

FEI Annual Review of 2020-21 Rates

Workshop

October 14, 2020



Agenda

Topic	Presenter(s)
Overview & Approvals Sought	Diane Roy <i>Vice President, Regulatory Affairs</i>
Revenue Requirements & Rates	Rick Gosselin <i>Manager, Cost of Service</i>
Forecasting	David Bailey <i>Customer Energy and Forecasting Manager</i>
COVID-19 Pandemic Update	Michelle Carman <i>Director, Customer Service</i> James Wong <i>Director, Budgeting and Strategic Initiatives</i>
Clean Growth Innovation Fund Update	Mark Warren <i>Director, Business Innovation and Measurement</i>
Service Quality Indicators (SQIs)	James Wong <i>Director, Budgeting and Strategic Initiatives</i> Paul Chernikhowsky <i>Director, Regulatory Projects and Resource Planning</i>
Open Question Period	All

2020 Rates Include 2014-2019 PBR Plan Elements

- Increase to 2020 Opening Rate Base for capital that was held outside of rate base:
 - ❑ \$65.0 million in excess of formula/allowed but within the dead band over the PBR term cumulatively
 - ❑ \$61.1 million outside of dead band for 2019
- 2019 Flow-through account balance
 - ❑ \$22.2 million credit for 2019
 - ❑ \$11.6 million credit true-up for 2018
 - ❑ \$2.5 million credit for financing
- Final Earnings Sharing recovery of \$1.6 million for 2019 and for 2018 true-up
- Final 2019 SQI results all equal to or better than the benchmark

Approved Multi-Year Rate Plan (MRP)

MRP Term from 2020 to 2024

Rate Increases for
2020 and 2021

Service Quality
Indicators

Formula-
Driven Items

Forecast Items
(Approved and
Flow-through)

Customer

Safety

Key Differences between MRP and PBR Plan

- Capital:
 - ❑ 2020 through 2022 regular sustainment/other capital has already been approved for the amount to include in rates
 - ❑ Only growth capital is subject to indexing with 100 percent of forecast customer growth with true-up
- O&M
 - ❑ Change to customer growth factor for indexed O&M: 75% of net customer growth with true-up
 - ❑ Changes to which items are forecast and flowed-through outside of indexed O&M (variable LNG O&M, integrity digs)
- Earnings Sharing applies to more items
 - ❑ Some components of Other Revenue
 - ❑ Depreciation, financing and earned return on rate base (that is not otherwise subject to flow-through)

FortisBC MRP Compared to PBR Plan

	Approved PBR	Approved MRP
Term	2014-2019 (6 years)	2020-2024 (5 years)
Indexing for O&M and FEI Growth Capital	Grow by inflation less 1% productivity; 55% labour and 45% non labour inflation	Grow by inflation less 0.5% productivity; adjust for actual PY labour percentages annually
Growth Factor for O&M and FEI Growth Capital	50% of lagged actual net customer growth for O&M and capital other than FEI growth; 50% of lagged gross customer adds for FEI growth capital	75% of forecast net customer growth for O&M, 100% of gross customer adds for FEI growth capital; both with true-up
“Z” Factors	Yes - 5 criteria including materiality threshold	Same but with reduced threshold (\$150K for FBC; \$500K for FEI)
Capital	Indexed as above	Forecast basis, except FEI growth
SQIs	13 for Gas; 11 for Electric	13 for Gas; 12 for Electric
Off Ramps	200 bps one year or 150 bps 2 consecutive yrs	150 bps one year
Innovation Fund	None – some funding occurring through O&M	\$5M for Gas
Incentives	50/50 O&M and capital earnings sharing only	50/50 ROE

Approvals Sought

- 2020: Existing interim delivery rate increase be made permanent (2 percent)
- 2021: Delivery rate increase of 6.59 percent (approx. \$27 or 2.9 percent to the annual bill of a residential customer)
- Four New Deferral Accounts – all for regulatory proceedings
 - ❑ Annual Reviews, to be amortized in each subsequent year
 - ❑ 2020 LTGRP, amortization to be determined in the future
 - ❑ BCUC Initiated Inquiries, to be amortized in each subsequent year
 - ❑ City of Coquitlam Application Proceeding, to be amortized over 3 years
- Existing deferral account requests
 - ❑ Five year amortization of the 2020-2024 MRP Application deferral
 - ❑ Draw down the 2017 & 2018 Revenue Surplus deferral account to zero over 2020 and 2021
 - ❑ Include COVID-19 incremental costs and related savings from 2020 and 2021 in the COVID-19 Customer Recovery Fund deferral

Approvals Sought (cont'd)

- Biomethane Variance Account (BVA) and Revenue Stabilization Adjustment Mechanism (RSAM) rate riders for 2021
- Amount of Southern Crossing Pipeline Revenue to be included in Other Revenue
- 2021 Core Market Administration Expense (CMAE) budget and allocation

Questions?



