



**AGENDA
CITY OF LAKE WORTH BEACH
ELECTRIC UTILITY CITY COMMISSION MEETING
CITY HALL COMMISSION CHAMBER
TUESDAY, JANUARY 26, 2021 - 6:00 PM**

ROLL CALL:

PLEDGE OF ALLEGIANCE: led by Vice Mayor Andy Amoroso

AGENDA - Additions / Deletions / Reordering:

PRESENTATIONS: (there is no public comment on Presentation items)

A. Electric Utility & Customer Service Presentation

- Update on outage caused by private tree trimming at 1029 S G Street on Dec 26, 2020
- Update on Utility Payments and Payment Plans
- 3 Year overview of EU Activities and Progress
- SHRIP Project Example(s)

PUBLIC PARTICIPATION OF NON-AGENDAED ITEMS AND CONSENT AGENDA:

ADJOURNMENT:

If a person decides to appeal any decision made by the board, agency or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based. (F.S. 286.0105)



Electric Utility & Customer Service Presentation
January 26th, 2021
Ed Liberty, Electric Utility Director



Utility Payments Aging, Payment Plans, and Collections

Franco Bellitto

Customer Service Manager

AGING Report as of 01/19/2021

	2021	2020	2019
AGING REPORT	1/19/2021	3/16/2020	3/15/2019
Total Commercial (excl. taxes & fees)	\$57,039 5.5%	\$42,388 3.7%	\$25,619 2.1%
Total Residential (excl. taxes & fees)	\$212,733 12.7%	\$93,882 5.4%	\$106,243 6.0%
Total EL Res & Comm (excl. taxes & fees)	\$269,773 9.9%	\$136,270 4.8%	\$131,862 4.5%
Total Water&Sewer (excl. taxes & fees)	\$171,181 11.3%	\$60,818 3.8%	\$42,250 2.9%
GRAND TOTAL ALL Utilites (incl. taxes & fess)	\$547,425 10.8%	\$260,638 4.9%	\$216,770 4.1%

NOTE: Aging report tracks accounts 30+ days past due

Payment Plans as of 1/19/21

<i>Date</i>	<i>Total # of Payment Plans</i>	<i>Total \$ amount of Payment Plans</i>	<i>Total Payment Plans AMOUNT PAID</i>	<i>% of Payment Plans PAID</i>	<i>Total Payment Plans DELINQUENT</i>	<i>% of Payment Plans DELINQUENT</i>
as of 10/31	1058	\$882,057.34	\$165,208.38	19%	201	19%
as of 11/30	1185	\$989,322.59	\$252,672.35	26%	296	25%
as of 12/31	1194	\$995,234.44	\$345,475.01	35%	383	32%
as of 01/19	1196	\$997,153.92	\$387,992.81	39%	378	32%

- **RESIDENTIAL Payment Plans**

- 1116 plans
- \$852,093

- **COMMERCIAL Payment Plans**

- 80 plans
- \$145,060



Assistance Payments received from PB County as of 1/19/21

- **\$186,984 received since 4/1/2020**
- **420 total customer accounts**
- **Maximum assistance received = \$1,200**
- **Minimum assistance received = \$52**
- **Average assistance = \$445**

Collections

file sent to collection agency every 60 days

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total:
2020	\$10,702	\$16,419	\$6,961	\$4,694	\$14,840	\$29,212	\$22,303	\$33,762	\$36,389	\$67,804	\$95,464	(Feb)	\$338,550
2019	\$13,615	\$8,532	\$8,236	\$10,523	\$9,985	\$12,911	\$21,058	\$25,435	\$22,649	\$47,700	\$29,752	\$14,114	\$224,511

2020 Projections ~\$425k

47% increase - 2020 vs 2019



A Perspective On What Has Been Accomplished Over the Past Three Years

■ Structural Initiatives Undertaken to Improve, Control, Measure, and Communicate Electric System Performance

Developed detailed energy supply cost modeling; monthly review and running forecast of wholesale power supply costs

Implemented spending controls; eliminated non-productive overtime

Implemented monthly financial reviews including key performance indicators; created detailed financial monitoring, review, and oversight functions

Increased spending on activities that specifically improve reliability

Restructuring of staff roles and responsibilities; privilege of focus and clearer accountabilities

Significantly improved wholesale power contracts; active management of energy supply costs

Retention of SME's to augment staff capability; combination of new hires, specialty consultants, and established engineering firms with national portfolios of recognized clients, and use of retirees for selected tasks/roles

Development of a clear strategy for generation assets; supply-side resource plan guides the directive to reduce costs and achieving the lowest CO2 emissions in the State of Florida by 2025.

Development of multi-year capital investment plans prioritized by impact on reliability; prioritization by poorest performing circuit

Established a basis of design and construction standard for the T&D system; serves as the basis for all new construction and equipment selection.

Developed and published system reliability indexes; monthly staff review of major outage causes

Developed and implemented a public information campaign; launched www.CitizenOwnedEnergy.com.

Improved use of labor contracts and improved pay rates for specialty craft in highly competitive classifications

Improved customer service processes; added after-hours call center support, implemented on-line outage reporting, implemented new credit card payment processes and 7x24 national payment capability, added off-site cash payment capability, and migrated to 100% remote CSR capability.

