

TRANSMISSION & DISTRIBUTION INFORMATION SESSION

 **SaskPower**
Powering our future[®]



VIRTUAL EVENT

OCTOBER 13TH | 1-4 PM CST



SASKPOWER SUPPLIER INFORMATION SESSION



TRANSMISSION & DISTRIBUTION

OCT 13, 2021



RHEA BROWN

DIRECTOR, PROCUREMENT & CONTRACTS
MANAGEMENT



THE FUTURE

- Customers
- Energy transition
- Expectations
- Electrification
- Power systems
- Modernization
- Innovation
- Sustainability
- Changing Workforce
- Partnerships
- Affordable electricity
- Uncertainty



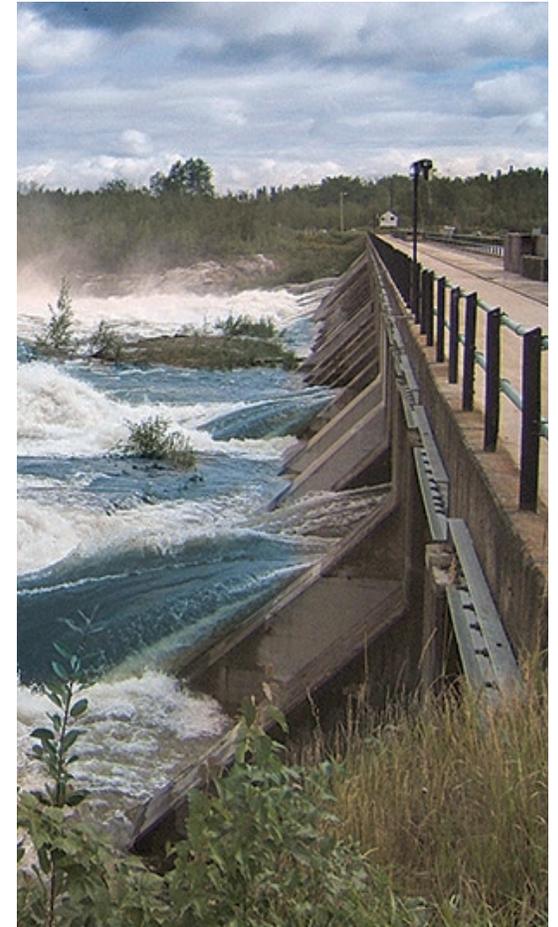
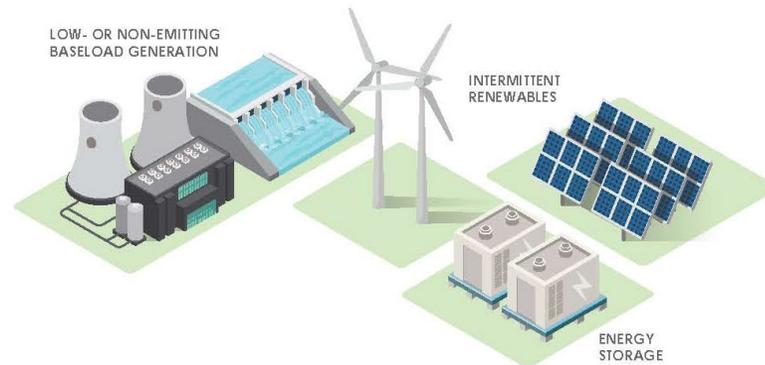
PROCUREMENT INVESTMENT (YTD)

- Annual Procurement Spend ~ **\$800M**
- Indigenous Procurement: **14.8%**
Benchmark target 8.5%
 - YTD: \$47.5M
- Saskatchewan Procurement: **68.6%**
 - Benchmark target 75%
 - YTD: \$320 M
- Supplier Bid Training (Tools for Success)



INCREASED LOW/ZERO CARBON ELECTRICITY SOURCES

- SaskPower must replace over 1,400 megawatts of conventional coal with lower carbon supply options.
- By 2030, up to 50% of generation will be from renewables.
- By 2030, we will reduce GHG emissions 50% from 2005 levels.
- We are planning for a net-zero GHG future by or before 2050.

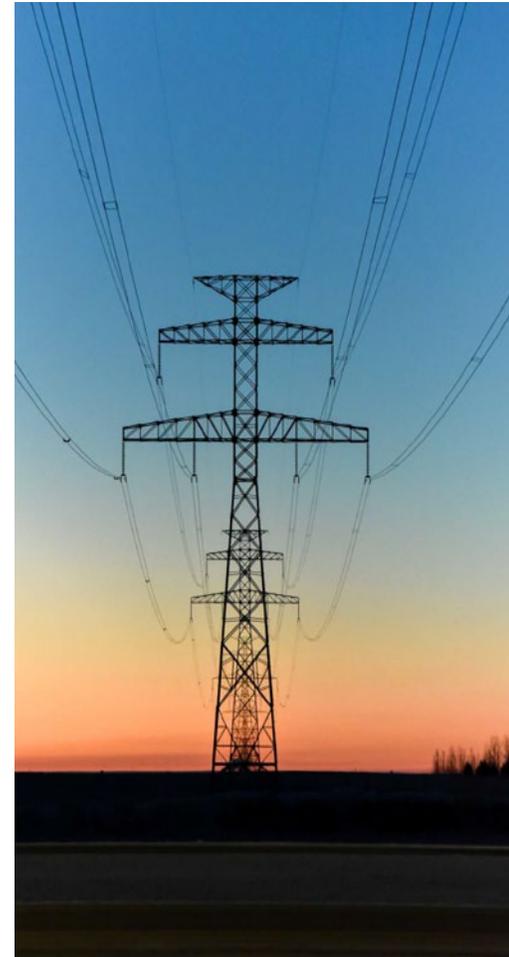


A MODERNIZED GRID FOR SASKATCHEWAN

- Enhanced visibility, control and automation of the grid.
- Customers will see increased reliability and resiliency, reduced emissions, and improved safety.
- Enabling of two-way energy services and increased penetration of Distributed Energy Resources (DERs).

EXPANDED INTERCONNECTIONS

- Flexibility to integrate renewables, accommodate demand uncertainty
- Increased reliability and resiliency in the case of extreme weather.
- Will assist in meeting GHG targets while enabling more renewables and the potential integration of emerging supply technologies.



ESG IN SUPPLY CHAIN

- Environmental, Social and Governance
- Supplier Code of Conduct
- Supplier Diversity Program Expansion
- CEA Sustainable Electricity Company Designation
- PAR Gold Status



