cost category	Cost allocations
Owner charge	Fixed	Administrative & general, distributed energy resources, debt coverage margin, other credits
Demand charges		
Transmission	Fixed	Administrative & general, operations & maintenance, debt, debt coverage margin, other credits
Generation	Fixed	Administrative & general, fixed operations & maintenance, debt, debt coverage margin, reserves, surplus sales margin credit, hydro demand, baseload, combustion turbine, other credits
Energy charges		
Dispatchable fixed	Fixed	Administrative & general, fixed operations & maintenance, debt, debt coverage margin, reserves, surplus sales margin credit, hydro demand, baseload, other credits
Variable*	Variable	Fuel, hydro energy, variable operations & maintenance, purchased power, wheeling, ancillary services, generation specific transmission, other credits

*Dispatchable variable and intermittent variable cost energy charges combined in 2023

Firm power service

Owner charge

- Owner allocation based on each owner community's ratio of total energy for the six most recent year-end values
- Why six years?
 - Allocated costs include distributed energy resource expenses, which are long-term behavioral shifting programs
 - A reasonable approach is to establish a time period twice the time period for the demand methodology
 - To provide rate stability in fixed cost recovery
 - Allows owner communities to see change over time, without dramatically impacting year-to-year changes

Firm power service

Demand charges

- Unbundled generation and transmission
- Minimum billing demands
 - Designed to address fluctuations in demand by owners and result in more certainty in the monthly bill for each owner, as well as revenue for Platte River
 - Emphasizes the efficient use of infrastructure to maximize short-term and long-term marginal cost savings, providing a system benefit
 - Greater owner community financial incentive to lower peaks during months with high demands; less financial incentives to lower peaks during non-peak months

Firm power service

Billing demand

- Monthly billing demand is the greater of metered demands and minimum billing demands
- Minimum generation billing demand
 - 75% of the owner community's average maximum coincident demand during the three preceding **summer** periods beginning with the most recent completed year
 - Generation additions are to meet summer peaks
- Minimum transmission billing demand
 - 75% of the owner community's average maximum noncoincident demand during the three preceding **annual** periods beginning with the most recent completed year.
 - Transmission additions to meet owner loads regardless of season
- Minimum billing demands concentrate the signal to reduce consumption at time of peak

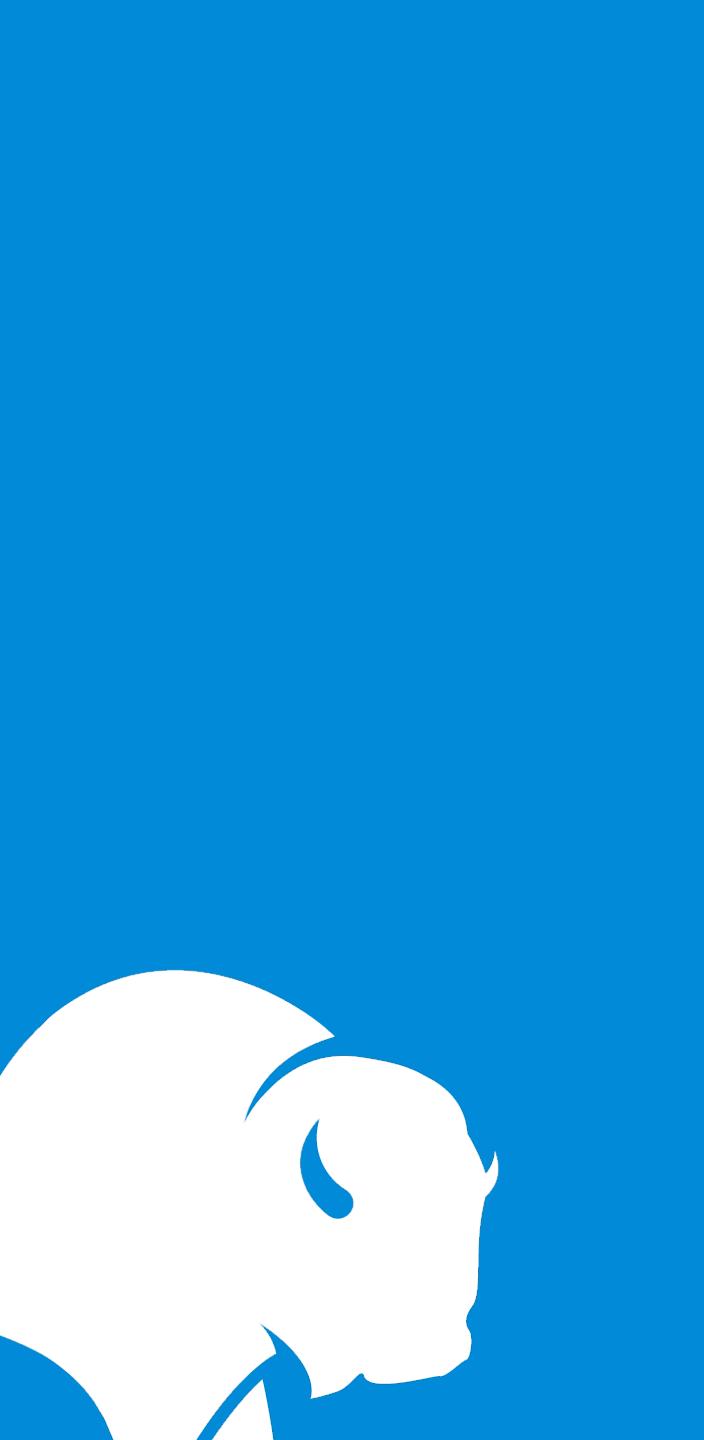


Firm power service

Energy charges

- Unbundled, transparent fixed and variable energy costs
 - Applies to all kWh supplied
- Fixed energy charge
 - Reliability, or firming component, of energy rates
- Variable energy charges
 - 2020 - 2022: unbundled dispatchable and intermittent energy charges
 - 2023 recommendation
 - Blend dispatchable and intermittent energy costs into a single charge
 - Platte River assumes all intermittent generation variance risk

For information purposes, intermittent energy allocated monthly based on each owner community's ratio of total owner community monthly loads will be displayed on invoices.



2023 firm power service recommendation

Owner community charges and revenue

	2022		2023		Change	
	Charge	Revenue	Charge	Revenue	Charge	Revenue
Owner community charge	\$11,520	\$13.4	\$13,229	\$15.4	14.8%	15.0%
Demand charges						
Transmission	\$6.62	\$43.2	\$6.72	\$45.0	1.5%	4.3%
Generation: summer	\$6.10	\$15.0	\$6.15	\$15.9	0.8%	6.1%
Generation: nonsummer	\$4.48	\$18.0	\$4.60	\$18.7	2.7%	3.8%
Energy charges						
Fixed	\$0.01572	\$49.2	\$0.01586	\$50.8	0.9%	3.1%
Dispatchable variable	\$0.01520	\$36.6 ¹				
Intermittent variable	\$0.03200	\$32.6				
Variable	\$0.02067 ²		\$0.02273	\$78.3 ¹	10.0%	13.1% ³
Revenues (millions)		\$208.0		\$224.1		7.7%
Energy sales (GWh)		3,218.5		3,301.4		2.6%
Average rate (\$/MWh)		\$64.63		\$67.88		5.0%

¹ Includes large customer service

² The 2022 variable charge is informational only for comparison to the proposed 2023 variable cost energy charge

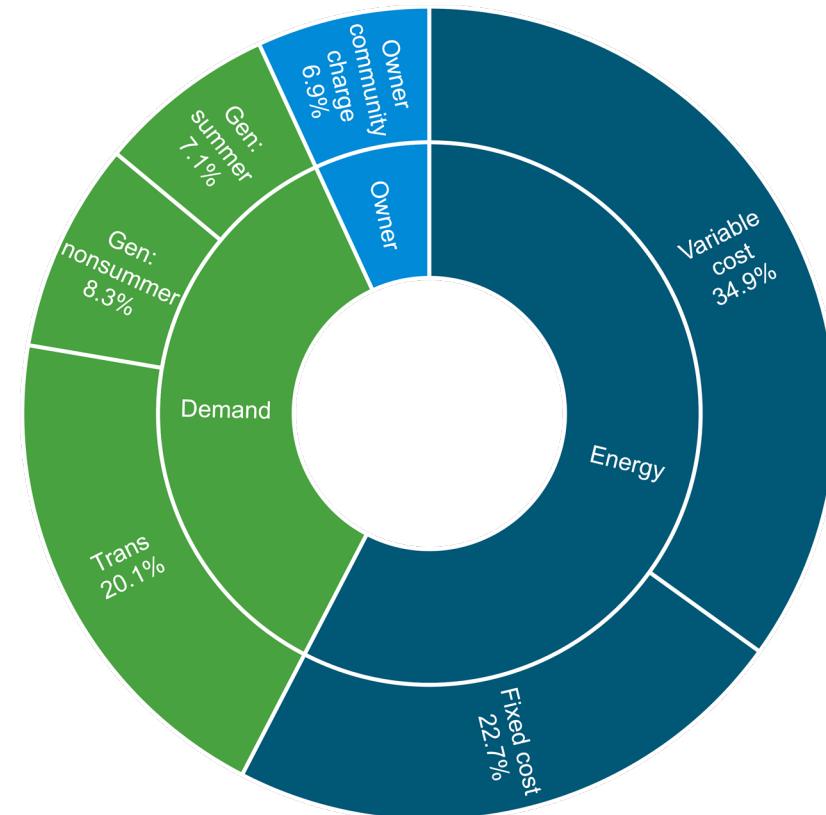
³ Comparison of 2022 dispatchable and intermittent variable to 2023 variable revenue totals

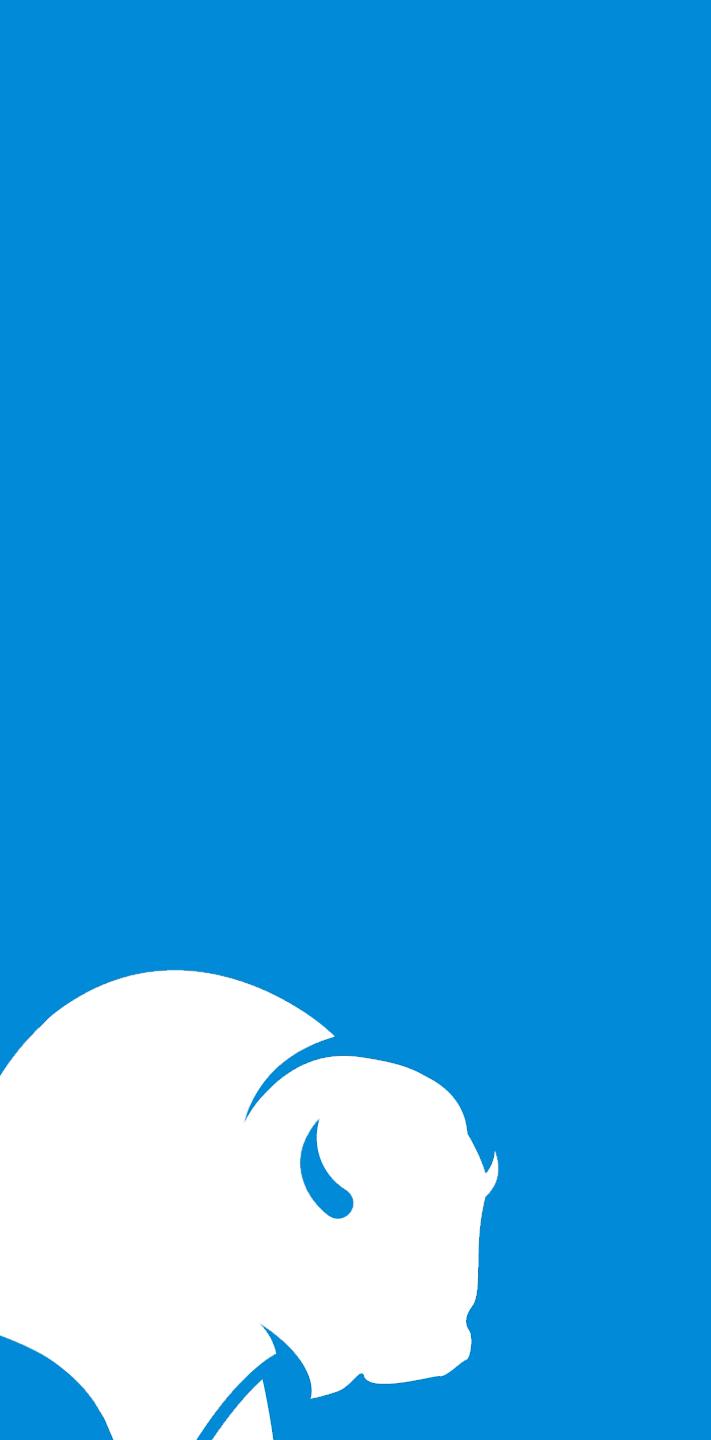
Firm power service

Revenue allocation

	2023 revenue \$ millions	%
Owner community charge	\$15.4	6.9%
Demand charges		
Transmission	\$45.0	20.1%
Generation: summer	\$15.9	7.1%
Generation: nonsummer	\$18.7	8.3%
Energy charges		
Fixed	\$50.8	22.7%
Variable*	\$78.3	34.9%