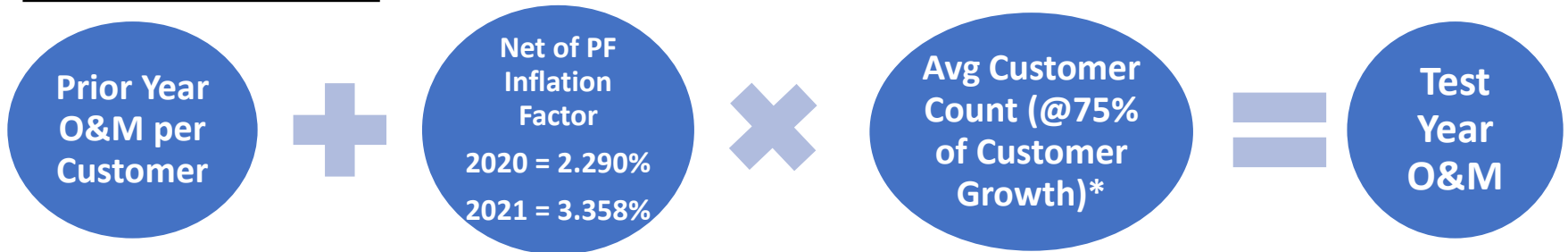
Revenue Requirements & Rates

Rick Gosselin, *Manager, Cost of Service*

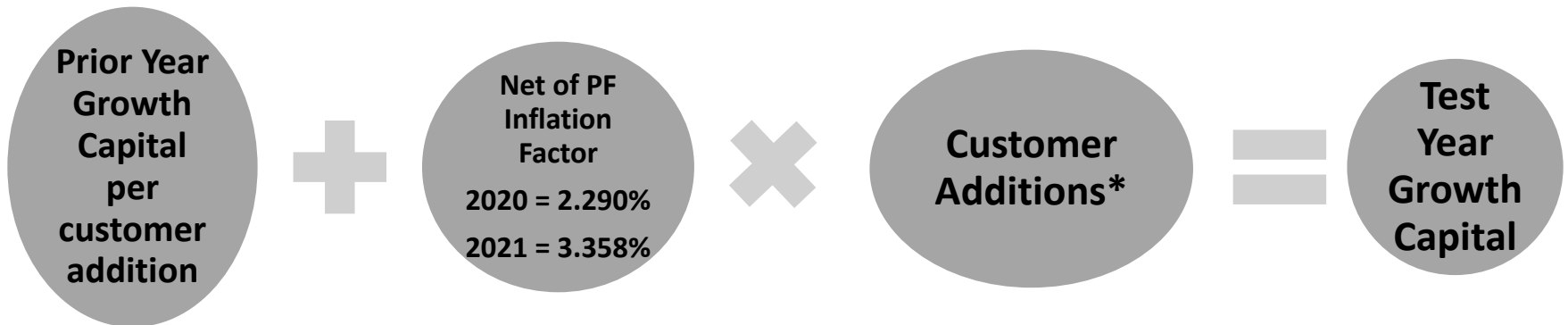


The MRP Formula for O&M and Growth Capital

Index Based O&M



Index Based Growth Capital

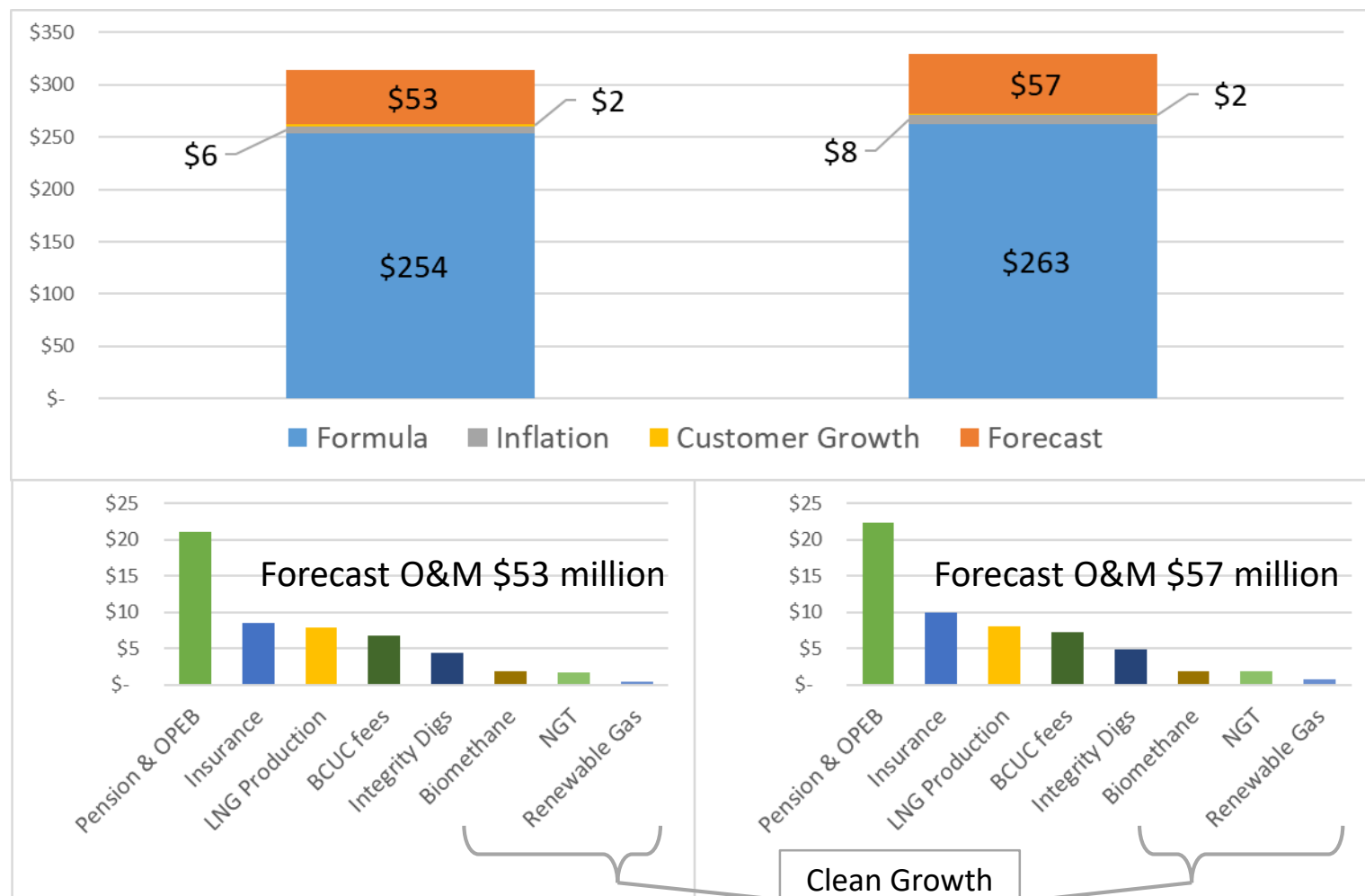


* Subsequent true-up of customer forecast eliminates forecast variance

Total O&M

2020 Gross O&M \$314 million
(\$262 million after capitalized overheads)

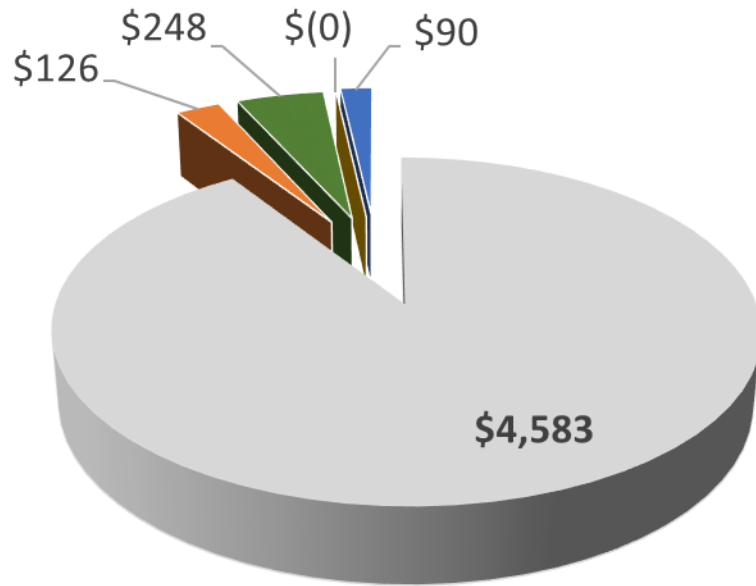
2021 Gross O&M \$329 million
(\$275 million after capitalized overheads)



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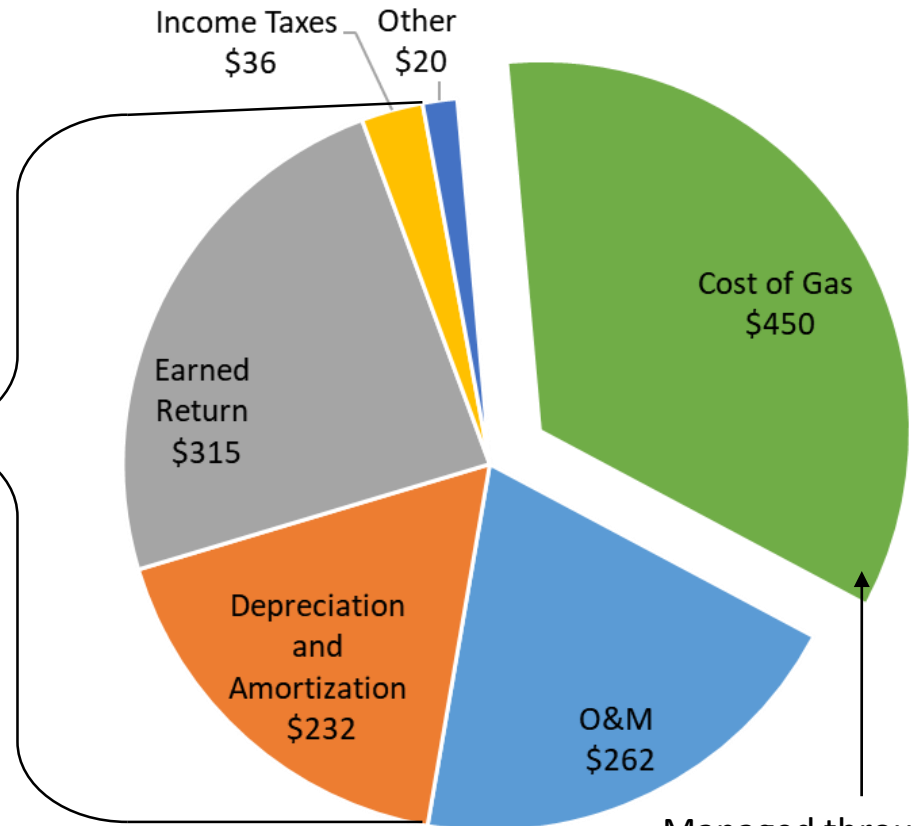
2020 Revenue Requirement Summary

Total Rate Base of \$5,047 million



- Opening Net Plant before rebasing
- Rebasing
- Changes in Net Plant
- Unamortized Deferred Charges
- Gas in Storage and Other WC

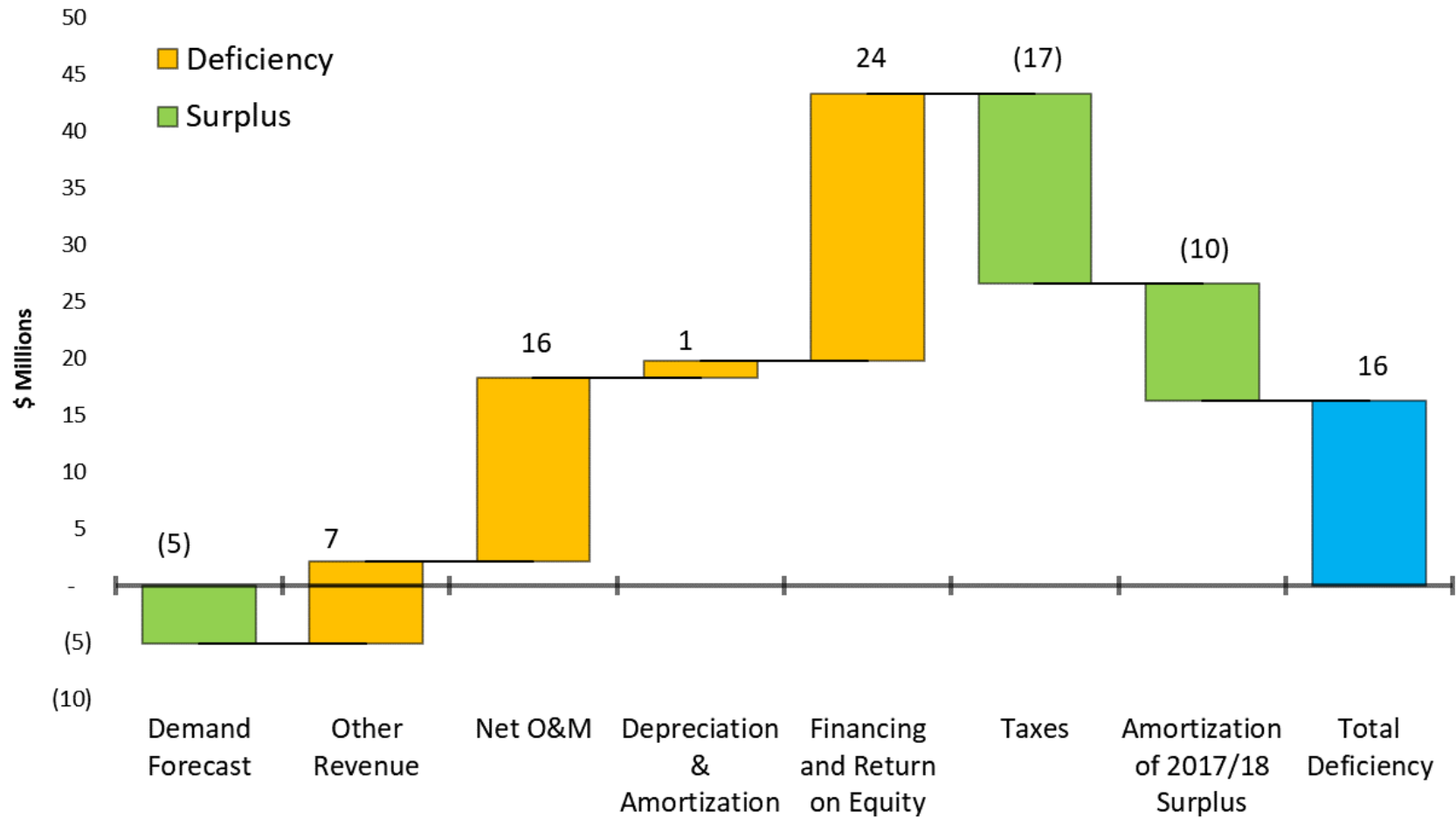
Total Revenue Requirement of \$1,315 million