PROCUREMENT OBSERVATIONS

DAN IRVINE

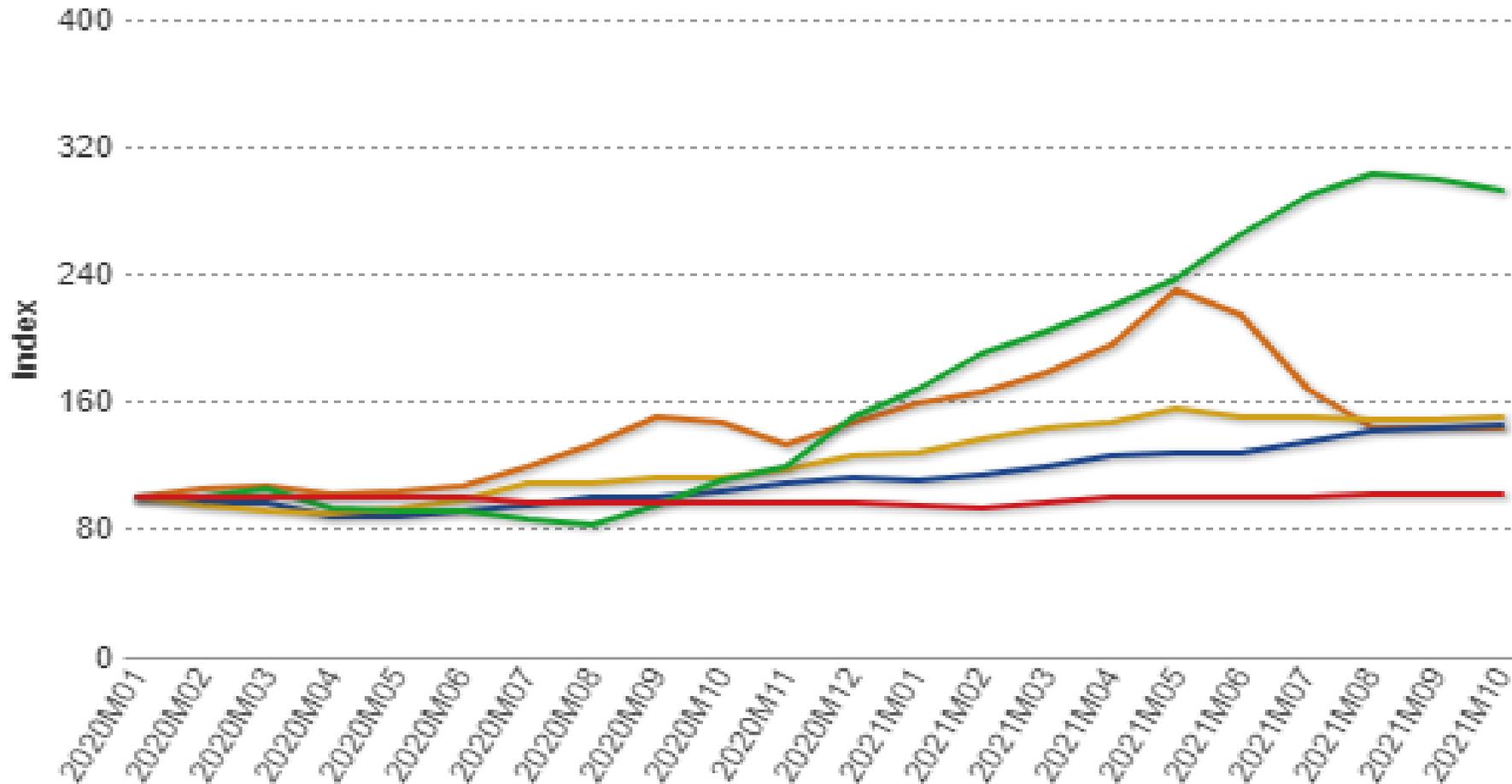
PROCUREMENT MANAGER, MAJOR PROJECTS &
STRATEGIC PLANNING

AGENDA

- Market Trends
- Major Projects
- Competition Principles
- Best Value Breakdown
- Observations on Procurements



INDUSTRY OBSERVATIONS

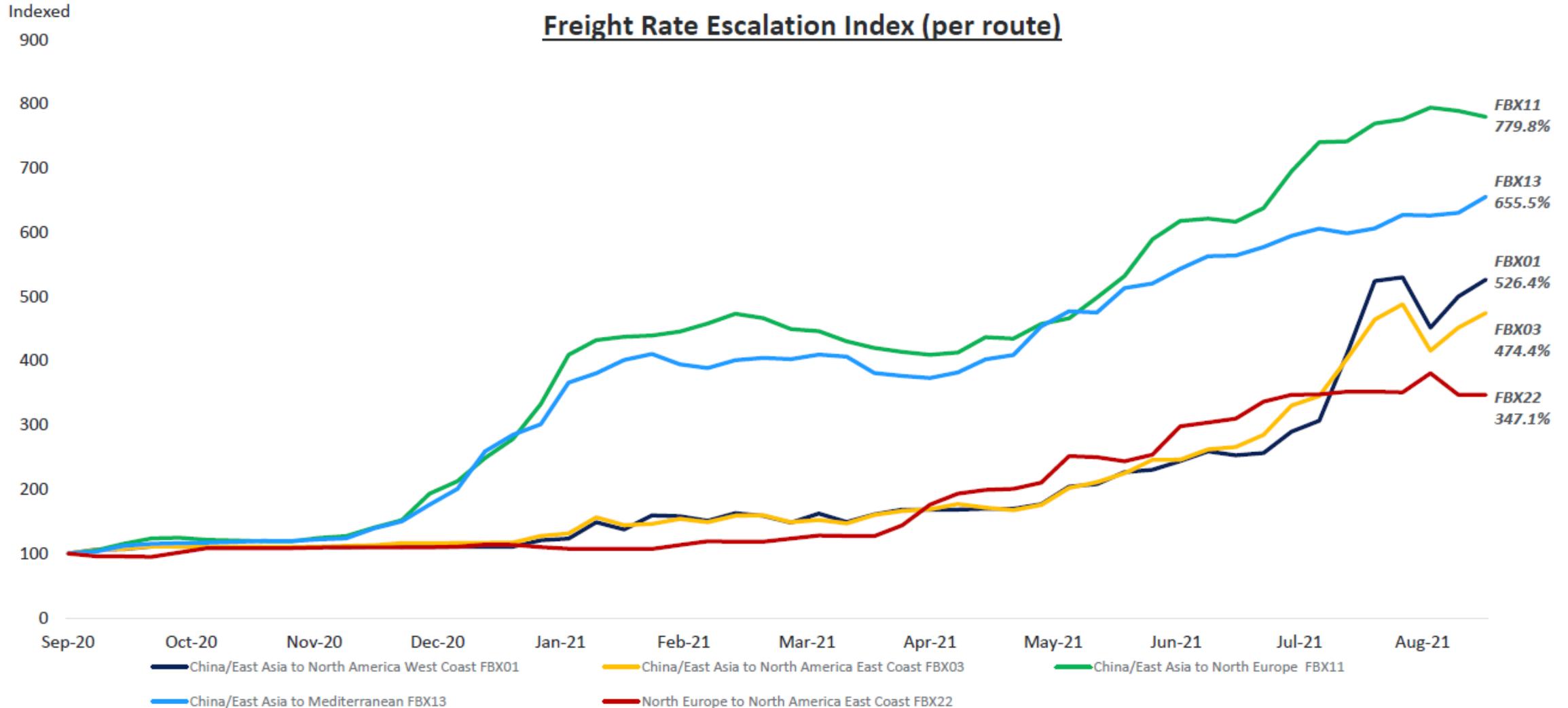


Pandemic by commodity

- Yellow - Copper
- Green - Steel
- Blue - Aluminum
- Red - Cement
- Orange - Lumber