* Includes large customer service





Owner community impacts

2022 Strategic Budget to 2023 proposed budget

Firm power service: Owner community impacts

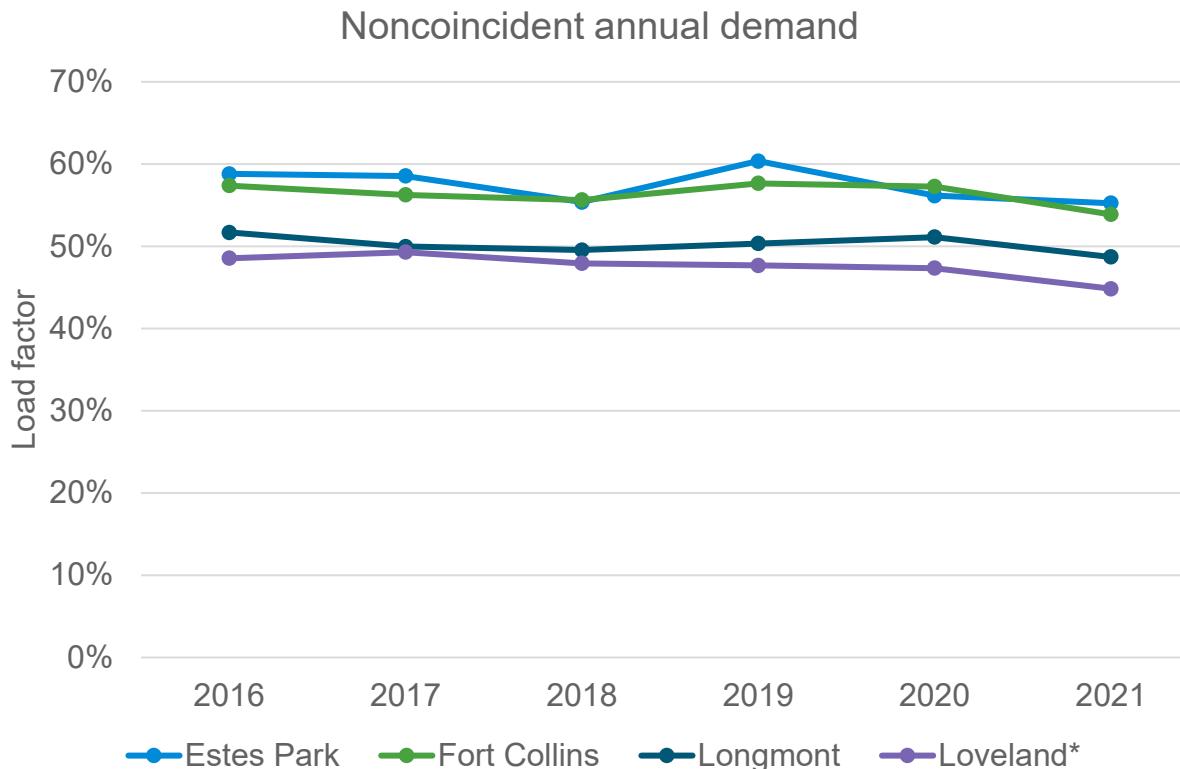
		Estes Park	Fort Collins	Longmont	Loveland*	Platte River
2022	Revenues (millions)	\$8.5	\$96.8	\$54.8	\$48.0	\$208.0
	Energy sales (GWh)	136.2	1,523.7	826.5	732.1	3,218.5
	Average rate (\$/MWh)	\$62.17	\$63.51	\$66.29	\$65.55	\$64.63
2023	Revenues (millions)	\$9.1	\$103.8	\$59.2	\$52.0	\$224.1
	Energy sales (GWh)	139.9	1,558.1	852.0	751.4	3,301.4
	Average rate (\$/MWh)	\$64.91	\$66.60	\$69.47	\$69.26	\$67.88
	Average \$/MWh change	4.4%	4.9%	4.8%	5.7%	5.0%

*Loveland includes large customer; otherwise, Loveland's rate impact would be 6%.

- Impacts vary based on unique load factors, load characteristics and forecasted loads
- Platte River's 2023 proposed monthly budget was provided to owner community rate staffs

Firm power service

Owner community load factors



- Owner communities with the highest load factors have the lowest average rate
- Coincident and noncoincident peaks
 - Do not vary significantly among front range utilities
 - Vary for Estes Park as a winter peaking system

*Loveland excludes large customer

Firm power service

Billing demand in excess of metered demand

	Estes Park	Fort Collins	Longmont	Loveland*
Coincident				
2022	0.2%	3.8%	10.8%	11.7%
2023	0.1%	3.3%	10.7%	12.4%
Favorable/(unfavorable)	0.1%	0.5%	0.1%	(0.7%)
Noncoincident				
2022	4.9%	3.5%	10.5%	11.4%
2023	4.0%	3.2%	10.8%	12.9%
Favorable/(unfavorable)	0.9%	0.3%	(0.3%)	(1.5%)

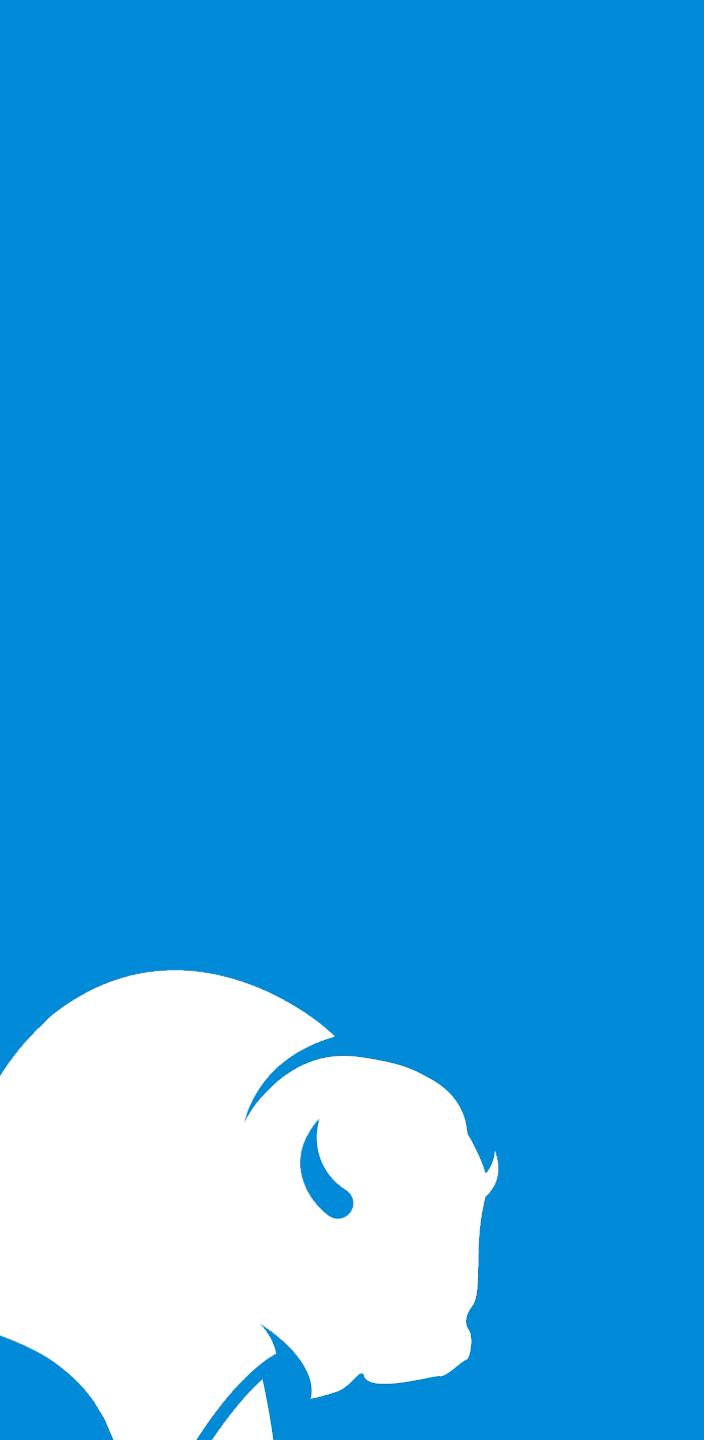
- The owner communities with the lowest average rate, also have the lowest billing demand in excess of metered demand
- Improvements in billing demand, relative to the other owner communities, can lower an owner community's rate increase relative to the average

Firm power service impacts

Platte River

	2022 budget	2023 proposed budget	Change (\$)	Change (%)
Transmission billing demand (kW)	6,522,363	6,702,257	179,894	2.8%
Generation billing demand (kW)	6,481,240	6,654,458	173,218	2.7%
Energy sales (kWh)	3,218,455,300	3,301,375,662	82,920,362	2.6%
Revenues	\$208,017,293	\$224,081,909	\$16,064,616	7.7%
Average rate (\$/MWh)	\$64.63	\$67.88	\$3.24	5.0%





2023 rate tariff schedules

Standard offer energy purchase (Tariff SO-23)

Wholesale Transmission Service (Tariff WT-23)

Large Customer Service (Tariff LC-23)

Standard offer energy purchase (Tariff SO-23)

Avoided energy rate

- | | |
|--------------------------|---|
| Applicability | <ul style="list-style-type: none">• Power production facilities that have registered with the Federal Energy Regulatory Commission as Qualifying Facilities under the Public Utilities Regulatory Policies Act and are electrically connected to Platte River's transmission system or the distribution system of one of Platte River's owner communities |
| <hr/> Calculation | <ul style="list-style-type: none">• Hourly resource model marginal cost analysis• Balance of owner community load after 'must-take' energy projections• Remaining hourly load served by lowest marginal cost resource: coal-fired generation, natural gas-fired generation and market purchases• Hourly average determines the avoided energy rate |
| <hr/> 2023 rate | <ul style="list-style-type: none">• 25.5% increase to \$0.02033 from \$0.01620 per kilowatt hour<ul style="list-style-type: none">• Fuel and market price increases• Increase frequency of combustion turbines and market purchases as the marginal resource |

Tariffs without rate changes

Wholesale Transmission Service (Tariff WT-23)

- No changes
- Board approved in May 2022; effective June 1 of each year
- Transmission service charged to third parties
- Charges based on prior year actuals