Delivery Costs of
\$865 million

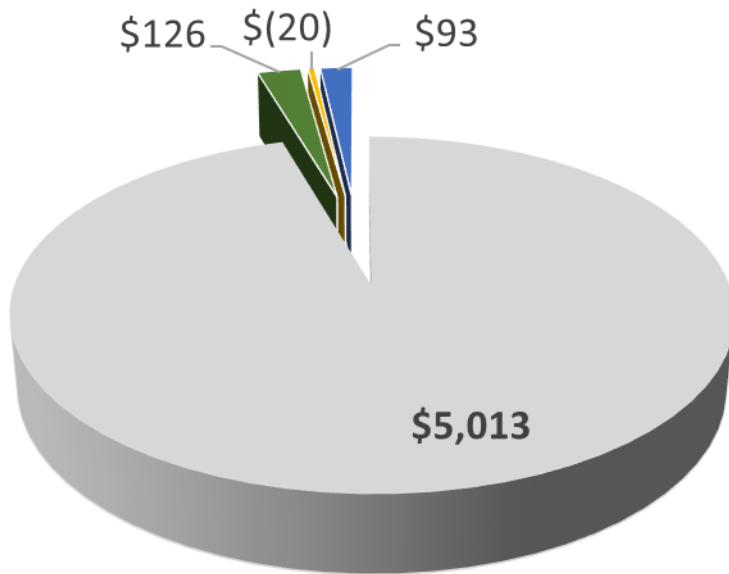
Managed through
Quarterly Review &
Rate Setting Process

Summary of 2020 Deficiency



2021 Revenue Requirement Summary

Total Rate Base of \$5,213 million



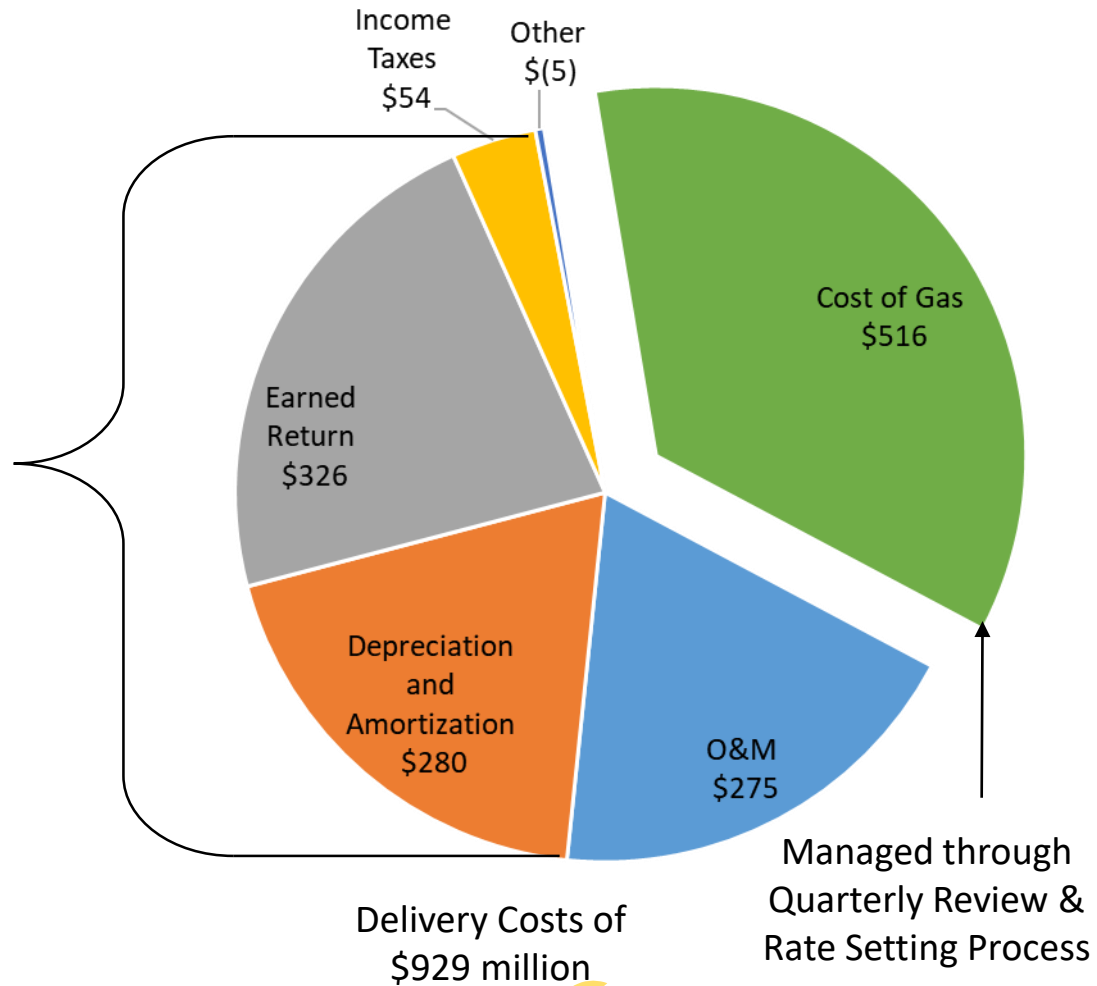
Opening Net Plant

Changes in Net Plant

Unamortized Deferred Charges

Gas in Storage and Other WC

Total Revenue Requirement of \$1,445 million

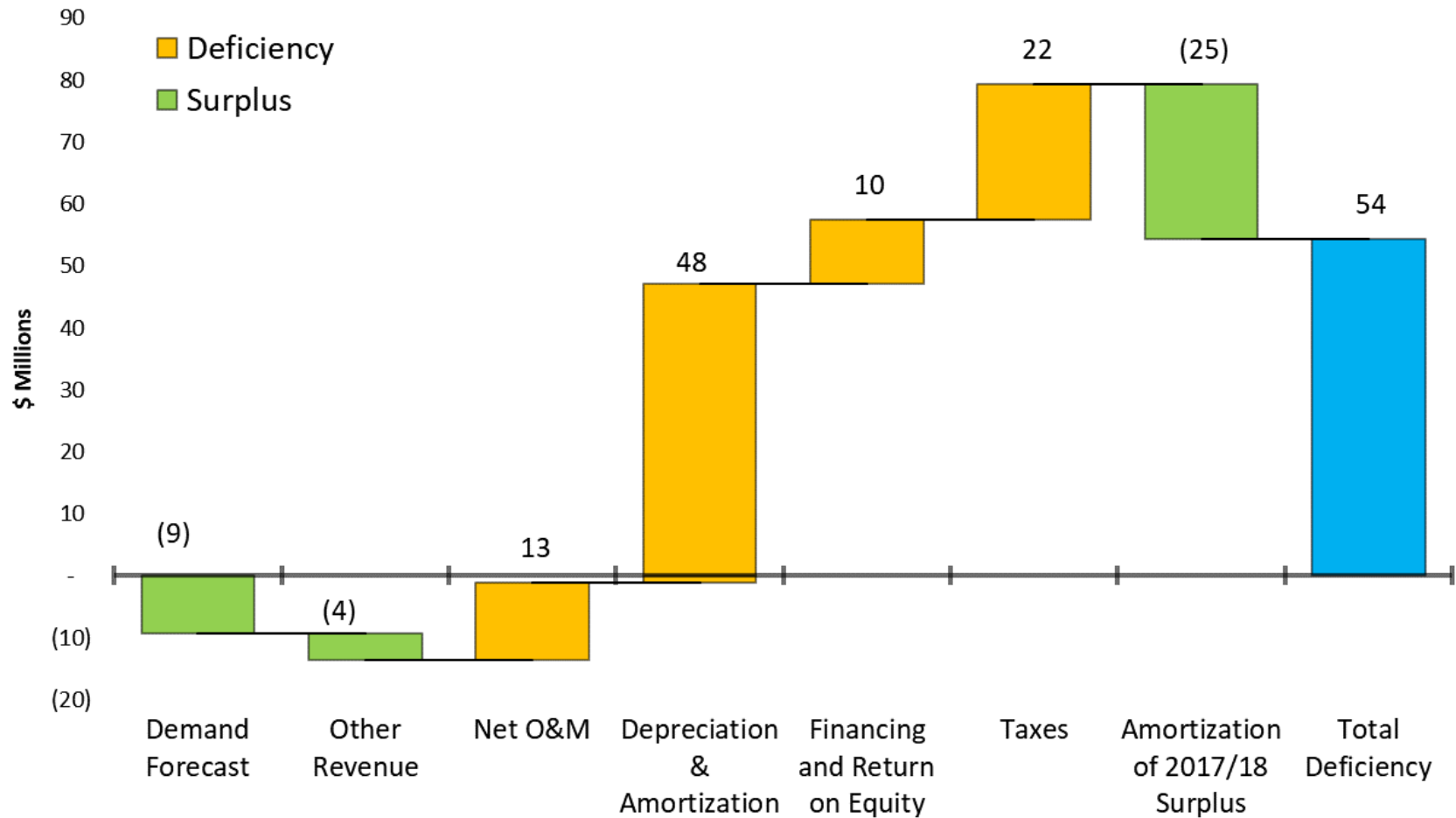


Delivery Costs of
\$929 million



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Summary of 2021 Deficiency



Questions?