INDUSTRY OBSERVATIONS



CHALLENGES



COVID

Pricing
Delays
Engagement

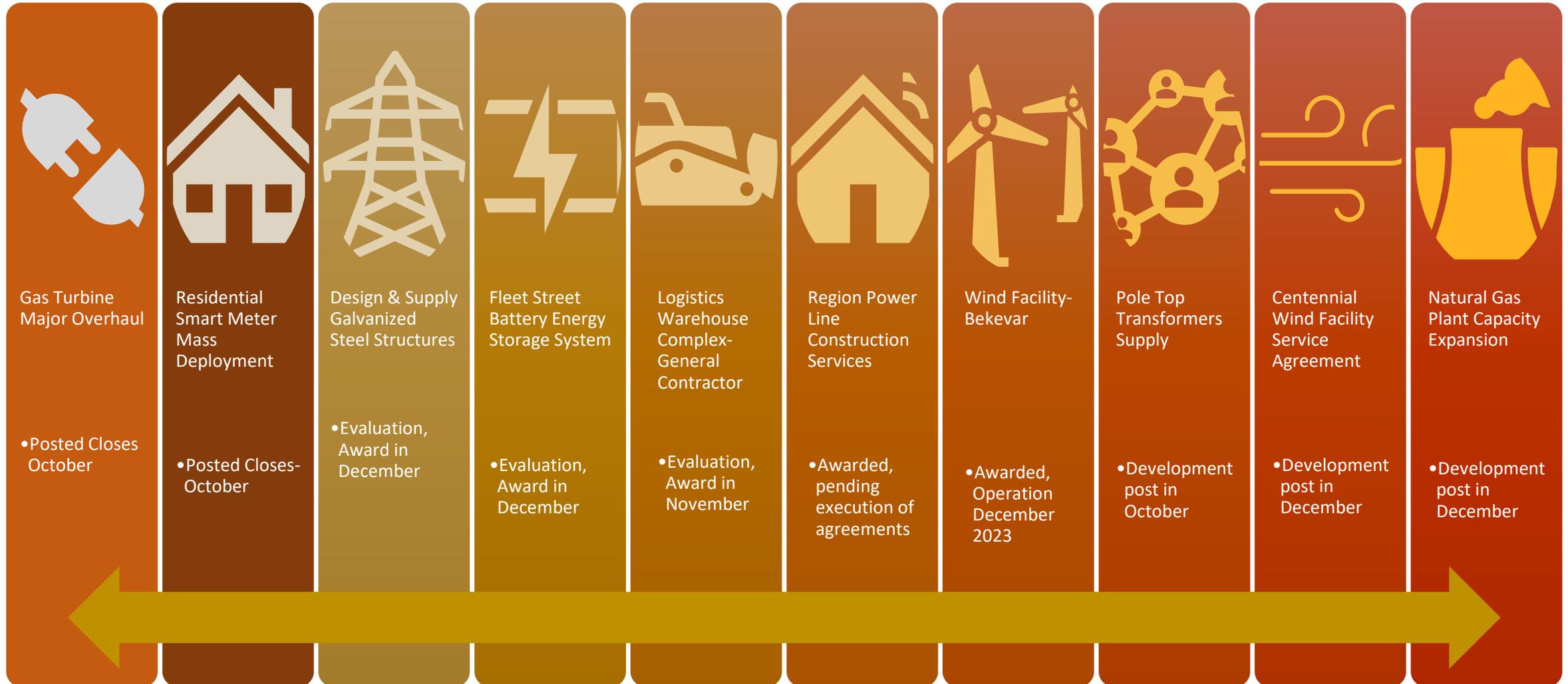


Labor Shortages



Commodity
Prices Increase

MAJOR PROCUREMENTS





COMPETITION PRINCIPLES



BEST VALUE



ENABLING,
INTUITIVE AND
ENCOMPASSING



FAIRNESS /
TRANSPARENCY

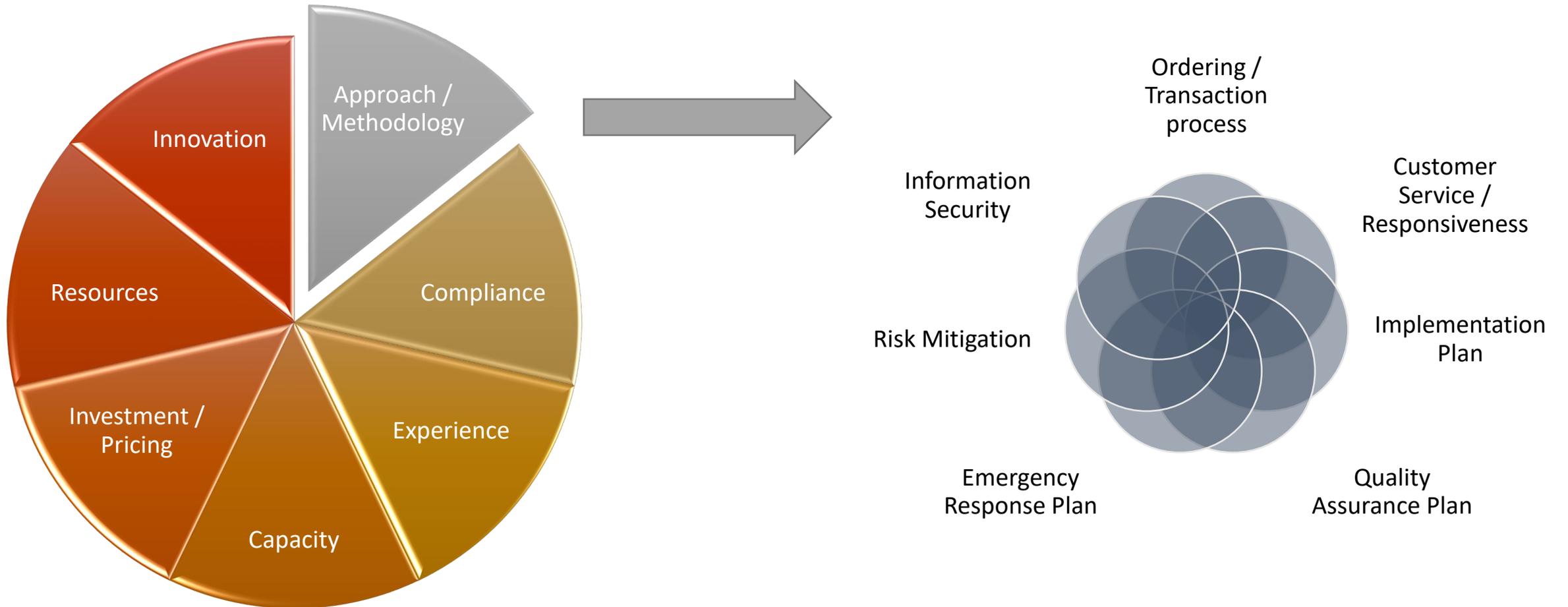


DEFENSIBLE



TRADE AND LEGAL
COMPLIANCE

BEST VALUE EVALUATION



COMMUNITY BENEFITS





OBSERVATIONS ON PROCUREMENTS

Questions

Clarifications

Debriefs

Differentiation

Organization
structures

ISNet World

Financial
Assessment

Conflict of
Interest

Complete
Proposals

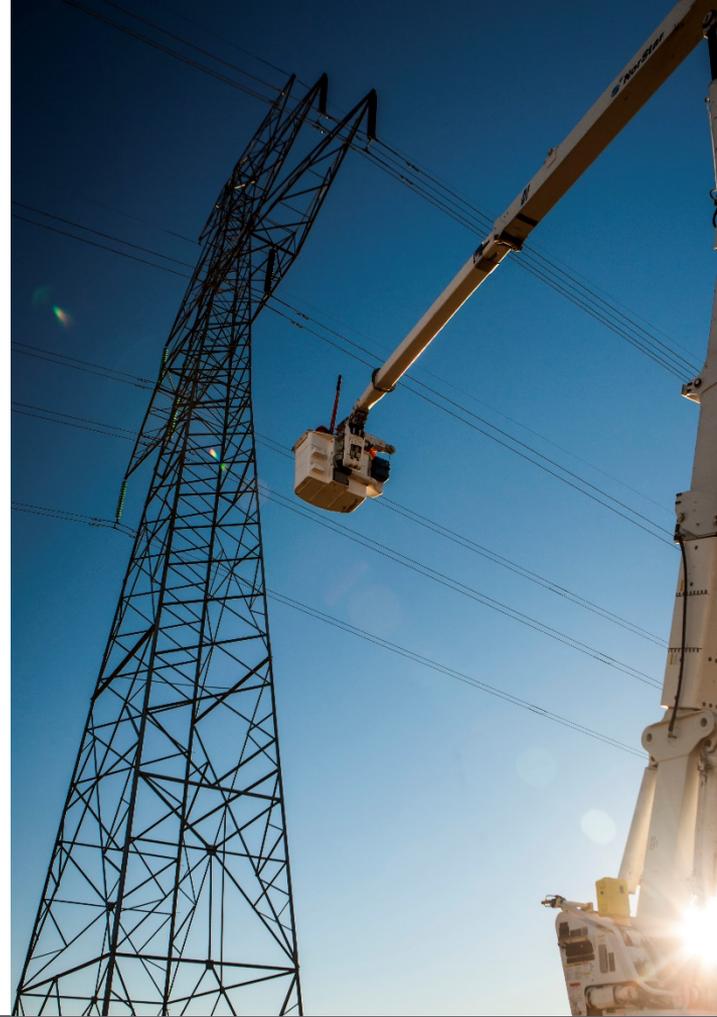


DISTRIBUTION ENGINEERING

October 13, 2021

TOPICS FOR DISCUSSION

- Distribution Services Overview
- Distribution Engineering Overview
- Distribution Capital investments
- Current External Resources
- Upcoming Opportunity