Large Customer Service (Tariff LC-23)

- Charges established through separate contract
- Changes tied to firm power service tariff and annual budget



Schedule

September Draft 2023 rate tariff schedules • Updated 2023 tariff language and charges

October 2023 rate tariff schedules • Final 2023 tariff language and charges
 • Board approval

January 2023 rate tariff schedules • Effective Jan. 1, 2023

Questions



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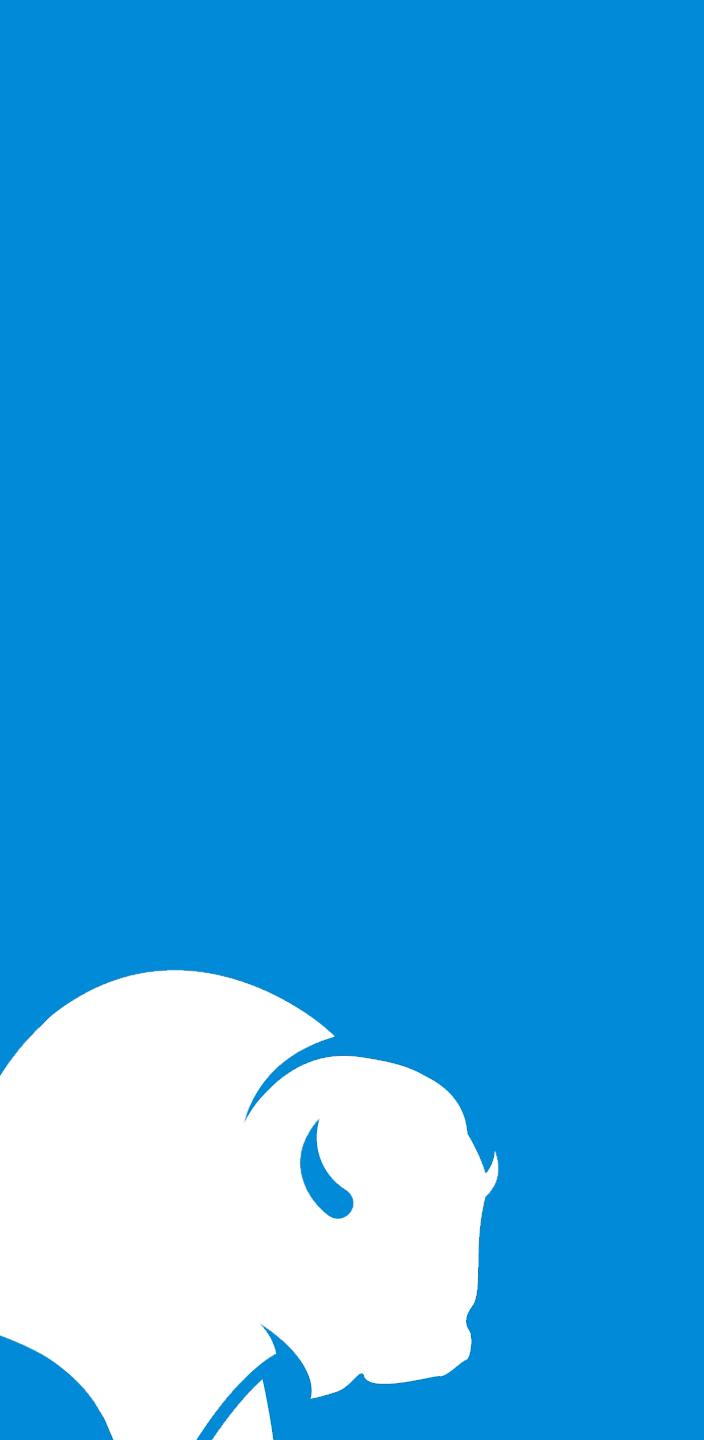


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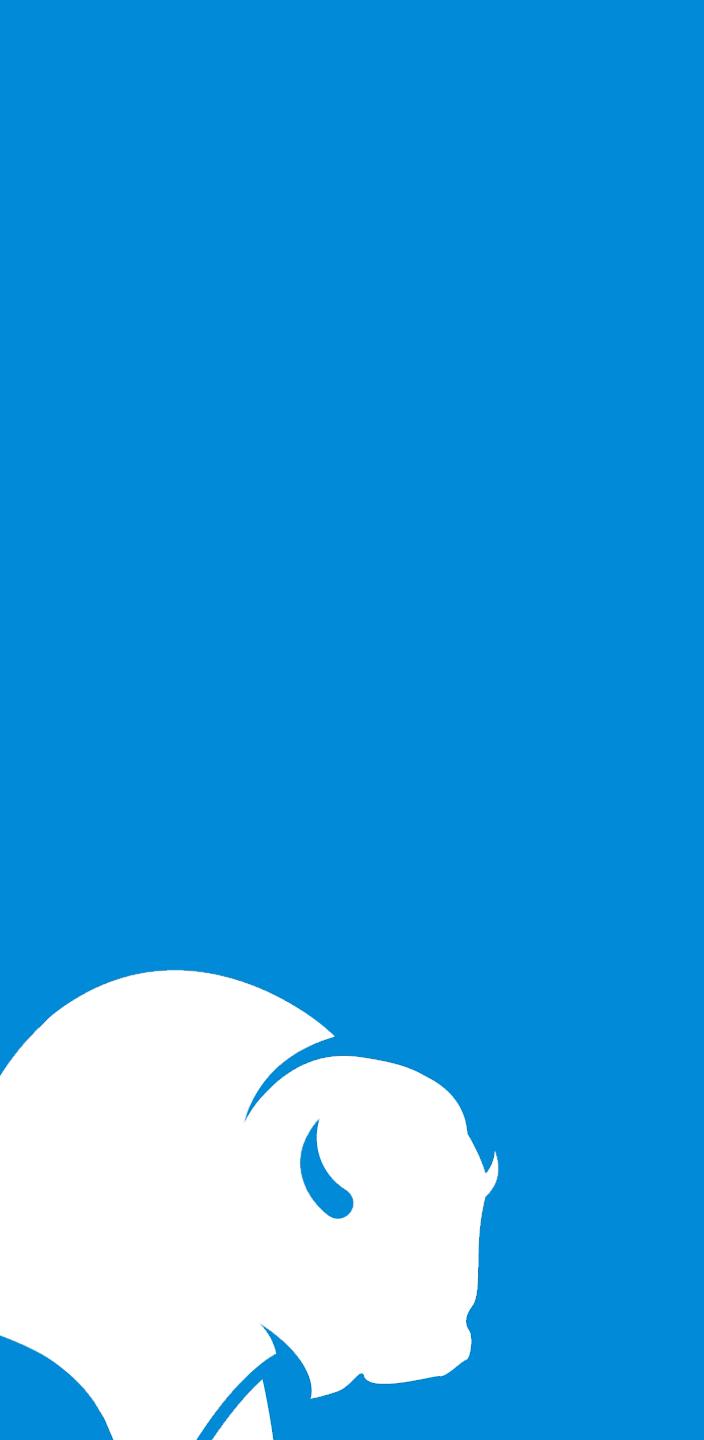


Power markets – present and future

Melie Vincent, chief operating officer

Agenda

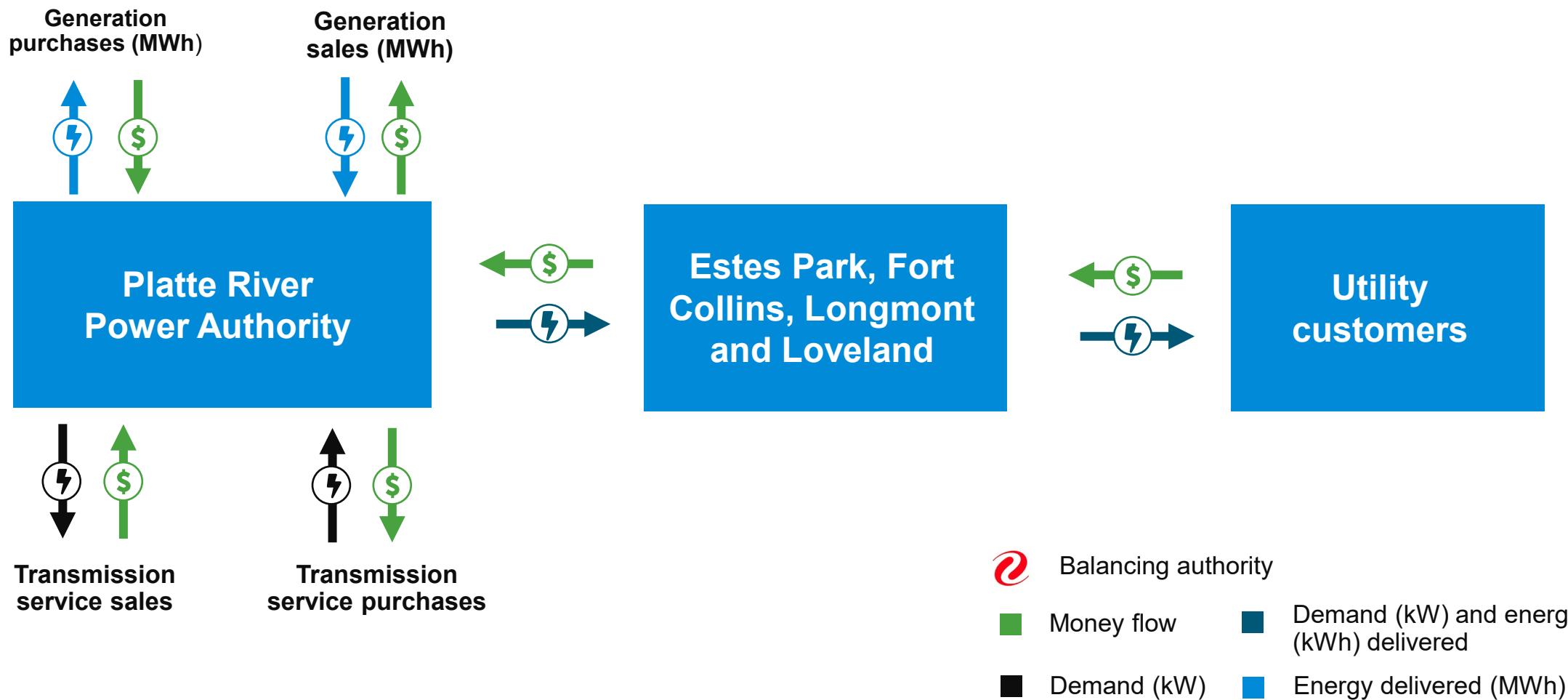
- Market constructs
 - Bilateral market
 - Joint dispatch agreement (JDA)
 - Western Energy Imbalance Service (WEIS)
 - Southwest Power Pool Regional Transmission Organization West (SPP RTOW)
- Responsibilities and functions
 - Finance
 - Resource planning
 - Operations
 - Balancing authority (BA)/RTO
- Tools and resources required