Forecasting

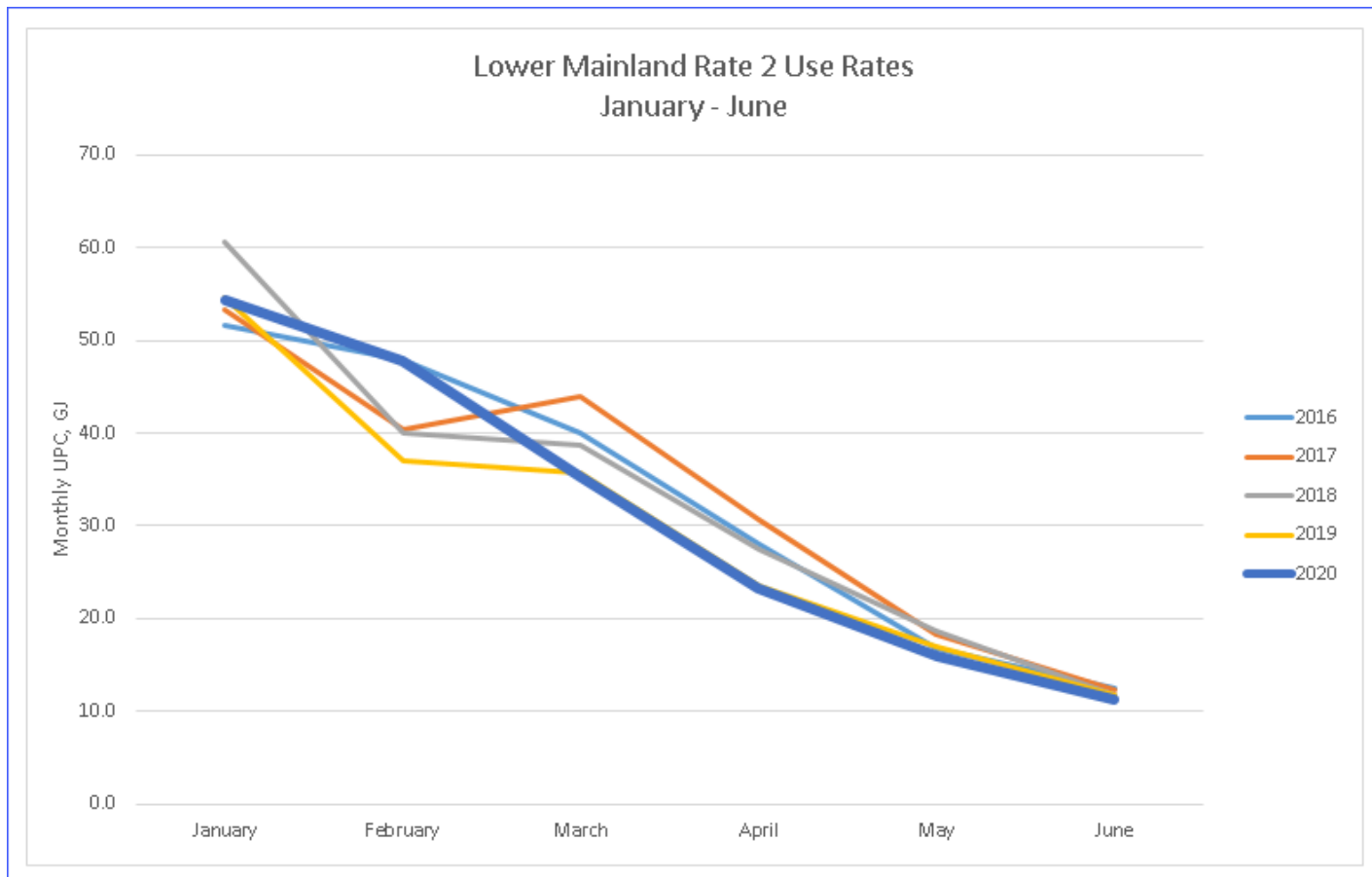
David Bailey, *Customer and Energy and Forecast Manager*



Pandemic Considerations for Forecasting

- Customer Forecasts:
 - ❑ Residential - next CBOC SFD/MFD housing starts forecast expected in Q4 2020
 - ❑ No evidence of an impact to customer additions, based on internal meetings with key managers or customer additions reported to date
- Industrial Demand:
 - ❑ Industrial survey was conducted in June
 - ❑ Customers were able to factor any expected impact into their survey responses
- Overall Demand:
 - ❑ 2020 Projection (2020P) used Actuals for January to June for all inputs, which would reflect the impacts of the Pandemic to that point

Pandemic Impact – Use Rate Example



Given the small variance in the months since the pandemic began, and with the understanding that the pandemic situation is unpredictable and changing rapidly, there is insufficient evidence to warrant forecast adjustments, either upwards or downwards

Forecasting Results - “What” and “Why”

- A number of IRs asked for reasons why particular aspects of the forecast were up or down
- What?
 - Actual historical data by region, rate, year and month
 - Weather normalized
 - Many drivers, all “intrinsic” to historic demand
 - Key: Accurate historical data is critical to objective, repeatable “time series” methods
- Why?
 - Many reasons why customers do what they do
 - Appliance efficiency
 - Building envelopes
 - Appliance count
 - Household size
 - 100s of industry segments, all driven differently
 - Key: “Why” is not an input to our forecast methods and therefore knowing “why” cannot improve the forecast results

Forecast Process

Rate Group	Customer Additions	Customers	Use Rate	Demand
Residential	CBOC forecast by dwelling type	Prior year customers + customer adds	Exponential Smoothing method, using normalized historical UPC	Product of Customers and Use Rates
Commercial	3 Yr. Avg. historical additions	Prior year customers + customer adds	Exponential Smoothing method, using normalized historical UPC	Product of Customers and Use Rates
Industrial				Annual survey of industrial customers
Aggregate			4	Sum of Res. + Comm. + Ind.

UPC and Commercial Adds Methods Review



- Annual Review for 2015 Rates Application
 - ❑ Decision and Order G-86-15
 - ❑ “Review alternative methods for forecasting residential use rates, commercial use rates and commercial customer additions”
- Established the 4% variance benchmark
- This process took a long time
 - ❑ This is not something we can change every year
 - ❑ The demand variances are quite small so we need to be careful not to make them worse by using untested methods

Methods Review - Data Collection

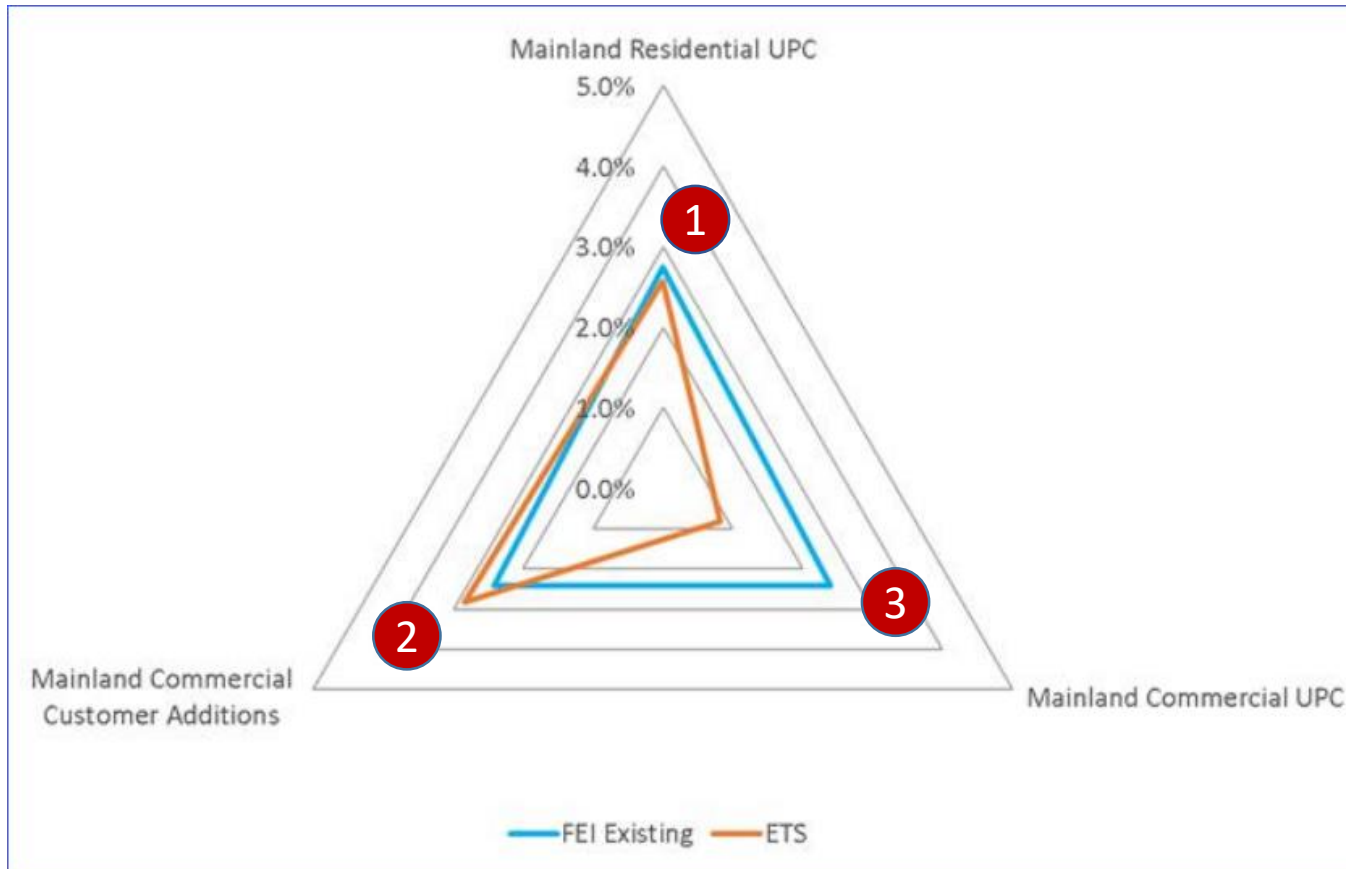
- FEI filed tables similar to the one shown each year.
- Each row required a copy of the existing forecast and then only one element (eg. commercial UPC) was changed.