Distribution Services

We Design, Construct, Operate & Maintain 34.5kV and lower distribution systems and services



Distribution Services

- Rural & Urban
- Residential, Farm, Commercial & Industrial Customers
- Streetlights
- Overhead & Underground Systems
- Planned & Unplanned Maintenance
- Power Outages & Emergencies



Distribution Services

Our People:

546,000 Customers

700 Employees

Our Area:

652,000 km² of Service Area

12 Operating Areas

48 Districts

Our Assets:

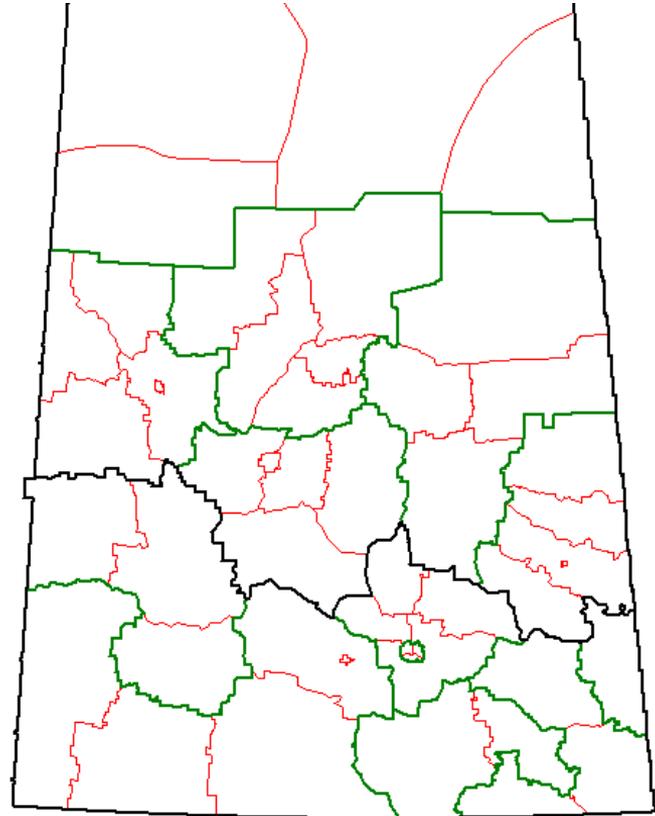
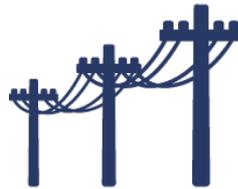
1,200,000 Power Poles

188,000 Transformers

150,000 km of 14.4kV & 25kV Lines

98,000 Street Lights

197 Substations



Distribution Engineering

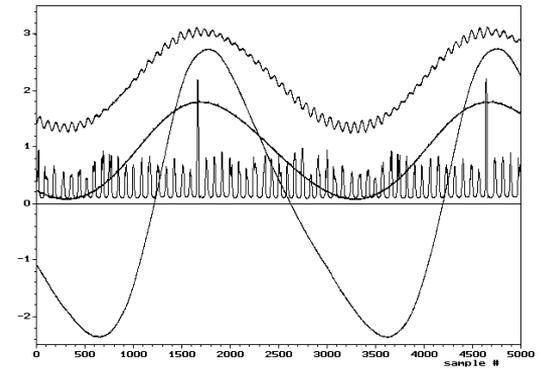
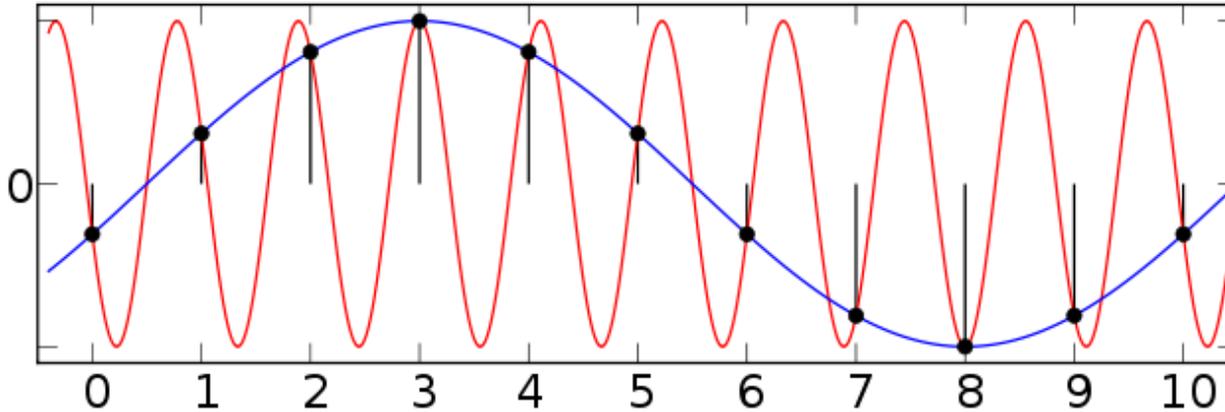
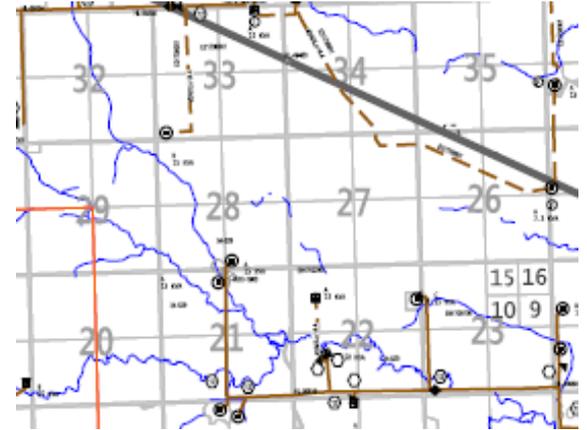
We Design, Construct, Operate & Maintain 34.5kV and lower distribution systems and services



Distribution Engineering

Four Lines of Business

- Operations & Maintenance Support
- GIS Field Support
- Customer Connect (North & South)
- Program & Maintenance Engineering