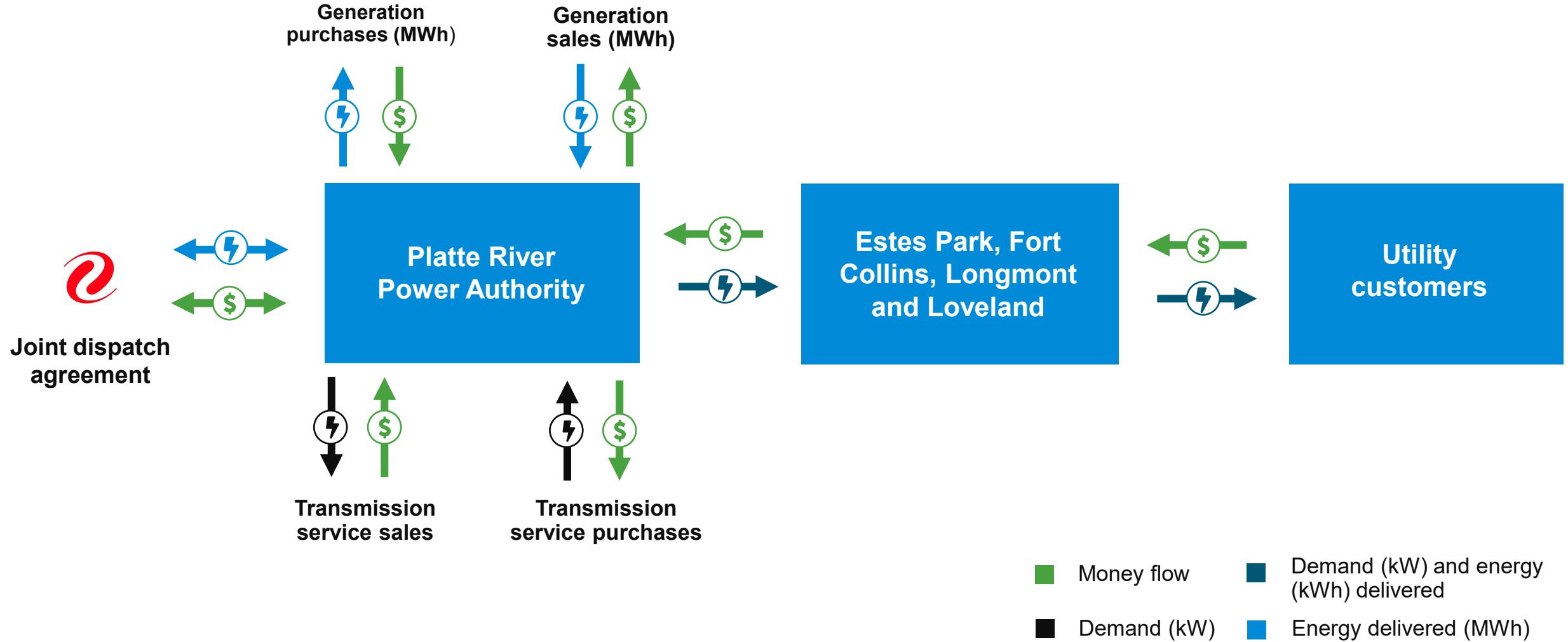
Market constructs

- **Bilateral market**
- **JDA**
- **WEIS**
- **SPP RTOW**

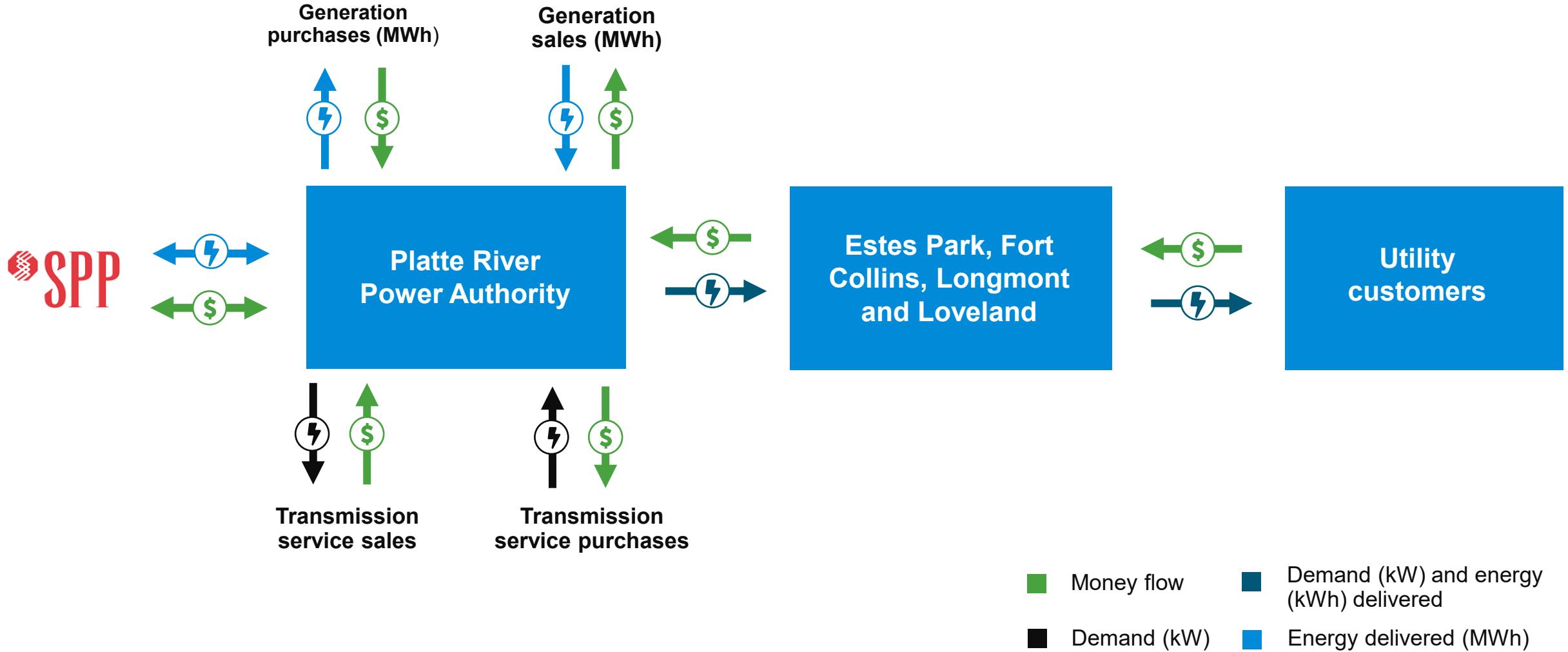
Bilateral market



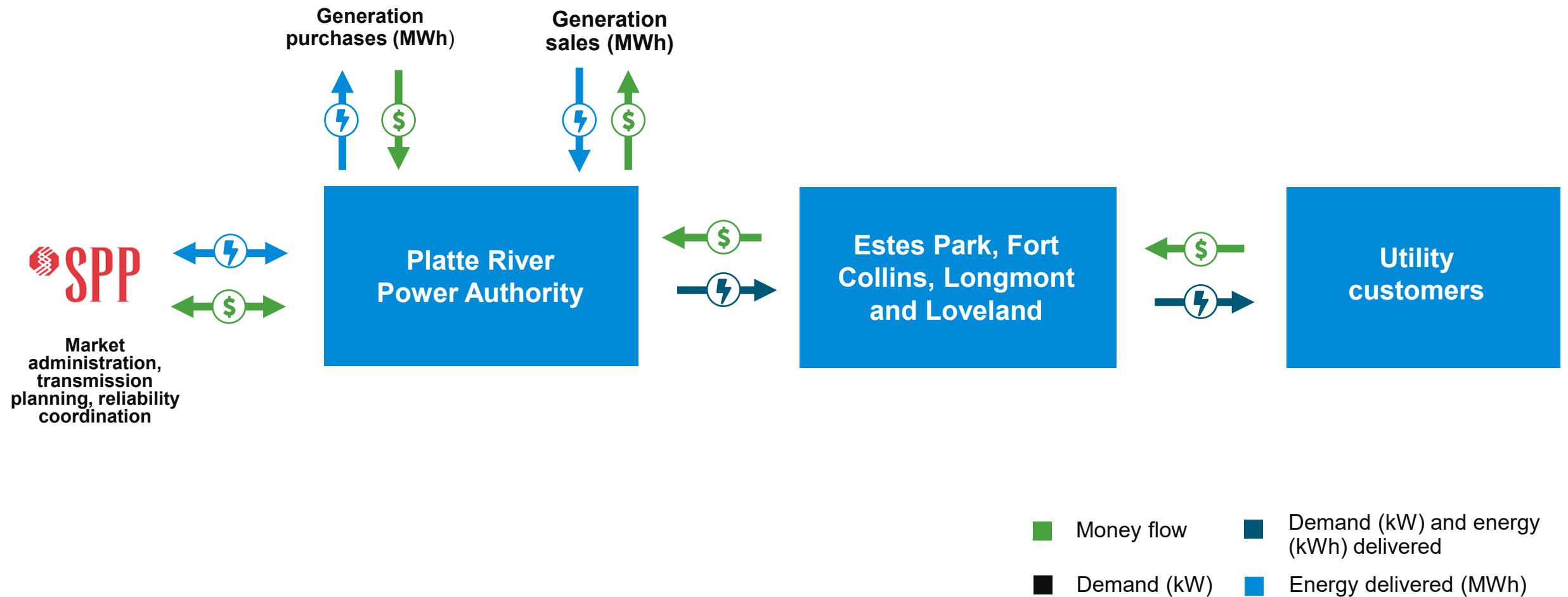
Joint dispatch agreement



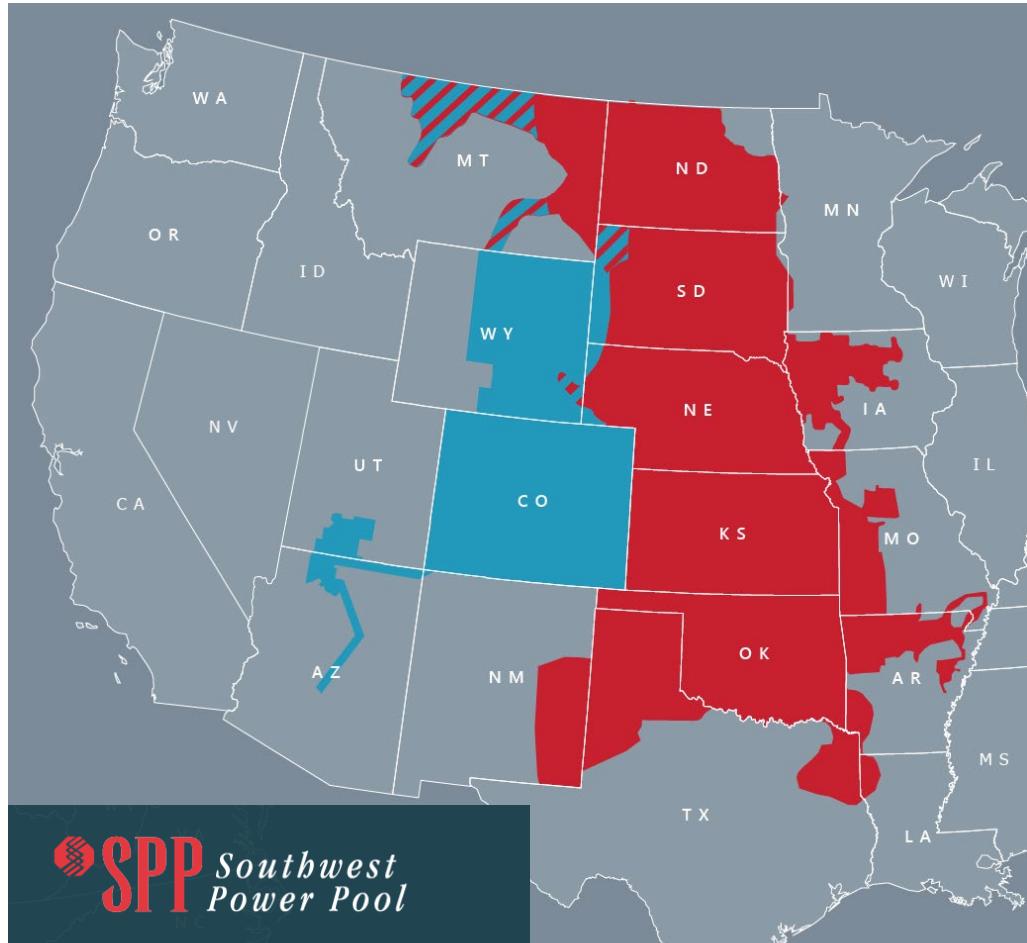
Western Energy Imbalance Service



SPP RTOW

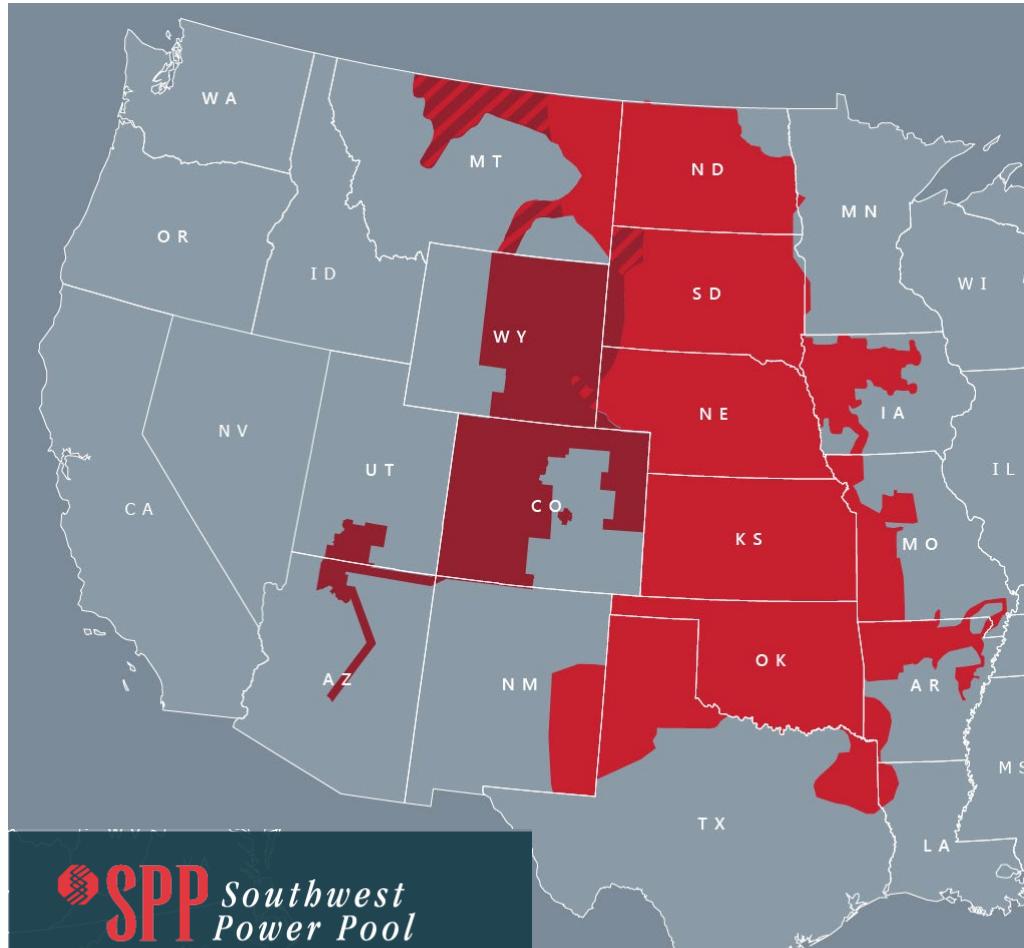


SPP WEIS BA participants

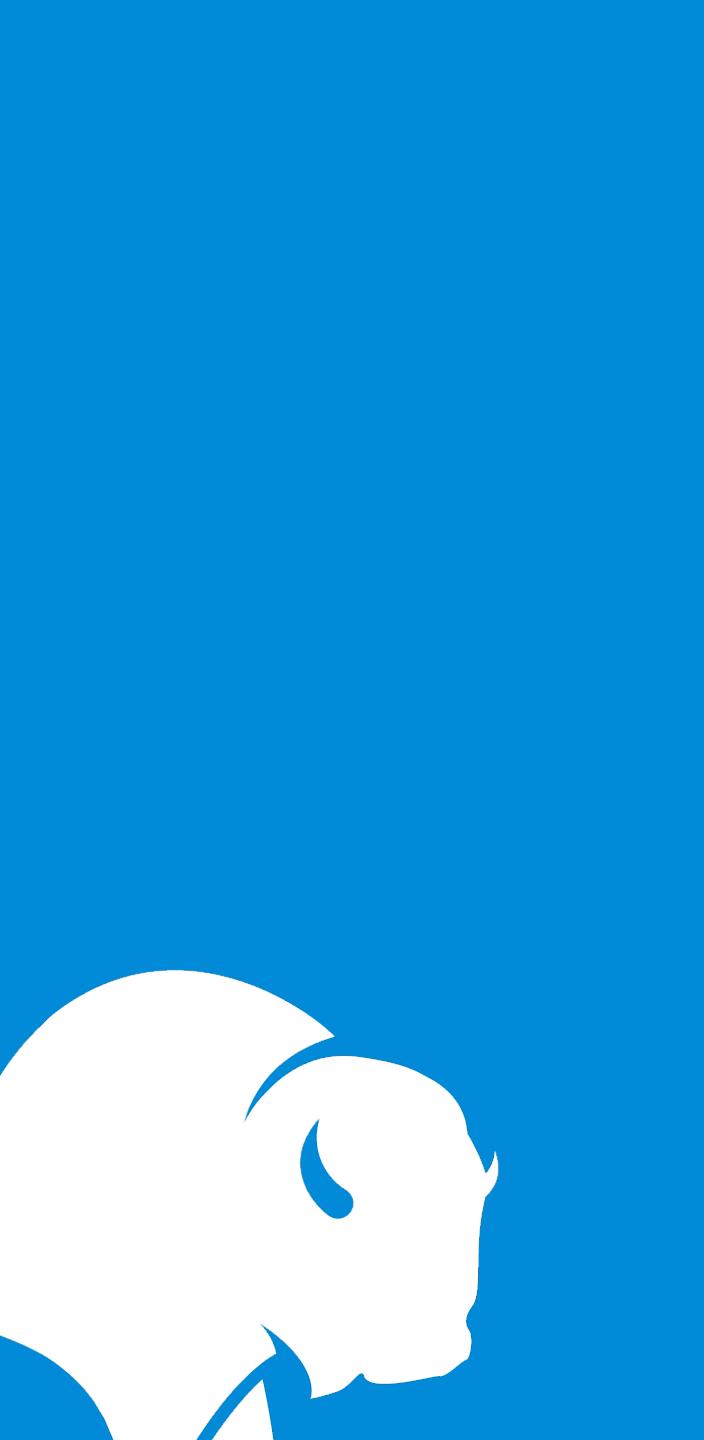


- Basin Electric Power Cooperative
- Black Hills Energy (effective April 2023)
- Colorado Springs Utilities (effective August 2022)
- Deseret Power Electric Cooperative
- Guzman Energy
- Municipal Energy Agency of Nebraska
- Platte River Power Authority (effective April 2023)
- Tri-State Generation and Transmission Association
- Western Area Power Administration
 - Upper Great Plains West
 - Rocky Mountain Region
 - Colorado River Storage Projects
- Xcel Energy (effective April 2023)

SPP RTOW BA participants



- Basin Electric Power Cooperative
- Colorado Springs Utilities (CSU)
- Deseret Power Electric Cooperative
- Municipal Energy Agency of Nebraska (MEAN)
- Tri-State Generation and Transmission Association
- Western Area Power Administration (WAPA)*
- Wyoming Municipal Power Agency



Market responsibilities and functions

- Finance
- Resource planning
- Operations
- BA/RTO

Platte River financial responsibilities and functions

Bilateral	JDA	SPP WEIS	SPP RTOW
<ul style="list-style-type: none">• Credit• Budgeting• Bilateral settlements	<ul style="list-style-type: none">• Credit• Budgeting• Market and bilateral settlements• Manage price volatility• Inter-control center communications protocol (ICCP) data submittal	<ul style="list-style-type: none">• Credit• Budgeting• Market and bilateral settlements• Manage price volatility• Meter data accounting and ICCP submittal	<ul style="list-style-type: none">• Credit• Budgeting• Market and bilateral settlements• Manage price volatility• Meter data accounting and ICCP submittal• Support unit three-part offer development• Congestion hedging