Table A:B2-4: Mainland Commercial Use Rates

	Year	Data Cutoff	Forecast Demand (PJ)	Actual Demand (PJ)	APE	2012-2018 MAPE
Existing	2012	2010	47.1	48.8	3.4%	
	2013	2010	47.3	48.1	1.6%	
	2014	2012	50.2	48.8	3.0%	
	2015	2013	49.3	49.1	0.5%	2.2%
	2016	2014	49.3	50.8	3.0%	2.3%
	2017	2015	49.7	51.4	3.3%	2.5%
	2018	2016	53.0	52.0	1.8%	2.4%
ETS	2012	2010	48.1	48.8	1.4%	
	2013	2010	48.5	48.1	0.8%	
	2014	2012	48.5	48.8	0.5%	
	2015	2013	49.1	49.1	0.0%	0.7%
	2016	2014	49.9	50.8	1.7%	0.9%
	2017	2015	50.9	51.4	1.1%	0.9%
	2018	2016	52.1	52.0	0.1%	0.8%

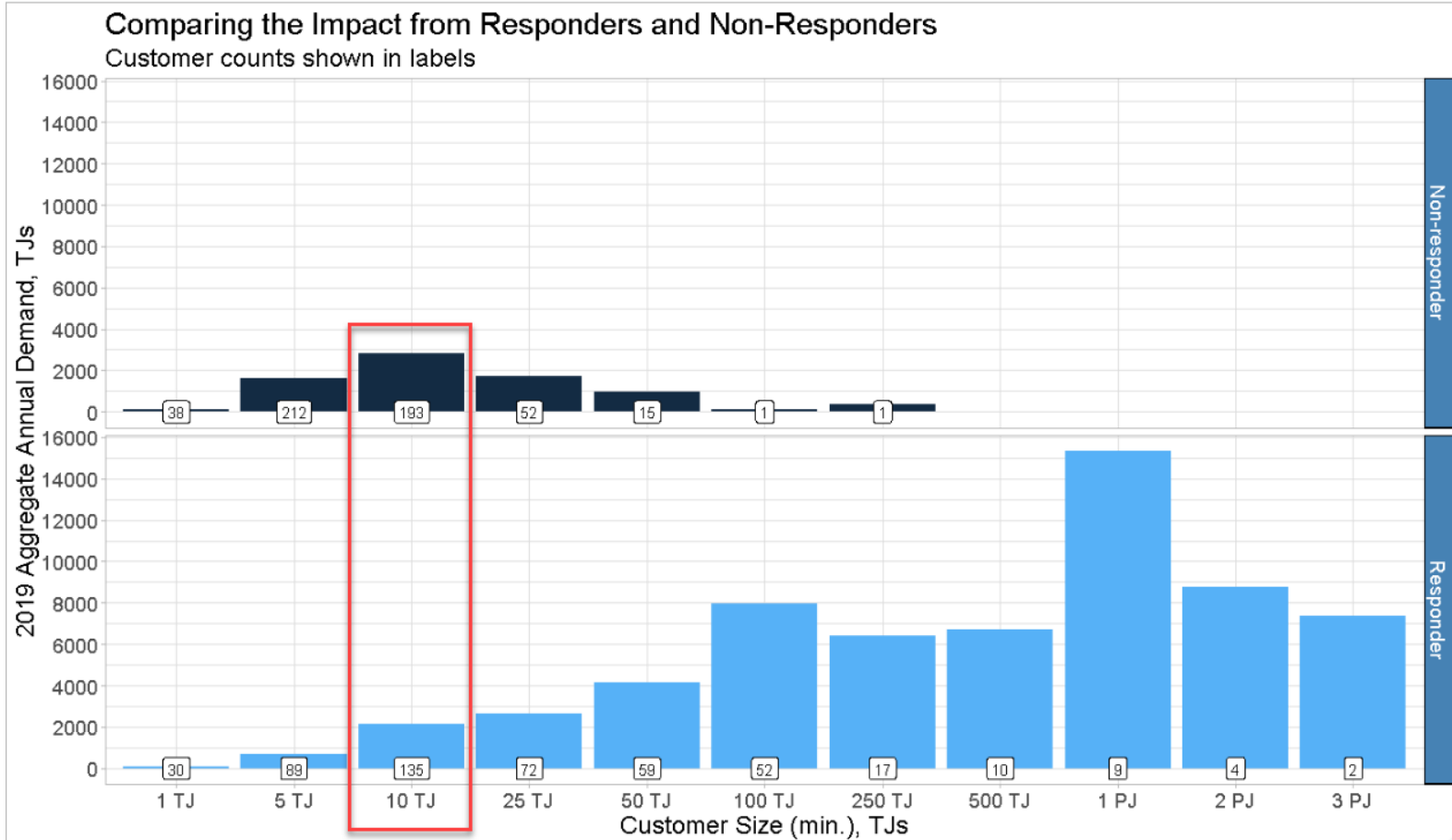


Methods Review - Conclusions

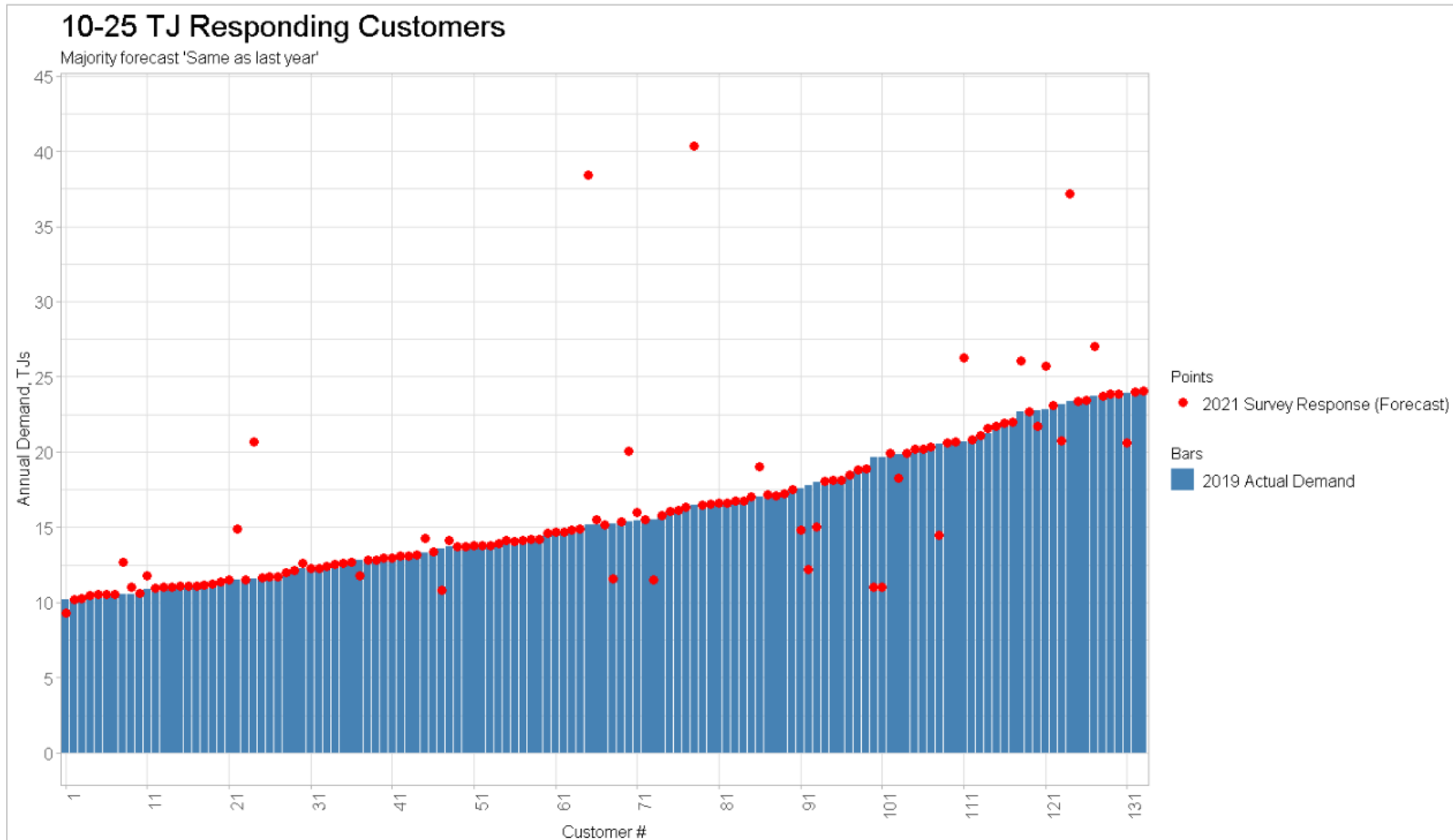


1. Residential UPC was almost a tie, but FEI recommended ETS
2. The existing method worked better for Commercial additions
3. ETS worked better for Commercial UPC