Distribution Capital Investments

Growth & Compliance

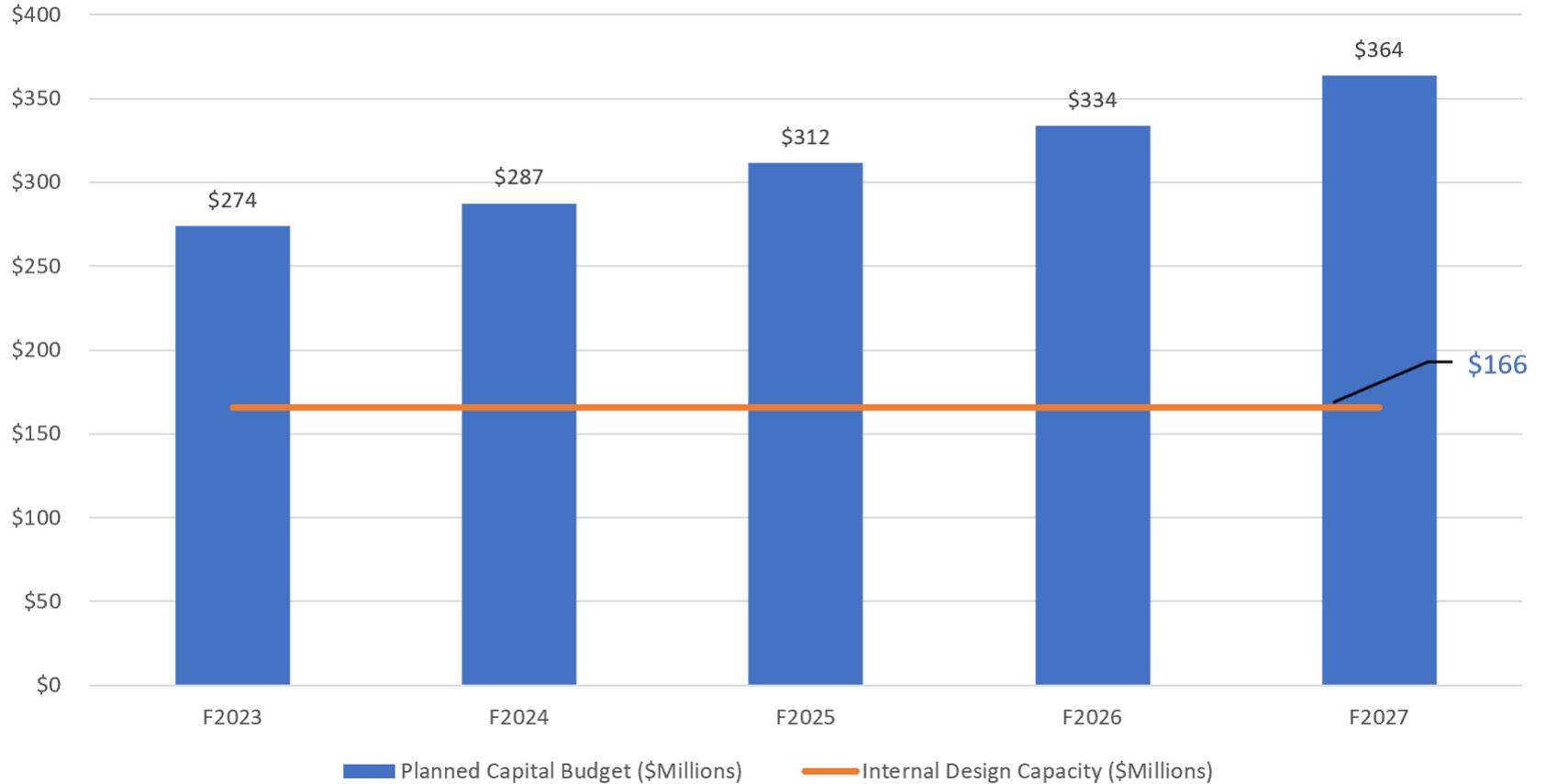
- Distribution customer connects **\$100-125M annually**
- Urban & Rural Economic Rebuilds **\$15M annually**

Sustainment

- Urban Core Infrastructure Improvements Program **\$9-10M annually**
- Rural Rebuild and Improvement Program **\$30-38M annually**
- Wood Pole/Crossarm Replacements **\$18-19M annually**
- Underground Primary Cable/RUD Mitigation **\$23-90M annually**

Future (2023-2027) **≥ \$1.5B over next 5 yrs**

Planned Capital by Fiscal Year



Current External Resources

Master Engineering Services Agreements:

- Final year of 5-year contract
 - Engineering Design/Estimating Services
 - Drafting
 - Approximately 19+ FTEs of capacity across three vendors
 - Expires May 2022

Quote Expeditor:

- One more year of 4-year contract
 - Provide expedited quotes to customers applying for new services
 - Approximately 4 FTEs of capacity across 2 vendors
 - Expires April 2023

Upcoming Opportunity

Master Engineering Services Agreements:

- Up to 5-year contract
 - Engineering Design/Estimating Services for \$108M to \$198M in capital projects over 5 years
 - Managing Daylighting, Staking & Surveying contracts, as part of design
 - Drafting
 - File Management & Permitting
 - Hope to have approved & posted by end of December 2021
 - Vendors will provide:
 - hourly rates for on demand services
 - quotes based on statements of work
 - Competitive pricing based on statements of work
 - Up to 50 FTEs of capacity across multiple vendors

Questions





DISTRIBUTION CONSTRUCTION OVERVIEW

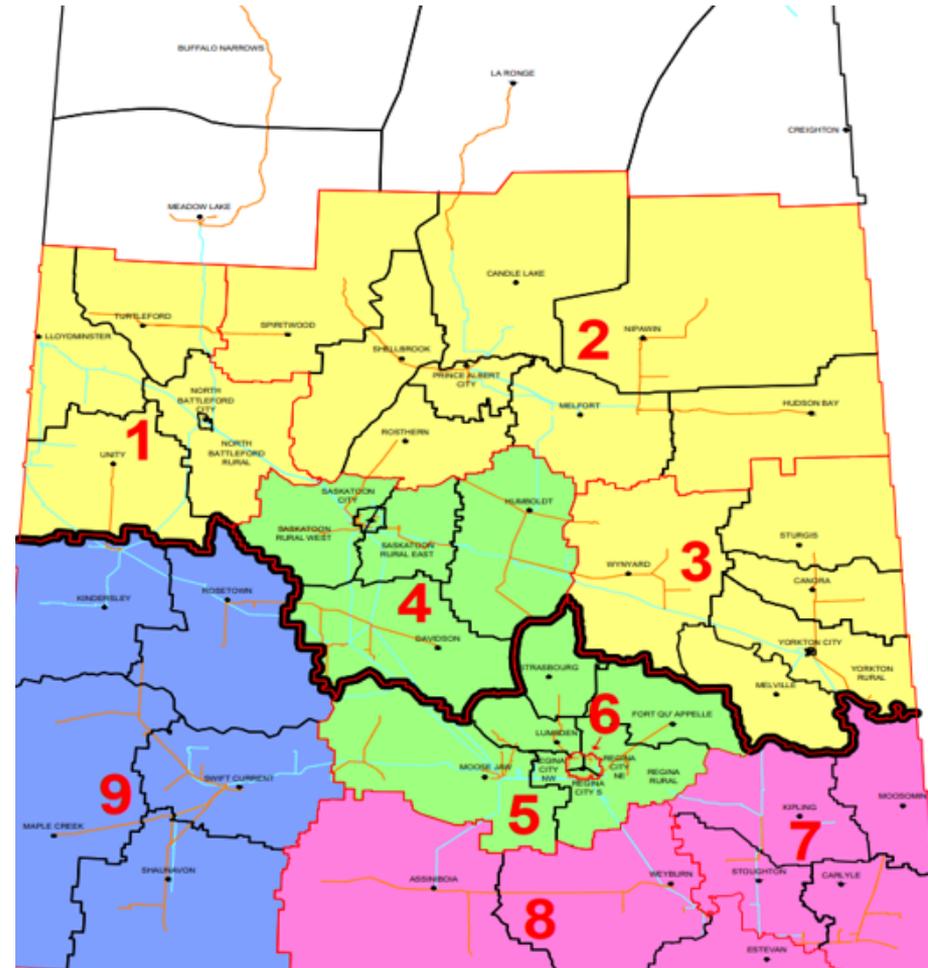


Ryan Neufeld

DIRECTOR, DISTRIBUTION CONSTRUCTION & WORK
MANAGEMENT

DISTRIBUTION CONSTRUCTION

- Responsible for the procurement of labor and equipment to primarily execute the capital portfolio
- Responsible for contract administration during construction
- Responsible for Project Management of the Distribution Capital Portfolio