Platte River resource planning

Bilateral	JDA	SPP WEIS	SPP RTOW
<ul style="list-style-type: none">• Long-term load forecast• Capacity• Fuel mix• Submit new resource interconnection requests to Platte River• Power purchase agreements (PPAs)	<ul style="list-style-type: none">• Long-term load forecast• Capacity• Fuel mix• Submit new resource interconnection requests to Platte River• PPAs• Renewable integration	<ul style="list-style-type: none">• Long-term load forecast• Capacity• Fuel mix• Submit new resource interconnection requests to Platte River• PPAs• Renewable integration• Resource capability	<ul style="list-style-type: none">• Long-term load forecast• Capacity• Fuel mix• Submit new resource interconnection requests to SPP• PPAs• Renewable integration• Resource capability• Resource adequacy requirements

Platte River operation activities

Bilateral	JDA	SPP WEIS	SPP RTOW
<ul style="list-style-type: none">• Provide ancillary services (AS)• Fuel supply• Unit maintenance• Short-term load forecast• Bilateral tagging• Unit commitment• Unit dispatch• Balance generation to load for both day-ahead (DA) and hour-ahead (HA)	<ul style="list-style-type: none">• Provide AS• Fuel supply• Unit maintenance• Short-term load forecast• Bilateral tagging• Unit commitment• Unit dispatch• Balance generation to load HA	<ul style="list-style-type: none">• Provide AS• Fuel supply• Unit maintenance• Short-term load forecast• Bilateral tagging• Unit commitment• Follow dispatch• Balance generation to load DA• Maintain accurate unit information with market	<ul style="list-style-type: none">• Offer AS• Fuel supply• Unit maintenance• Short-term load forecast• Bilateral tagging• Follow unit commitment and dispatch• Maintain accurate unit information with market• Transmission congestion hedging

Balancing authority activities

Bilateral - Xcel

- Balance supply and demand across footprint, real-time (RT)