Industrial Demand Survey Responses



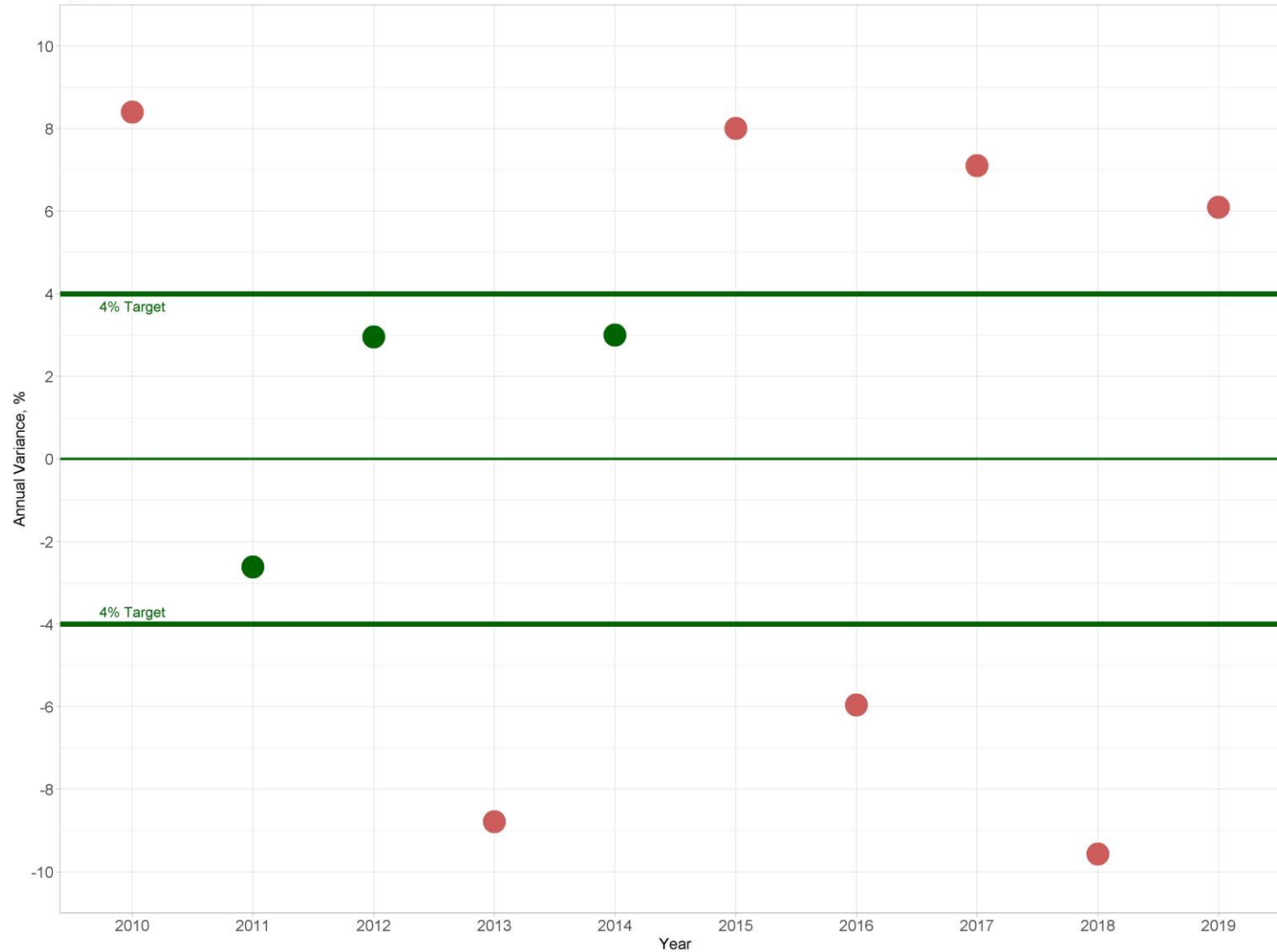
Industrial Survey - Responders Forecasting “Same as Last Year”



Aggregate Demand Variance - Hypothetical Example

High Variance Example

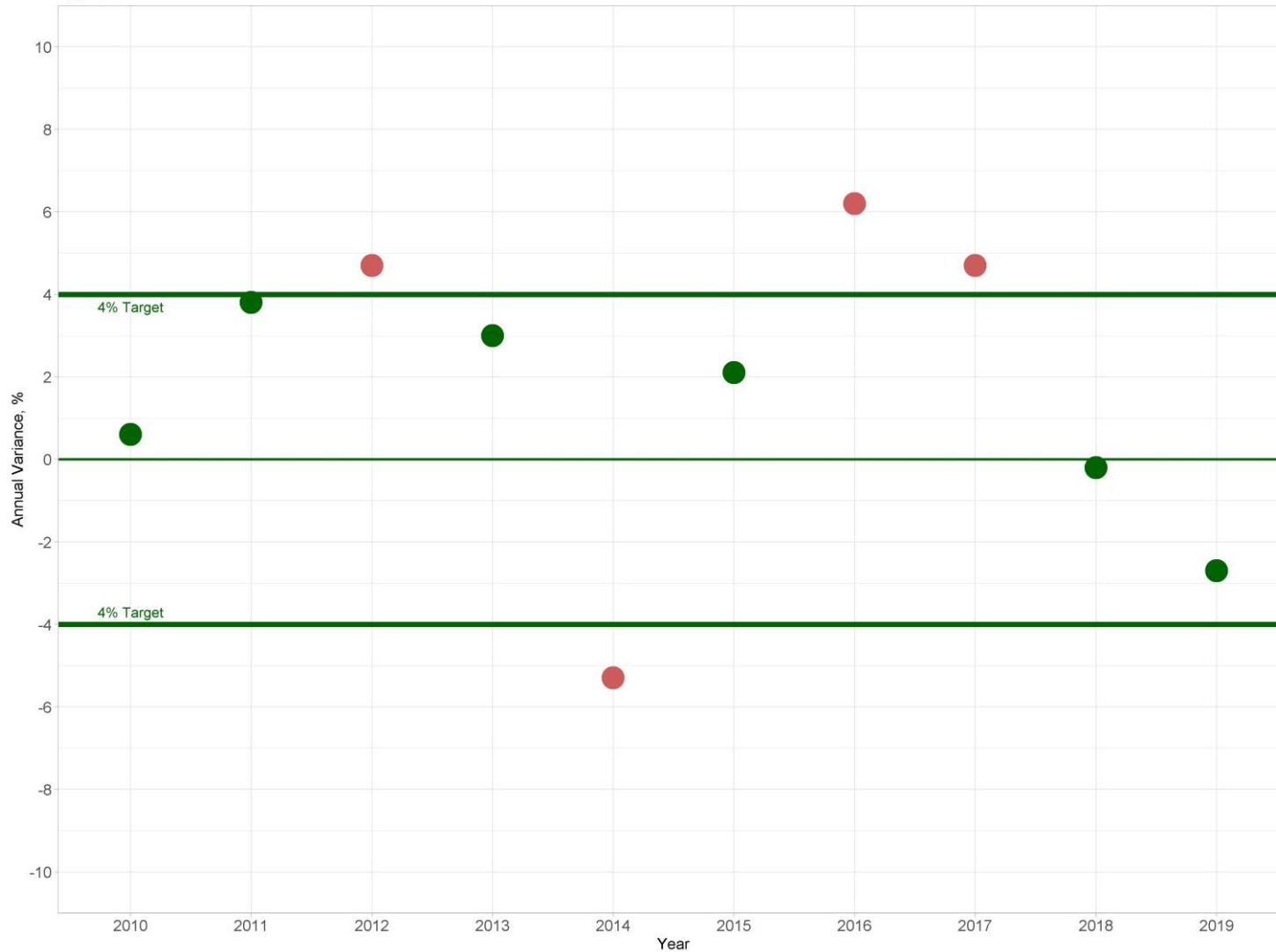
Aggregate Demand Variance, 2010-2019



Aggregate Demand Variance – FEI Results

Actual Variance

Aggregate Demand Variance, 2010-2019



Questions?



COVID-19 Pandemic Update

Michelle Carman, *Director, Customer Service*

James Wong, *Director Budgeting and Strategic Initiatives*



COVID-19 Overview of Employee Impacts

Category	Measures & Protocols
Leadership Responsibility	<ul style="list-style-type: none">• Outline, communicate and follow the Exposure Control Plan• Business unit plans developed to communicate specific requirements including scheduling/staggering of work activities and remote work capabilities• Ensure site safe work plans are developed, in place and communicated• Joint Health and Safety Committee engaged in controls and measures including inspections, review of issues and ongoing communication
Individual Responsibility	<ul style="list-style-type: none">• Self-check for COVID-19 symptoms prior to coming into the workplace and reporting requirements• Physical distance of 2m/6ft to be maintained with PPE requirements followed• Good personal hygiene practices (washing hands, sanitizers, wipes, covering coughs/sneezes)
Facilities & Personal Protective Equipment	<ul style="list-style-type: none">• Workstation layout, proximity and high traffic and common areas reviewed and assessed with measures implemented to promote proper hygiene and allow for physical distancing requirements to be met• Building occupancy limits posted and adhered to• Access into the workplace is limited to employees (limited to no access for guests, visitors and customers)• Clear guidelines on when PPE is required and how to use it• PPE supplied and available

COVID-19 Overview of Customer Impacts

Minimal disruptions to customer experience through pandemic

- Non-urgent work and communications paused for several months
- Manual reading accuracy SQI for gas customers impacted by safety measures and protocols for meter readers in early stages of pandemic