CONTRACTS MANAGED

- Regional Power Line Contract (RPL)- 5 year (2022-2027)
- Master Construction Agreement (MCA)-5 year (2021-2026)
- Pre-Construction Survey Contracts- 5 year (various locations)
- Provincial Line locating contract-Crown Collaboration (2018-2023)
- Joint Servicing Program-Crown Collaboration (2019-2024)
- Field Consultants-(2021-2025)
- Duct Bank construction in Regina Core (Civil work)

DISTRIBUTION SUSTAINMENT, GROWTH, & CUSTOMER CONNECT

Past (2017 – 2020)

14.4% increase per year

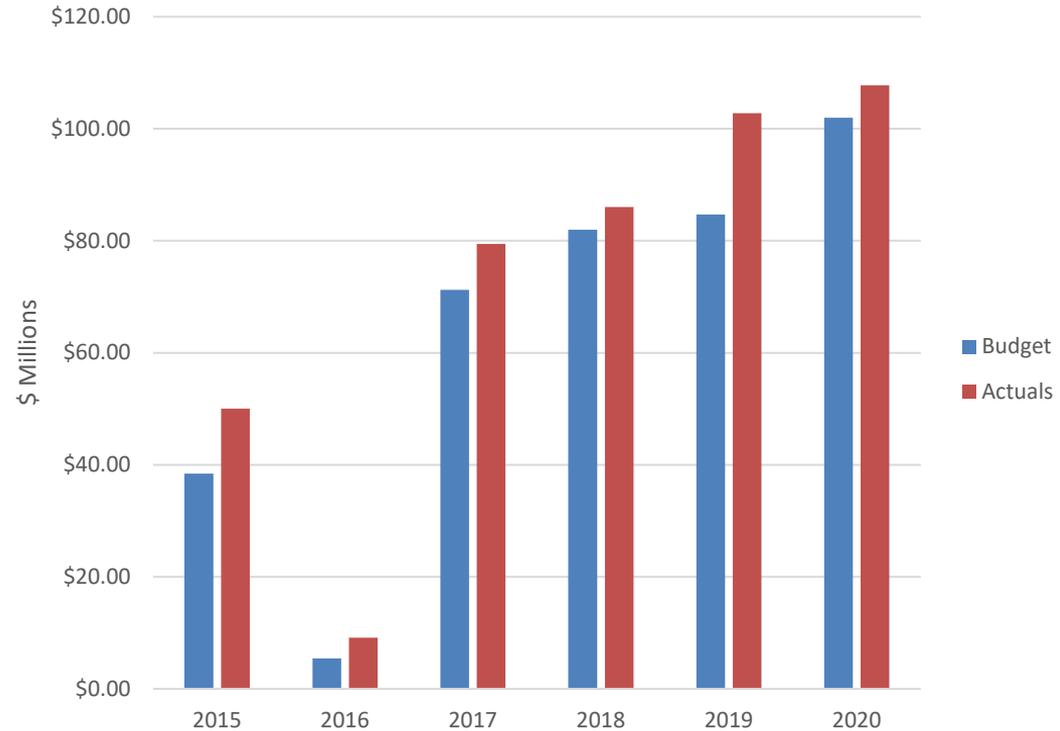
Current (2022F)

Growth & Sust. \$170 M

New Connect \$110 M

Future (2023-2027)

≥ 1.5 B over next 5 yrs



RISKS & OPPORTUNITIES – 5 YEAR VIEW

1. Rural Infrastructure & Reliability - \$500 M

- Wood pole replacement, Line rebuilds, underground infrastructure (RUD)
- Over the next 15 years replace
 - 75,000 km of rural infrastructure
 - Upgrade to meet future electrification load

2. Wildfire & Reliability – \$170 M

- Re-establishing and widening T&D ROWs through vegetation mgmt. Maintain through herbicide.

RISKS & OPPORTUNITIES – 5 YEAR VIEW

3. Urban Infrastructure & Reliability - \$170 M
 - Regina Core, U/G primary cable, Line & Pole replacements
 - Upgrade to meet future electrification load
4. PCB Mitigation <\$10 M
 - Transformer replacement, PCB ≥ 0.5 g by 2023
5. Energy Efficiency <\$30M
 - LED streetlight luminaire replacement , Power Quality
6. Recover and Redeploy Underutilized Assets

VENDOR OBSERVATIONS

- Increased focus on safety performance
- Collaboration on innovation to meet increased Capital expenditures
- Quality and pride of workmanship
- Struggling to find qualified workforce and general labor
- Work projection exceeding existing known workforce



QUESTIONS?

SASKPOWER TRANSMISSION & DISTRIBUTION INFORMATION SESSION

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Kelly Amberson, Transmission Construction

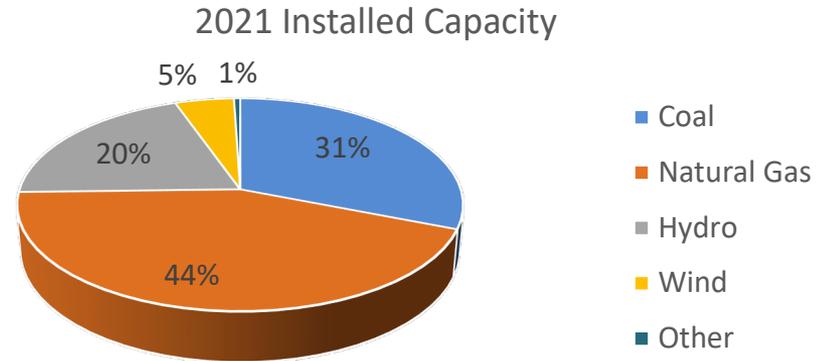
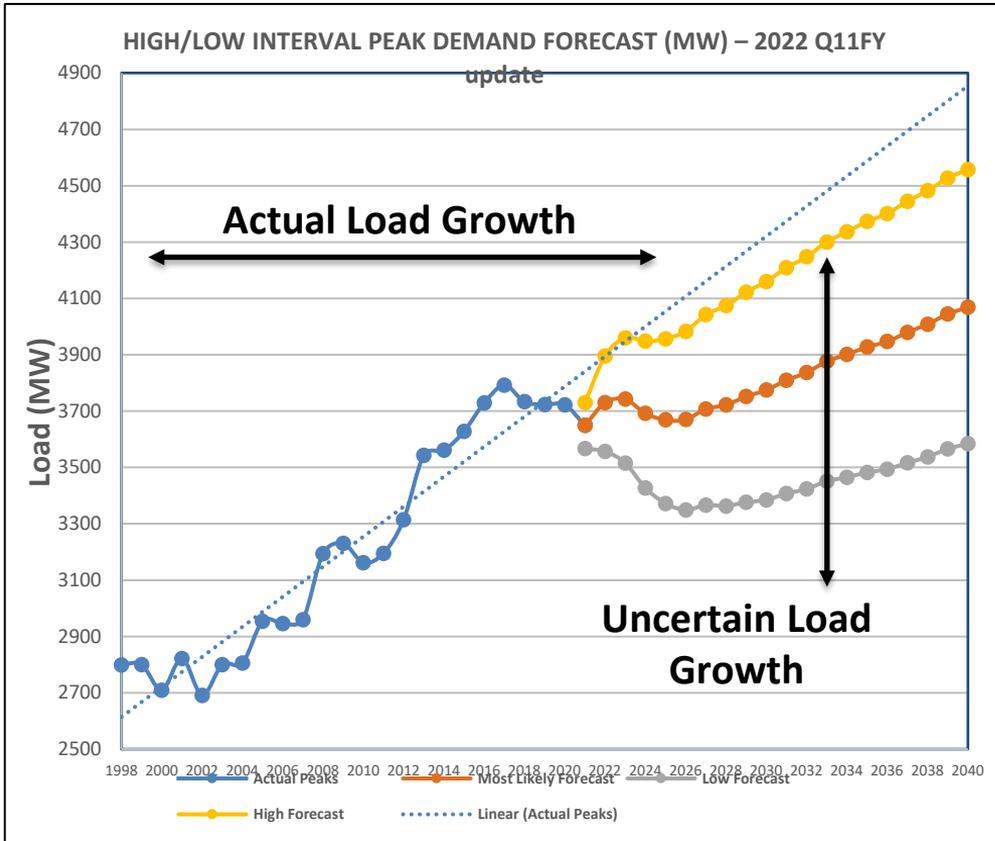
Jill Danberg, Transmission Engineering