JDA - Xcel

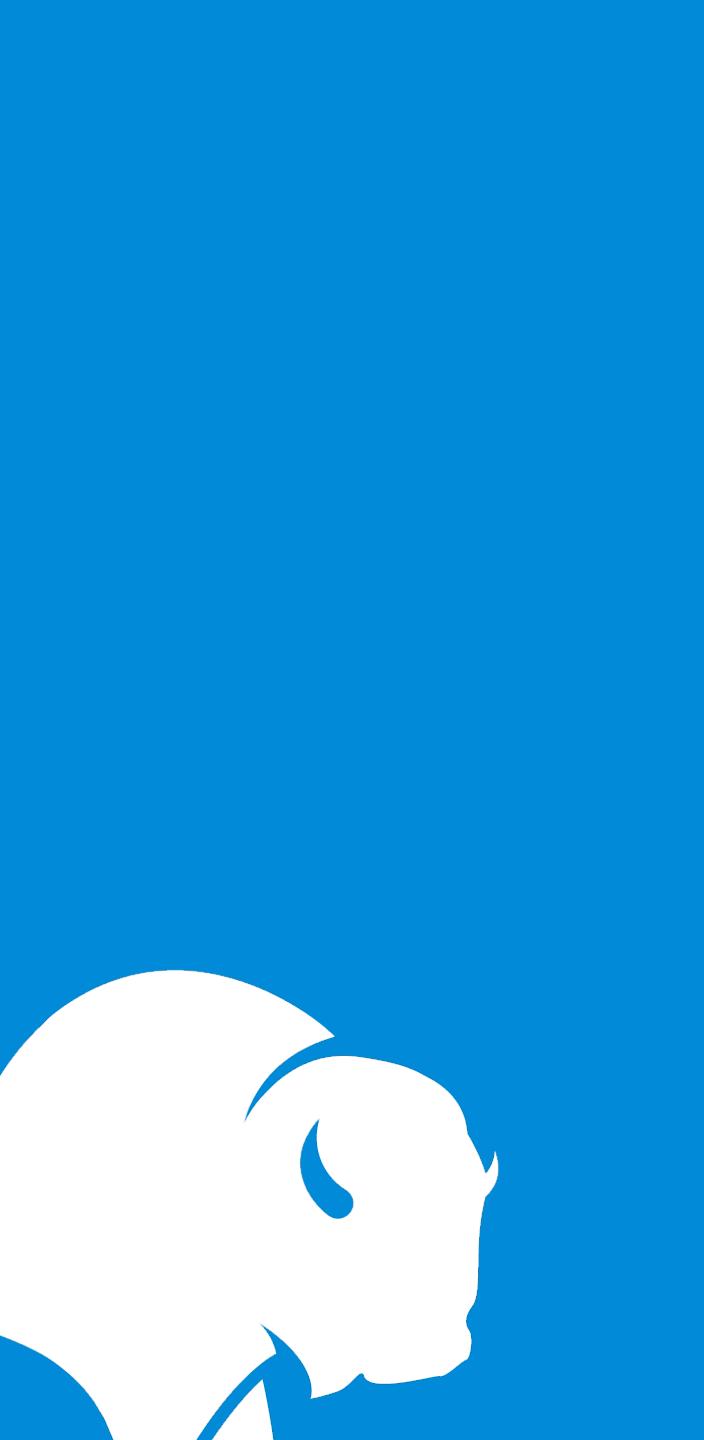
- Balance supply and demand across footprint, RT
- RT market price development
- Unit dispatch

WEIS – SPP

- Balance supply and demand across footprint, RT
- RT energy price development
- Load forecast
- Market governance
- Market settlements
- Unit dispatch

RTOW – SPP

- Balance supply and demand across footprint, DA and RT
- RT market price development
- Load forecast
- Market governance
- Market settlements
- Unit dispatch
- Unit commitment
- Regional transmission planning
- Interconnection queue
- Congestion rights auction



Market tools and resources required

- Finance
- Resource planning
- Operations
- BA/RTO

Tools and processes for bilateral market

- Bilateral settlements
- Long-term fuel price, load and generation forecasting
- Fuel and water supply management
- System modeling for budgeting and resource planning
- Short-term load and intermittent generation forecasting
- Energy trading software
- Outage scheduling (CROW)
- Electric quarterly reports (EQR) to Federal Energy Regulatory Commission (FERC)

Tools and processes for JDA

- Bilateral settlements
- Long-term fuel price, load and generation forecasting
- Fuel and water supply management
- System modeling for budgeting and resource planning
- Short-term load and intermittent generation forecasting
- Energy trading software
- CROW
- EQR to FERC
- Submit resource costs and parameters to BA

Tools and processes for WEIS

- Bilateral and market settlements
- Meter data submittal (meter agent)
- Long-term fuel price, load and generation forecasting
- Fuel and water supply management
- System modeling for budgeting and resource planning
- Short-term load and intermittent generation forecasting
- Energy trading software
- CROW
- EQR to FERC
- Energy transaction and risk management software to submit resource costs and parameters to SPP
- Automatic dispatch signal (ADS)
- Energy management system (EMS)
- Market engagement (stakeholder process)

Tools and processes for RTOW

- Bilateral and market settlements
- Meter data submittal (meter agent)
- Long-term fuel price, load and generation forecasting
- Fuel and water supply management
- System modeling for budgeting and resource planning
- Short-term load and intermittent generation forecasting
- Energy trading software
- CROW
- EQR to FERC
- Energy transaction and risk management software to submit resource costs and parameters to SPP
- ADS
- EMS
- Market engagement (stakeholder process)
- Transmission congestion rights auction (congestion hedging)
- Annual engineering data submission tool (EDST) filing with SPP



Questions



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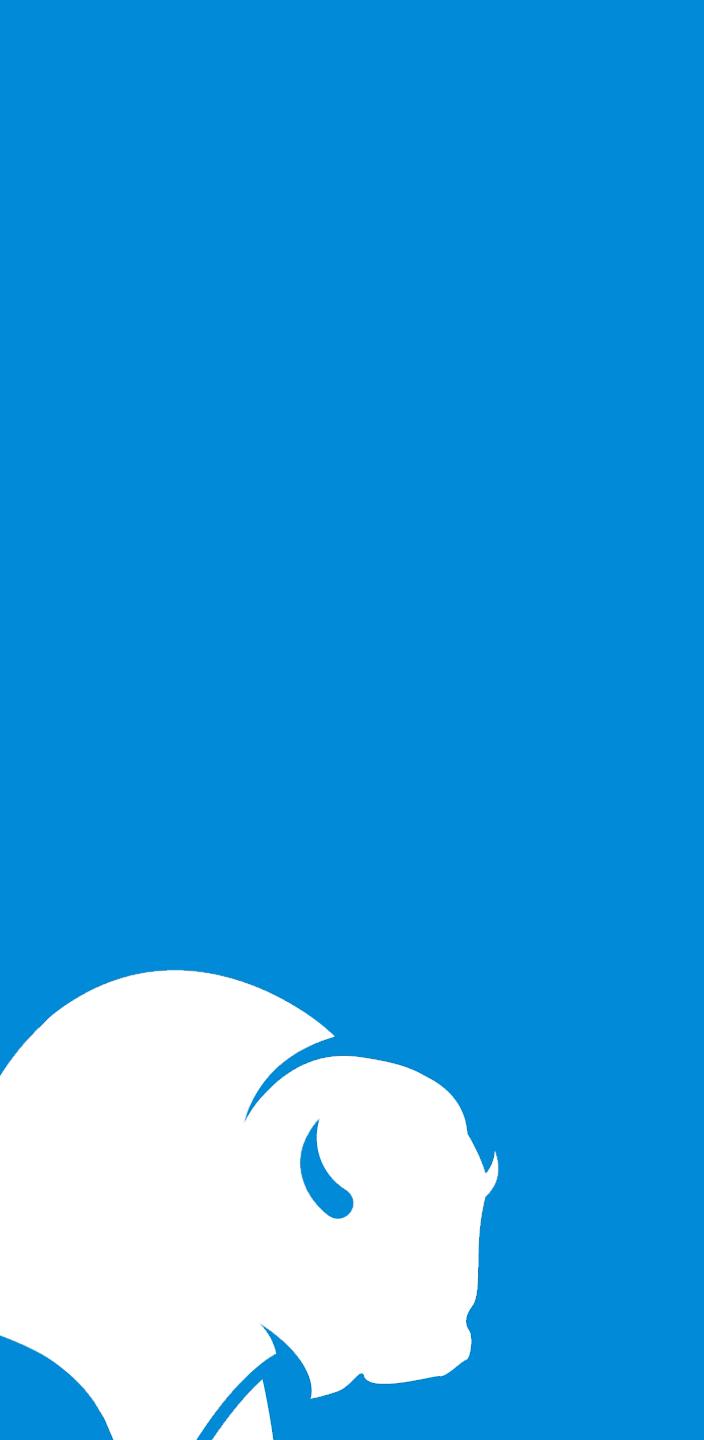


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Distributed energy resources updates

Paul Davis, distributed energy resources manager

Vision and guiding principles

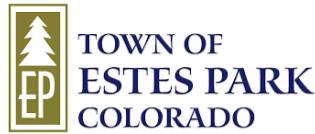
Vision

To integrate DERs into the electric system through collaboration and coordination between the owner communities and Platte River to provide value to all customers

Guiding principles (brief)

- Maintain system reliability, financial sustainability and environmental responsibility
- Facilitate DER deployment/benefits for all
- Consistency, transparency and flexibility among Platte River and owner communities
- Common processes, best practices and innovation
- Safety to protect the public, utility employees, contractors and customers
- Maintain physical and cybersecurity of utility-owned grid assets

Collaboration and coordination



Platte River
Power Authority

Committee	Reuben Bergsten Sarah Clark	John Phelan (chair) Adam Bromley	Darrell Hahn Hannah Mulroy	Tracey Hewson Christine Schraeder	Raj Singam Setti Paul Davis
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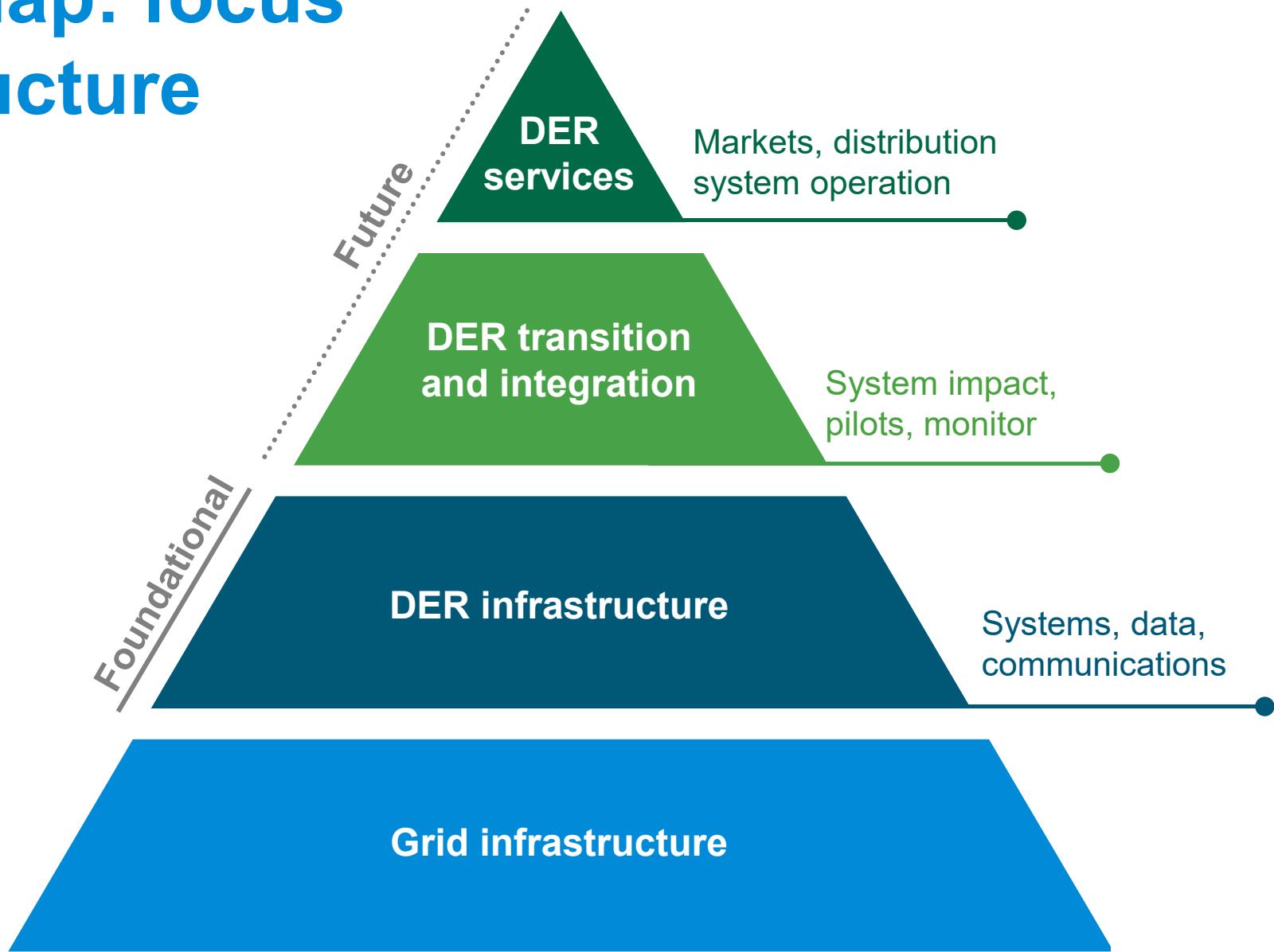
Planning team	Reuben Bergsten	Pablo Bauleo Poorva Bedge Kent Coldsnow Rhonda Gatzke Jim Garcia Randy Reuscher	Patrick Good Darrell Hahn Joshua Heuring Kevin Rademacher Brian McGill Kate Medina	Christine Schraeder	Paul Davis (lead) Masood Ahmad Wade Hancock Matt Scheppers Matt Thompson Darren Buck Shelley Nywall
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Programs team	Sarah Clark Joe Lockhart	Leland Keller Neal May Brian Tholl	Susan Bartlett Chuck Finleon Hannah Mulroy	Tracey Hewson	Paul Davis (lead) Bryce Brady
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DER focus areas