Financial and non-financial support provided to address needs

- Pause of collections related activities, including late payment charges and disconnections for non-payment
- Bill payment deferrals for all customers, with interest free payment plans
- Bill credits for eligible small commercial customers
- Promotion and expansion of energy savings opportunities & community support

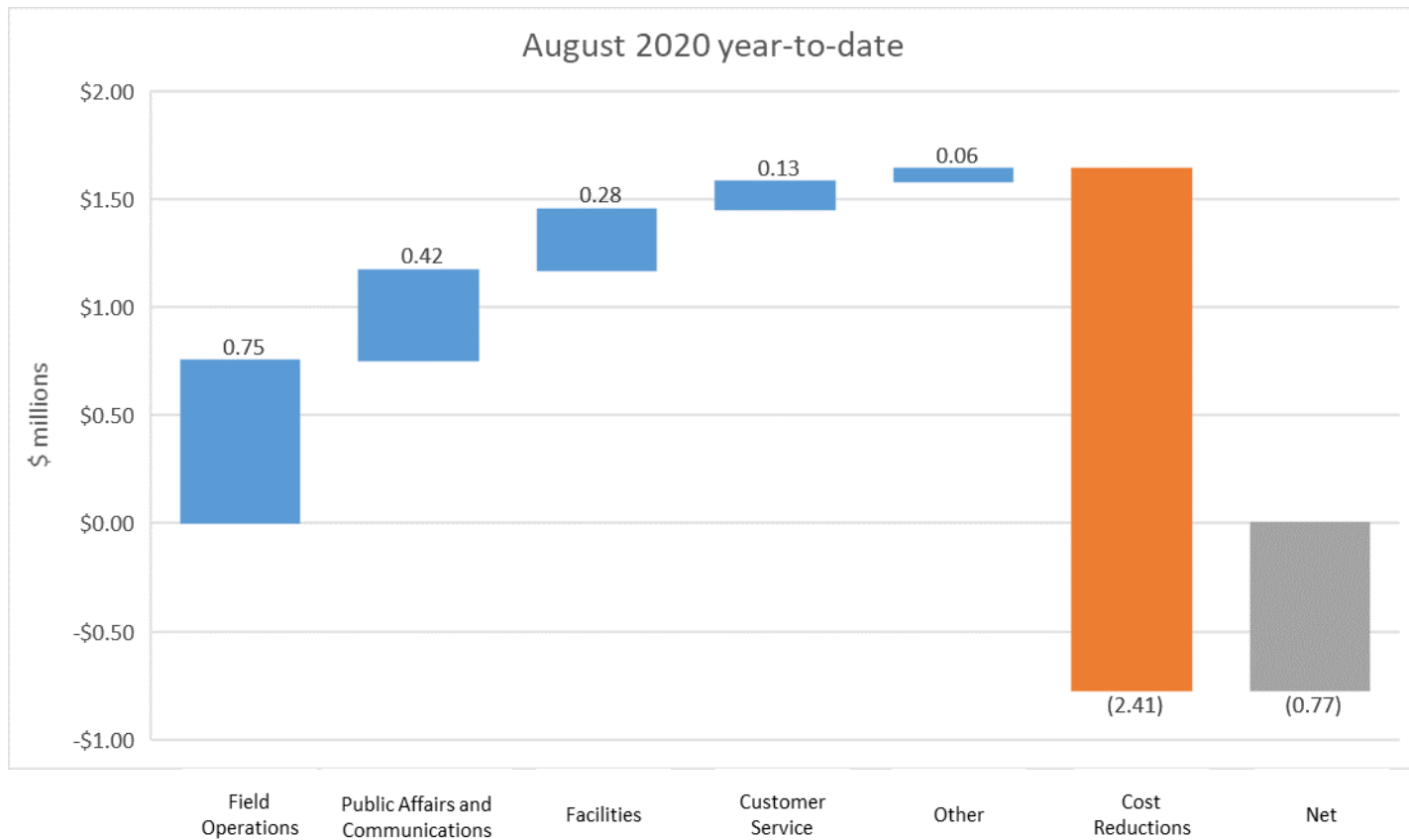
Customer Recovery Fund Deferral Account

- Forecast June 2021 balance of approximately \$5 million associated with forecast bill deferrals, bill credits and unrecovered revenues

COVID-19 Unrecovered Revenues (Bad Debt)

- Customer Recovery Fund Deferral Account captures unrecovered revenues associated with COVID-19
- Forecast unrecovered costs in deferral account consistent with approach embedded in financial statements (US GAAP)
- Approach to recognizing actual costs in deferral account will be finalized as bad debt expense becomes more certain
- Principles for recognizing actual costs in deferral account:
 - ❑ Balances recognized will be reasonably verifiable as being caused by COVID-19, with customer input being a primary consideration
 - ❑ Bad debts associated with COVID-19 should not have a significant impact on index-based O&M and earnings sharing

COVID-19 Net Incremental O&M costs



Questions?



Clean Growth Innovation Fund Update

Mark Warren, *Director Business Innovation and Measurement*

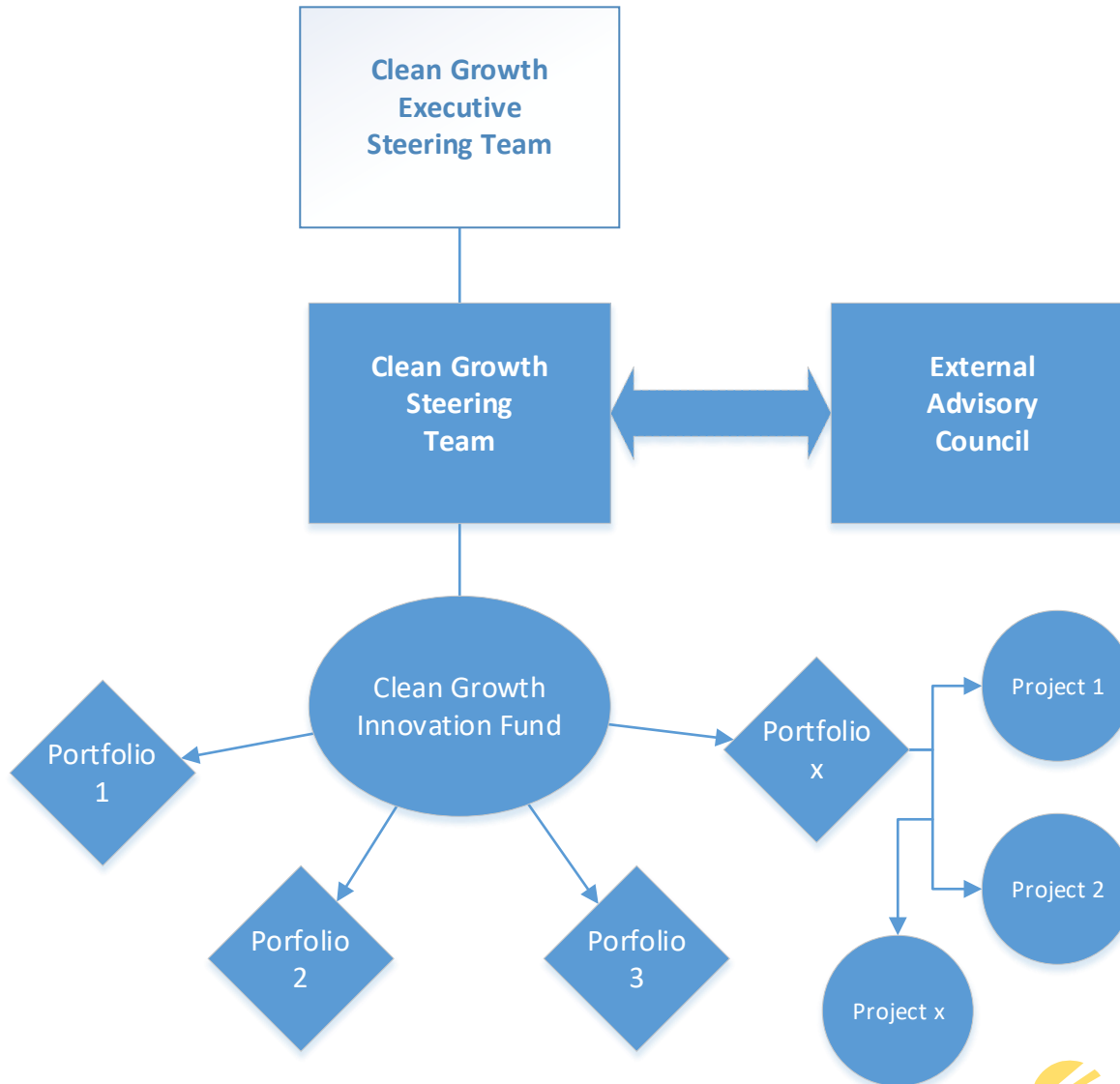


Key Selection Criteria for Projects

Clean Growth Innovation Fund - Selection Criteria

1. Amount of co-funding secured (from applicant and third parties)
2. Estimated CO₂e reduction in British Columbia
3. Estimated criteria air contaminant reduction (e.g. NO_x, SO_x) in British Columbia
4. Estimation of energy cost reductions for customers
5. Relevant experience of the applicant project team