Drivers of Transmission Projects

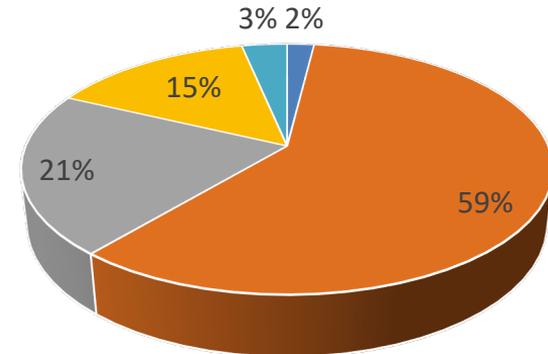
- Growth in Industrial sector
- Provincial load growth
- Upgrades to infrastructure
- Grid changes from generation



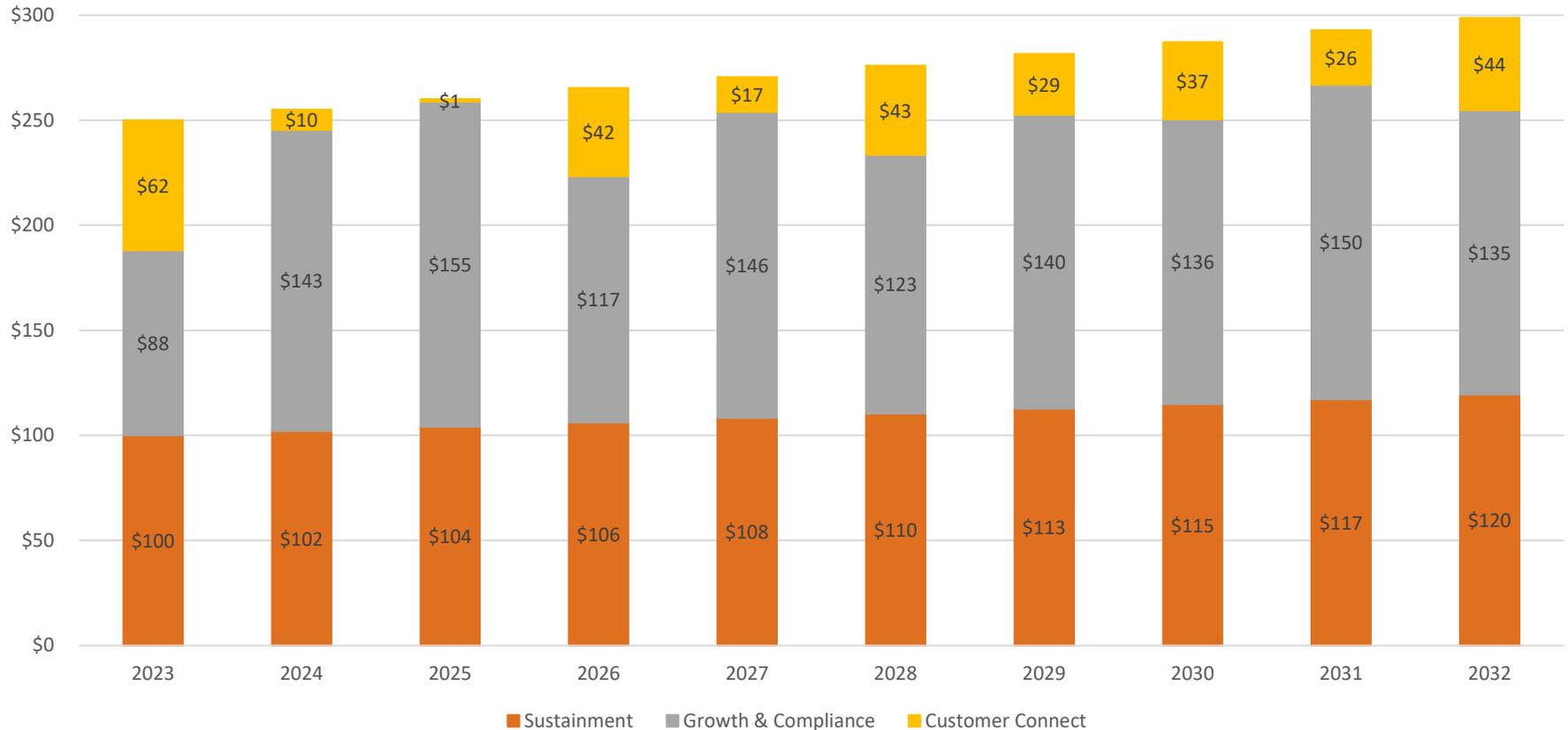
UNCERTAIN TIMES - GRID TRANSFORMATION



2030 Installed Capacity-Perspective



Preliminary Update - 10 Year Transmission Business Plan



Line Engineering Master Service Agreement

- Used to augment internal Engineering team, consisting of X line designers, X civil designers, etc. (add from Dallas here)
- MESA established in 2021, 3yr + 1 + 1
- Evaluated on personnel design skills, company aboriginal ownership, quality assurance plans, project execution and price



Station Engineering Master Service Agreement

- Used to augment internal Engineering team consisting of 10 Station Engineers and 17 Protection & Control Engineers and Technologists
- MESA established in 2017, 3yr + 1 + 1
- Evaluated on personnel design skills, company aboriginal ownership, quality assurance plans, project execution and price



Transmission Construction Department

- Transmission Station Civil Construction
 - Station Civil Construction
 - Other Civil Construction
- Transmission Station Electrical Construction
 - Outdoor Electrical Construction
 - P&C Construction
- Transmission Line Construction
 - Sustainment Work
 - Capital Construction Work
- Construction Inspection Services
- Other Contracts
 - Transformer Moves
 - Foundation Installation
 - EPC Construction



Transmission Construction Department

Transmission Station Civil Construction

- Station Civil Construction
 - Site Preparation
 - Foundation Installation
 - Concrete/screw piles
 - Grounding
 - Ducting/trench
 - Fencing



Transmission Construction Department

Transmission Station Civil Construction

- Other Civil Construction
 - Steel fabrication and erection
 - Road/access construction
 - Fence replacement/modification
 - Crushed rock initiatives

Contracts/Opportunities:

- No current multi-year programs in place
- Indigenous Procurements



Transmission Construction Department

Transmission Station Electrical Construction

- Outdoor Electrical Construction
- Wiring, protection & control, commissioning

Contracts/Opportunities:

- 5 Year Electrical Construction RFPQ
 - Expiring September 2022
- Indigenous Procurements



Transmission Construction Department

Transmission Line Construction

- Capital Sustainment Work
- Capital Construction Work

Contracts/Opportunities:

5 Year Transmission Line Construction RFPQ

- Expiring September 2024



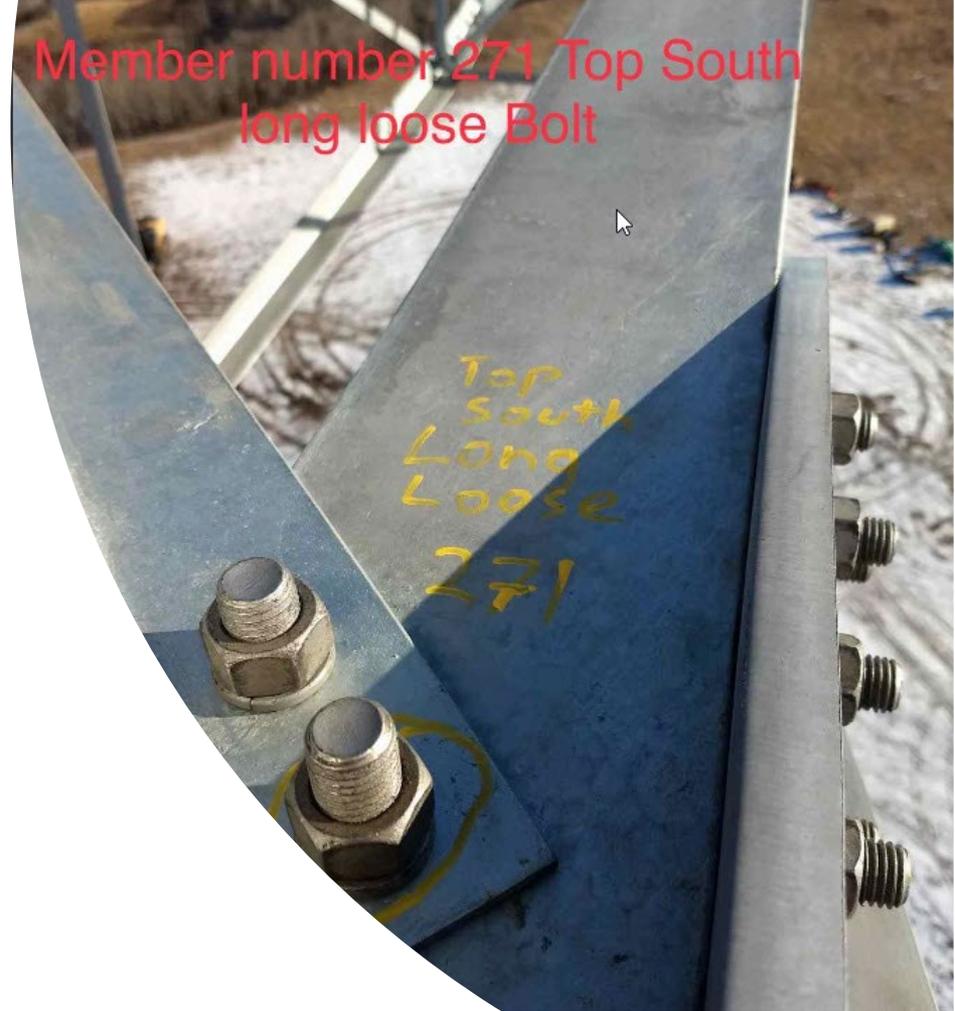
THE ABOVE PHOTO DISPLAYS SETTING OF STR. 169



Transmission Construction Department

- Construction Inspection Services
 - Line Construction Inspections
 - Station Construction Inspections
 - Construction Coordination
- Contracts/Opportunities:
 - 5 Year Construction Consulting Agreements
 - Expiring September 2024

Member number 271 Top South
long loose Bolt

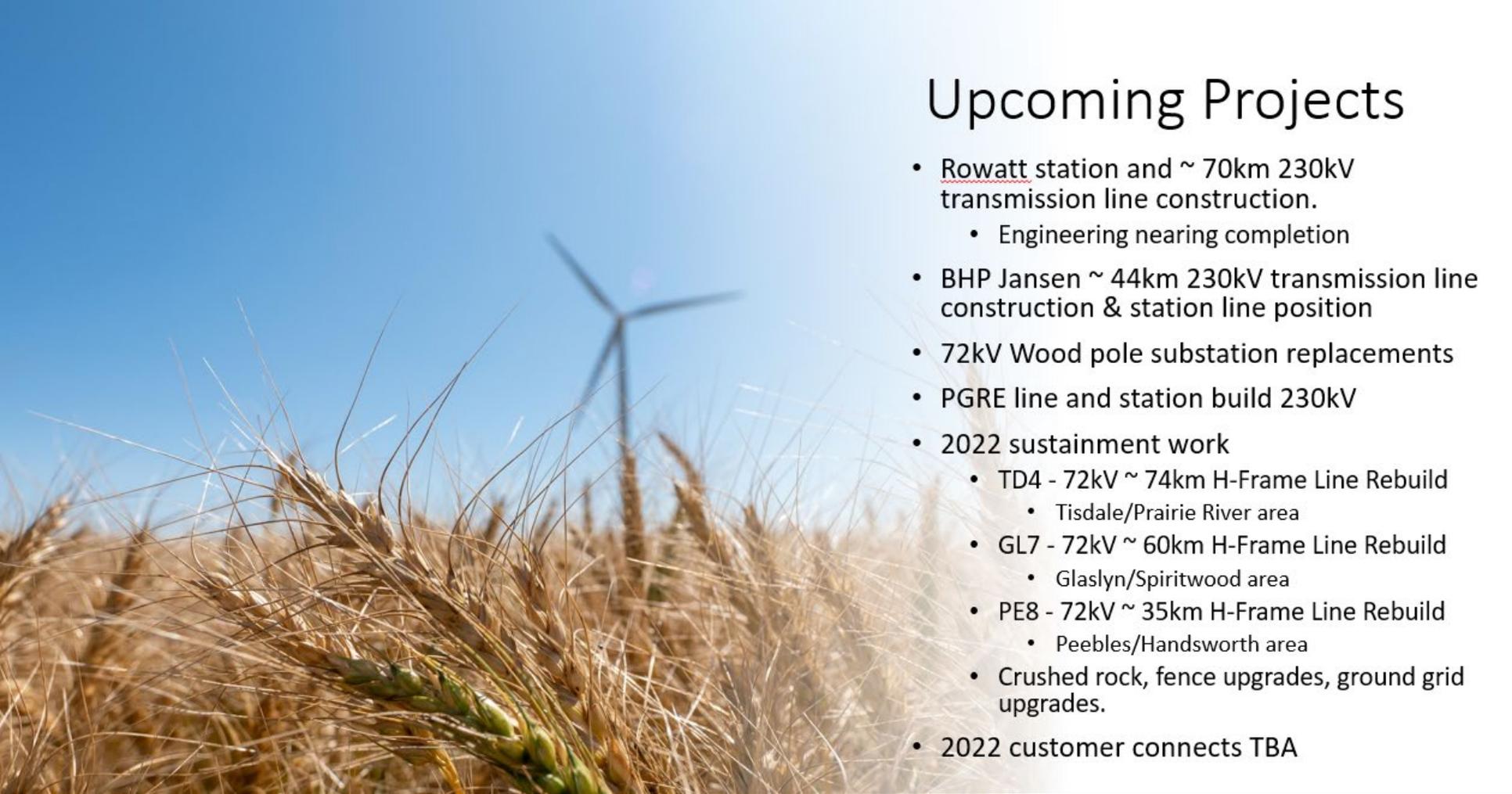


Transmission Construction Department

Other Types of Services

- Transformer Moves
- Foundation Installation
- EPC Construction





Upcoming Projects

- Rowatt station and ~ 70km 230kV transmission line construction.
 - Engineering nearing completion
- BHP Jansen ~ 44km 230kV transmission line construction & station line position
- 72kV Wood pole substation replacements
- PGRE line and station build 230kV
- 2022 sustainment work
 - TD4 - 72kV ~ 74km H-Frame Line Rebuild
 - Tisdale/Prairie River area
 - GL7 - 72kV ~ 60km H-Frame Line Rebuild
 - Glaslyn/Spiritwood area
 - PE8 - 72kV ~ 35km H-Frame Line Rebuild
 - Peebles/Handsworth area
 - Crushed rock, fence upgrades, ground grid upgrades.
- 2022 customer connects TBA