- DER gap assessment and roadmap project kickoff
- Building electrification program planning
- DER forecast and potential study for 2024 integrated resource plan
- Inflation Reduction Act

DER roadmap: focus on infrastructure



DER roadmap consultant

Received quotes from three experienced DER consultants

Selected Utilicast

- Platte River experience
- Similar DER consulting for other utilities
- Proposed approach

Assess drivers, goals
and desired outcomes

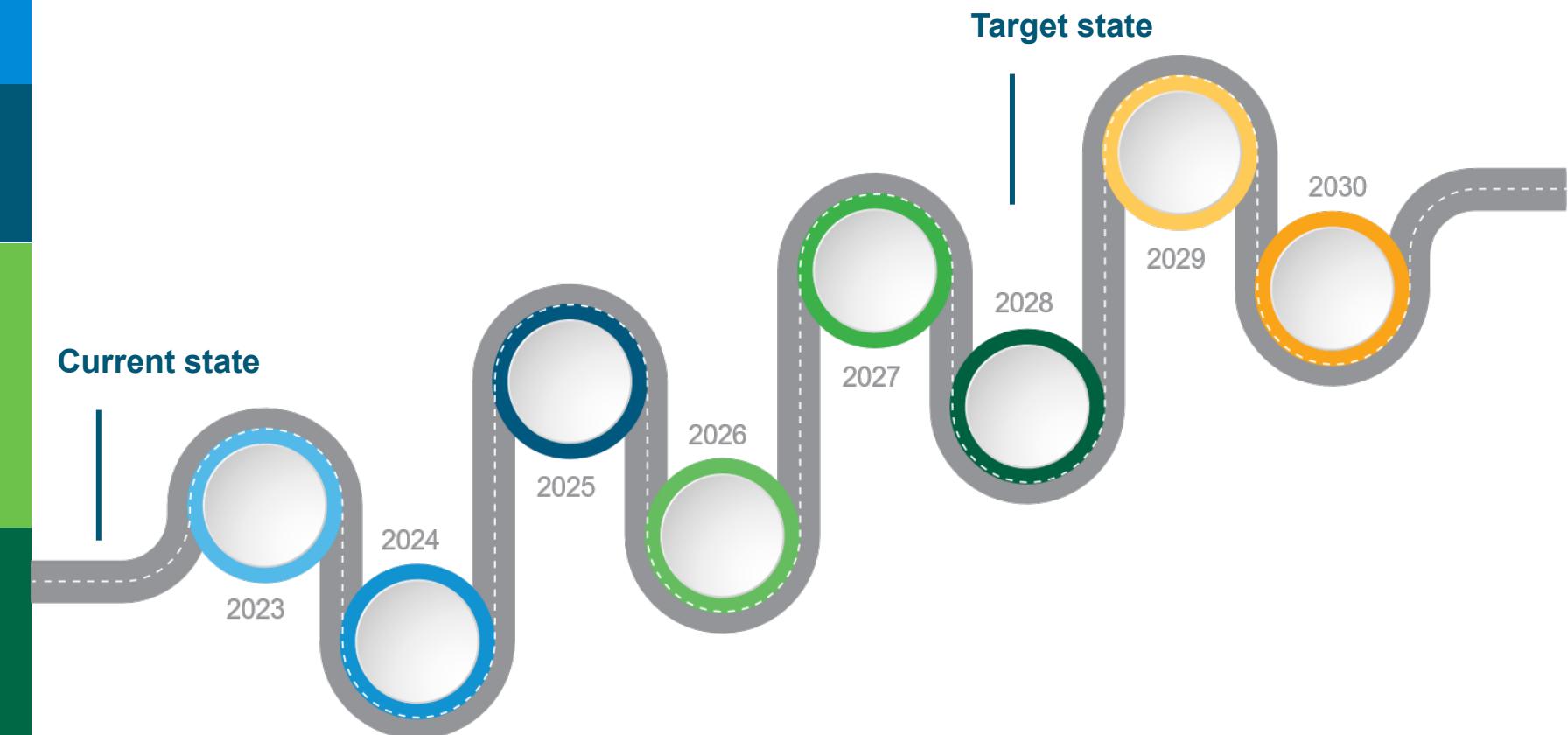
Identify DER services and
functional capabilities

Request for information to
assess DERMS capabilities

Target state, current
state and gap analysis

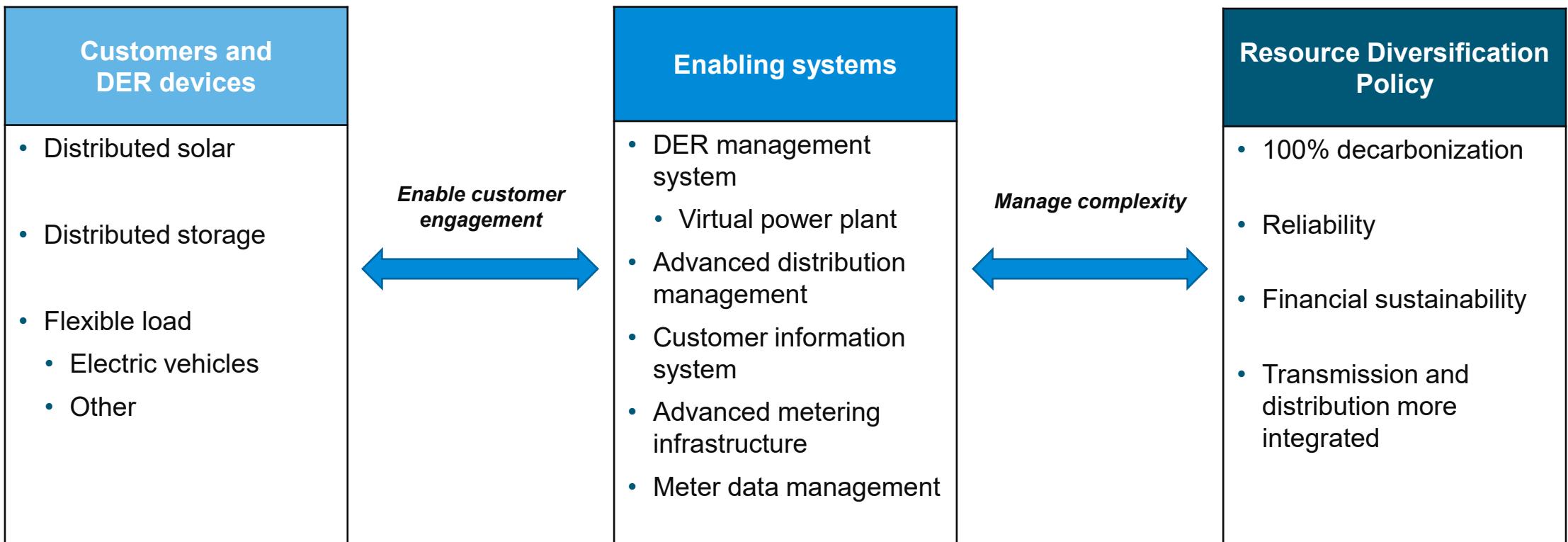
Roadmap

DER gap assessment and roadmap

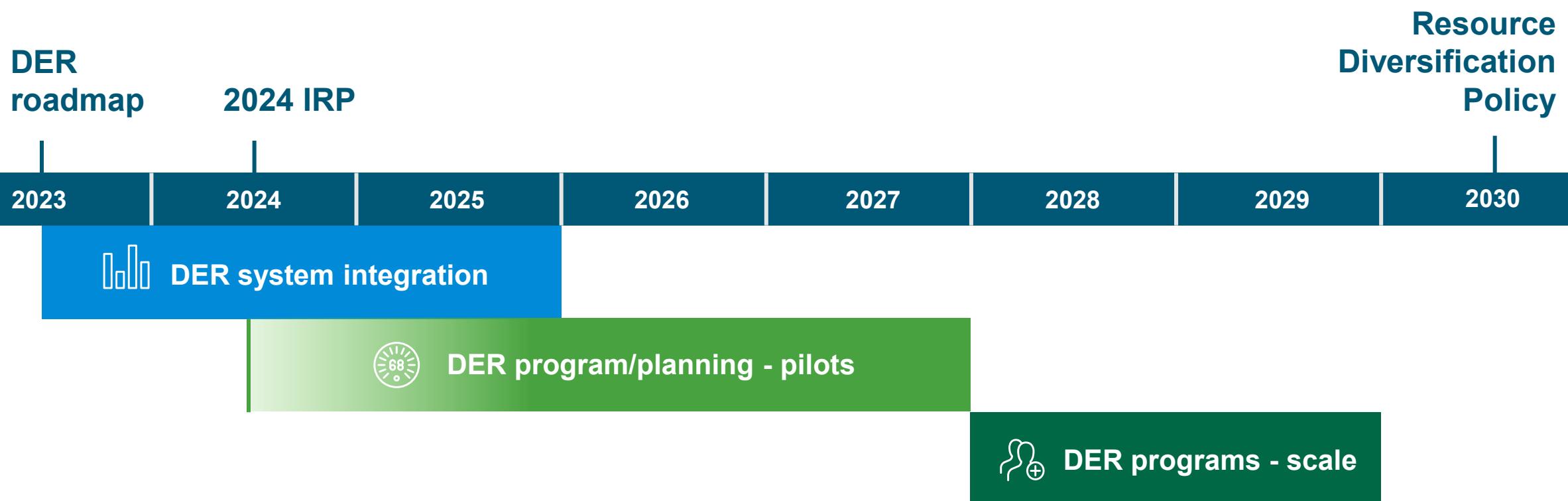


DER integration infrastructure

What this might look like...