Clean Growth Innovation Fund (CGIF) Governance



External Advisory Committee

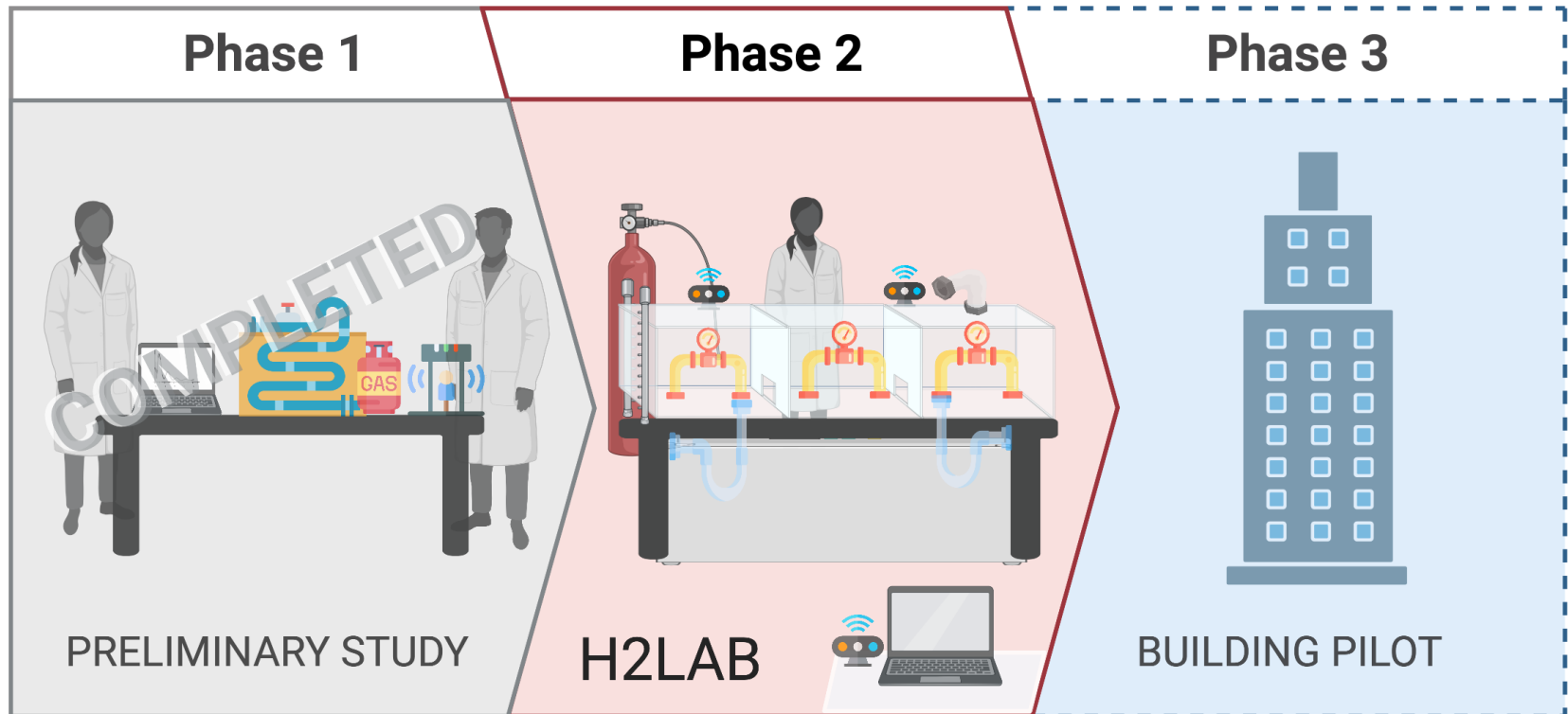
Reviewed Portfolio One September 18, 2020

- **Nicola Simon**, British Columbia Utilities Commission, Executive Director, Facilities & Planning (observer)
- **Rysa Kronebusch**, MoveUP, Vice President OR **Jim Quail**, MoveUP, Barrister & Solicitor
- **Dr. Scott Stanners**, BC Bioenergy Network, Executive Director
- **Thomas Hackney**, BC Sustainable Energy Association, Policy Advisor
- **Jeanette Jackson**, Foresight Cleantech Accelerator, Chief Executive Officer
- **Dr. Mina Hoorfar**, University of BC (Okanagan), Director of School of Engineering
- **Dr. Andrew Rowe**, University of Victoria, Professor and Director, Institute for Integrated Energy Systems
- **Arjun Singh**, City of Kamloops, Councilor and Chair, UBCM Climate Council

CGIF Portfolio One by Category

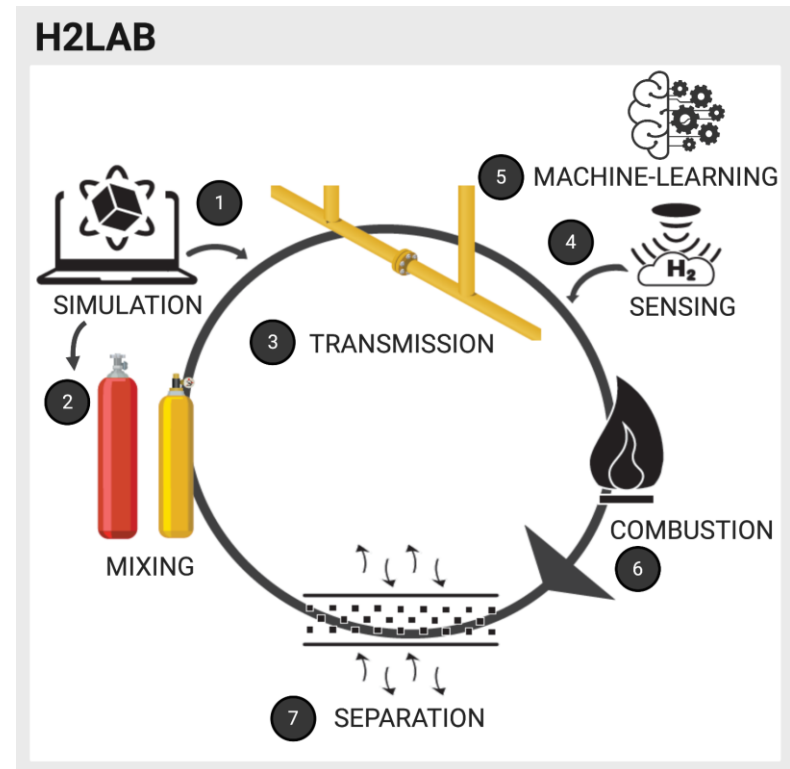
Category	CGIF Grant	Total Project Cost	Number of Projects
Renewable Gases	\$983,922	\$26,616,018	7
Carbon Capture	\$286,305	\$6,015,092	3
Transportation	\$165,000	\$960,000	2
Combined Heat & Power	\$15,110	\$190,000	1
Total	\$1,450,337	\$33,996,363	

UBC H2 Lab



H2 Lab Partnership Goals

- Develop a scalable and automated hydrogen-enriched natural gas (HENG) laboratory testbed
- Conduct an integrated study on the performance and feasibility of hydrogen blending for a range of 5 to 20% H₂ by volume
- Determine the H₂ blend that can be implemented and utilized within current pipeline infrastructure and end-use devices



Questions?



Service Quality Indicators

James Wong, *Director Budgeting and Strategic Initiatives*

Paul Chernikhowsky, *Director, Regulatory Projects and Resource Planning*



Customer

Service Quality Indicator	2018 Results	2019 Results	2019 Status (Relative to Benchmark and Threshold)	2020 August YTD Results	2020 Status (Relative to Benchmark and Threshold)	Benchmark	Threshold
Customer SQIs							
First Contact Resolution	83%	81%	Meets	83%	Meets	78%	74%
Billing Index	2.63	0.44	Meets	0.55	Meets	<=3.0	5.0
Meter Reading Accuracy	95%	95%	Meets	89%	Below	95%	92%
Telephone Service Factor (Non-Emergency)	71%	71%	Meets	76%	Meets	70%	68%
Meter Exchange Appointment	96.3%	96.0%	Meets	98.2%	Meets	95%	93.8%

Informational Indicator	2018 Results	2019 Results		2020 August YTD Results			
Customer Satisfaction Index	8.7	8.7	n/a	8.6	n/a		
Average Speed of Answer	35 sec.	39 sec.	n/a	41 sec.	n/a		

Safety and Reliability

Service Quality Indicator	2018 Results	2019 Results	Status (Relative to Benchmark and Threshold)	2020 August YTD Results	Status (Relative to Benchmark and Threshold)	Benchmark	Threshold
Safety SQIs							
Emergency Response Time	97.8%	97.9%	Meets	97.9%	Meets	97.7%	96.2%
Telephone Service Factor (Emergency)	97.9%	97.2%	Meets	97.2%	Meets	95%	92.8%
All Injury Frequency Rate	1,74	1.64	Meets	1.40	Meets	2.08	2.95
Public Contacts with Gas Lines	8 *	8 *	Meets	7	Meets	<=8	12

Informational Indicator	2018 Results	2019 Results		2020 August YTD Results			
Reliability SQIs							
Transmission Reportable Incidents	2	0	n/a	1	n/a		
Leaks per KM of Distribution System Mains	0.0061	0.0060	n/a	0.0043	n/a		

* For 2018, 2019 – Public Contact with Pipelines was reported on a 3 year average basis.

One Transmission Reportable Incident 2020 YTD

- Occurred on Savona to Vernon 323 mm (NPS 12) mainline near Weld 39520
- Minor incident on a 144 km pipeline, installed in 1957
- Dent was located in remote area on a steep slope in a ravine
- Dent with corrosion previously identified and monitored using in-line inspection (ILI)
- During an integrity dig, a small pin-hole leak was discovered on the dent



Pin-hole Leak on a Dent

- Occurred on Savona to Vernon 323 mm (NPS 12) mainline near Weld 39520



Pin-hole Leak on a Dent

- Occurred on Savona to Vernon 323 mm (NPS 12) mainline near Weld 39520



Temporary repair – future replacement

Questions?



Question Period



**For further information,
please contact:**

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