System integration timeline



Questions and discussion



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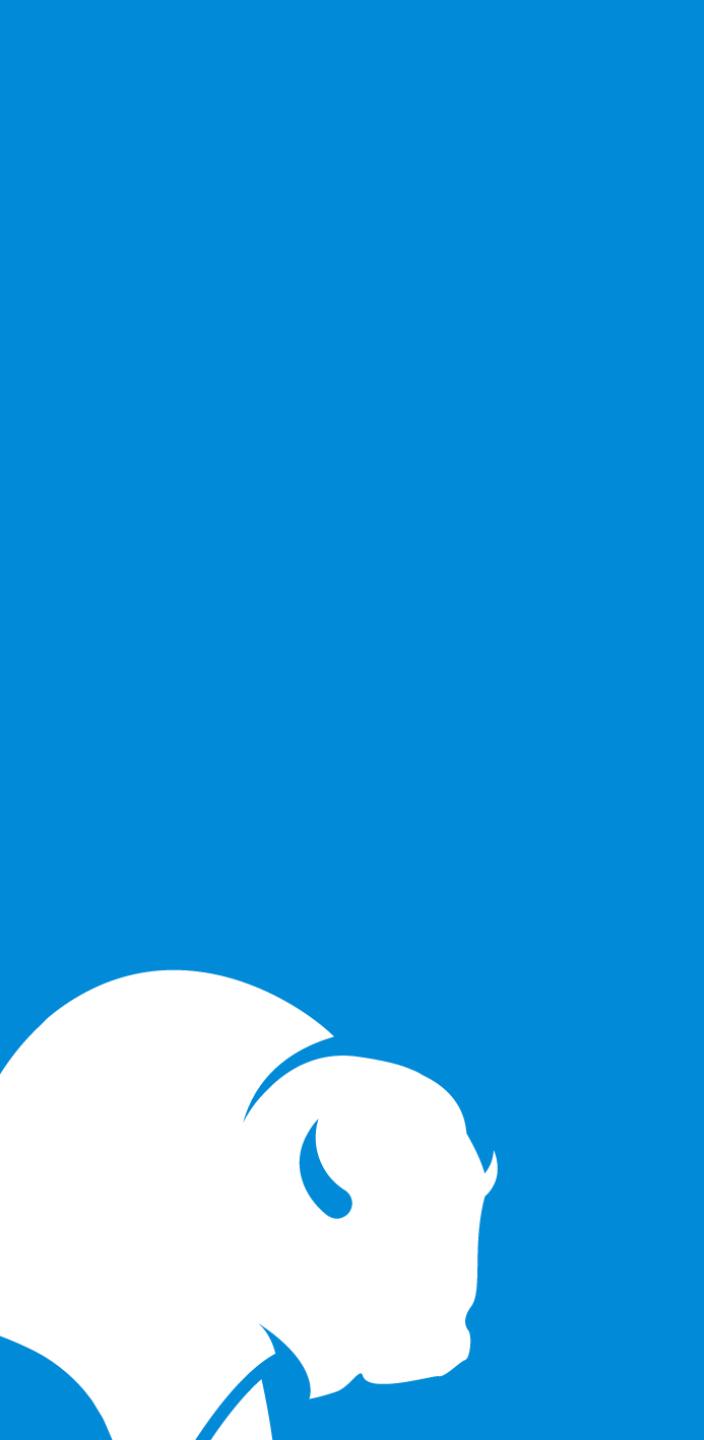


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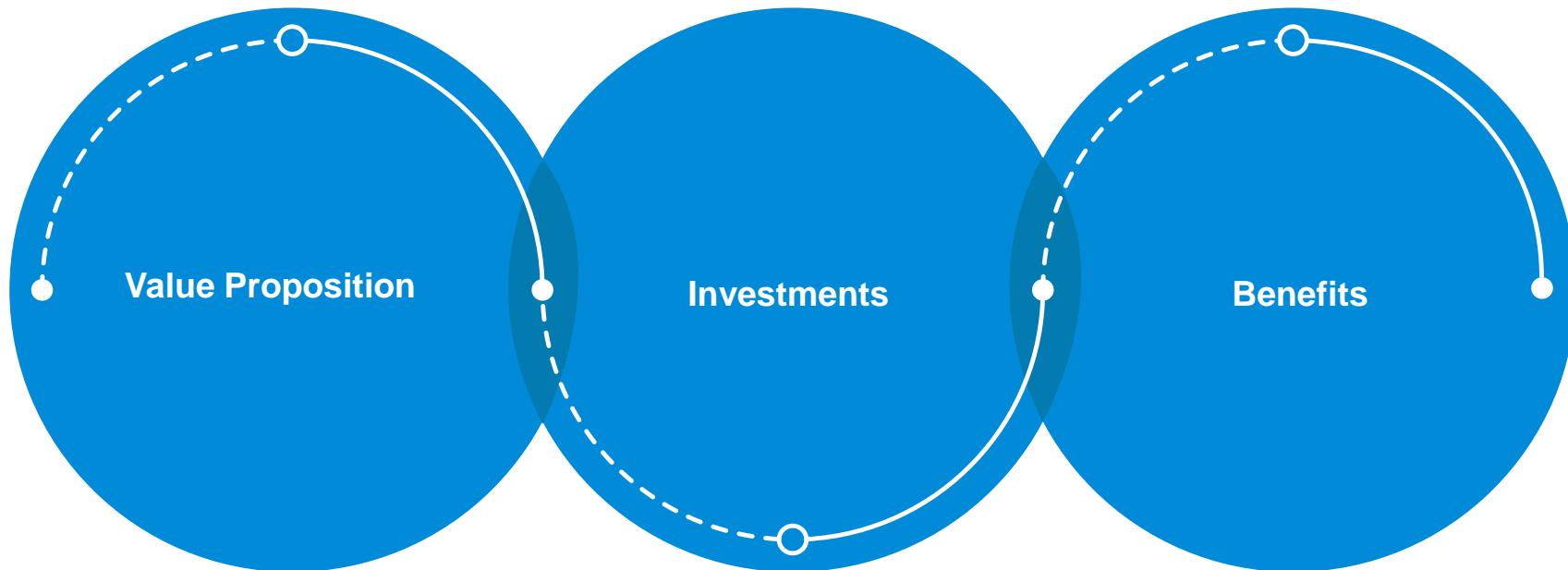
Regional messaging strategies and concepts

Eddie Gutierrez, chief strategy officer

Agenda

- Regional messaging strategies
- Value proposition concept
- Draft value proposition ad sample
- Process for building a campaign together
- Supporting marketing materials

Regional messaging approach



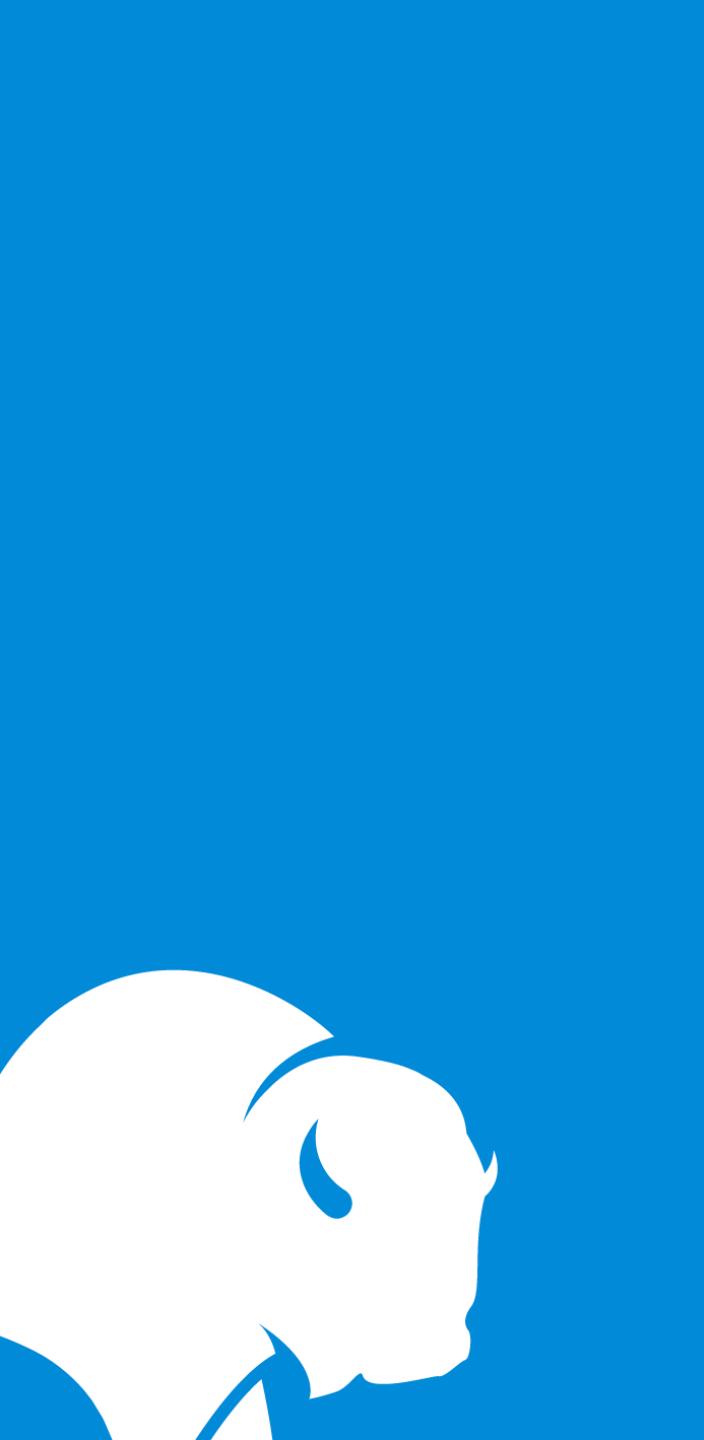
Value proposition concept

- A regional messaging approach to communicate the value – that is, the delivery of energy services, the commitment to clean energy generation innovation, and added benefits by our owner communities and the customers they serve
- Conceptual one-minute radio spot



Process for building a campaign together

- Collaborate over the next 14 to 16 weeks
- Develop baseline messages
- Craft customizable messages
- Collect input from owner community staff
- Together, build collateral to educate customers about:
 - Value of product (electricity)
 - Value and impact of noncarbon goals
 - How Platte River and owner communities are working together to achieve our goals
 - How customers benefit



Marketing examples

Examples of a value proposition campaign



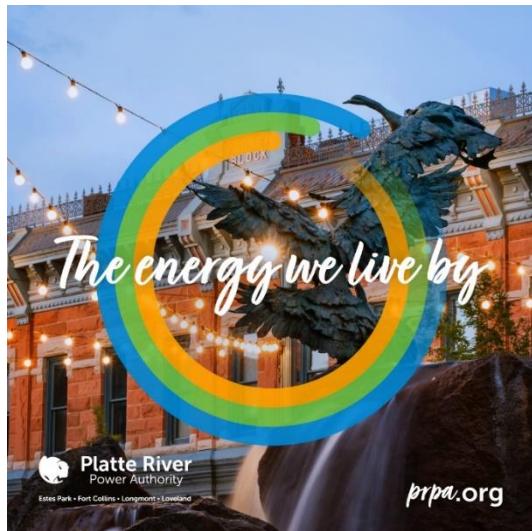
Examples of a value proposition campaign



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Estes Park



Fort Collins



Longmont



Loveland

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Sample marketing materials – a collaborative, unified message

- Customize materials that visually showcase each owner community while still adhering to a collaborative message
- The concept of the three rings would visualize an interconnection of:
 - Each owner community and their legacy insight
 - Platte River's strategic development for clean energy innovation
 - The inherent connection the energy industry shares

Questions



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July operational results

Category	July variance		YTD variance	
Owner community demand	1.4%	◆	3.7%	●
Owner community energy	2.4%	●	0.9%	◆
Wind generation	6.8%	●	8.4%	●
Solar generation	7.4%	●	8.5%	●
Net variable cost to serve owner community load*	(5.1%)	■	7.2%	●

Variance key: Favorable: ● >2% | Near budget: ◆ +/- 2% | Unfavorable: ■ <-2%

*Total resource variable costs plus purchased power costs less sales revenue



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Financial summary

Category	July variance from budget (\$ in millions)	Year to date variance from budget (\$ in millions)
Net income *	\$1.3 ●	\$7.5 ●
Fixed obligation charge coverage	.31x ●	.53x ●
Revenues	\$4.1 ●	\$10.5 ●
Operating expenses	\$(3.1) ■	\$0.9 ♦
Capital additions	\$0.4 ●	\$13.0 ●

2% ● Favorable | 2% to -2% ♦ At or near budget | < -2% ■ Unfavorable

* Net income results impacted by unrealized losses on investments of \$3.6 million year to date



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