■ Operational Initiatives Undertaken to Improve Electric System Reliability

Increased preventive maintenance of critical components; switches, breakers, insulators, substation components, transformers, and generation assets

Replacement of aged critical components showing impending failures

Implemented thermography and drone inspections of critical connections to identify impending failures and schedule preemptive repairs

Use of AMI system data to preemptively address potential problems; circuit phase imbalances and transformer overloading

Increased vegetation and tree trimming; has led to reductions in animal contacts

Use of AMI data in troubleshooting crew dispatch; rapid identification of outages ahead of customer calls

Aggressive deployment of animal guards and pole wraps, every pole we touch gets wrapped; focus on deterrence of bird and lizard contacts

Increased trouble shooting line worker staff to more rapidly respond to outages

Engagement with labor to greatly reduce after-hours response times

Controlled use of overtime to make repairs and return circuits to normal configuration as quickly as possible

Conversions of circuit segments to higher operating voltages; reduced circuit loading and enhanced supply options

Mass removal of problematic components such as metal brackets, aged insulators, and weak cross-arms

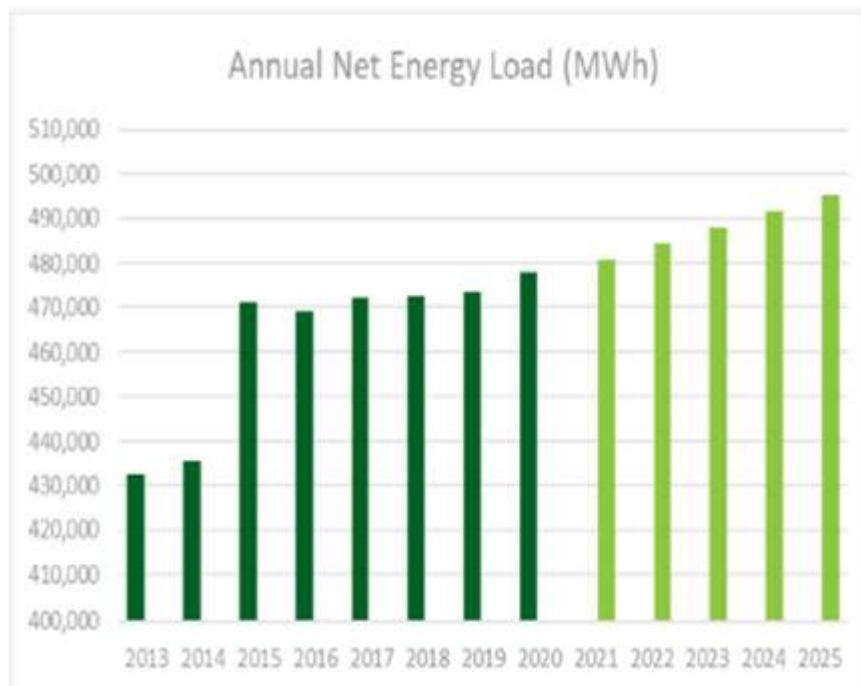
Gradual elimination of open-wire secondary

Implementation of a six-day workweek to accelerate high impact projects

Improved storm response and recovery processes

- The System has a growing load obligation, rising to 478,085 MWh in fiscal year 2020 from 410,813 MWh in fiscal year 2000. Load growth of 0.75% annually is expected through 2025.

Fiscal Year	Annual Net Energy Load (MWh)
2013	432,380
2014	435,554
2015	471,290
2016	469,000
2017	472,157
2018	472,413
2019	473,580
2020	478,085



- Peak demand was 96.7 MW in fiscal year 2020, down slightly from 97.2 MW in fiscal year 2019, but still up from 87 MW in fiscal year 2013.

Fiscal Year	Annual Peak Demand (MW)
2013	86.9
2014	90.8
2015	91.9
2016	95.6
2017	96.0
2018	96.4
2019	97.2
2020	96.7



System Hardening and Reliability Improvement Project

- The System Hardening and Reliability Improvement Project (SHRIP) will ensure the City's electric systems and infrastructure are prepared, hardened, and reliable.
- The system-wide upgrade is designed to weather big storms, eliminate vegetation and wildlife triggered outages, improve reliability, and increase capacity for commercial and residential growth.
- The multi-year capital plan includes replacing older poles with newer larger and stronger poles designed to stand up to Category 5 storm events.
- Adding system redundancy in key areas which will decrease the number and duration of outages.
- Convert to higher operating voltages (4,000 volts to 26,000 volts) in the distribution system to increase the amount of power that can be delivered to customers while reducing thermal stress on aging system components.
- Deploy advanced devices to more rapidly detect system problems and perform switching operations to more quickly restore power during outage events.





Electric Utility System Hardening and Reliability Improvement Examples of Recent Projects



**26B1W13 Phase 1, North Loop Phases 1,2 and 3,
South Loop Phase 1 Projects
Update**

26B1W13 Phase 1 Area Covered



26B1W13 Phase 1

- All system circuits were forced ranked by performance (poorest)
 - 26B1W13 ranked #1 as the poorest performing
 - 3 Phase project, phase 1 is complete
 - Work performed by outside contractor
 - » 126 total poles replaced
 - 72 Class 1 Wood
 - 54 KIP8 Concrete
 - » 18 new transformers
 - » Phase 1 total cost \$2436800.00





26B1W13 Phase 1 Project Example

Early 2019 the 26B1W13 Circuit was ranked the poorest performing circuit

August 2019 – Phase 1 Construction Started

October 2019 – Mid-point Reclosers into Service

Work Complete – Normal Configuration July 2020

	2019	2020	% Reduction
Customers Affected	11235	1942	-82.7%
Trip/Close Operation	6	5	-16.7%
Breaker Lockout	6	1	-83.3%
Outage Minutes	6812	5082	-25.4%
Customer Outage Minutes	711732	119952	-83.1%
Outages	48	39	-18.8%

Since July 2020 the 26B1W13 circuit has not had any breaker operations or lockouts. This work has had a direct impact on the reliability of service to 2,205 customers.













26B1W13 Phases 2 & 3

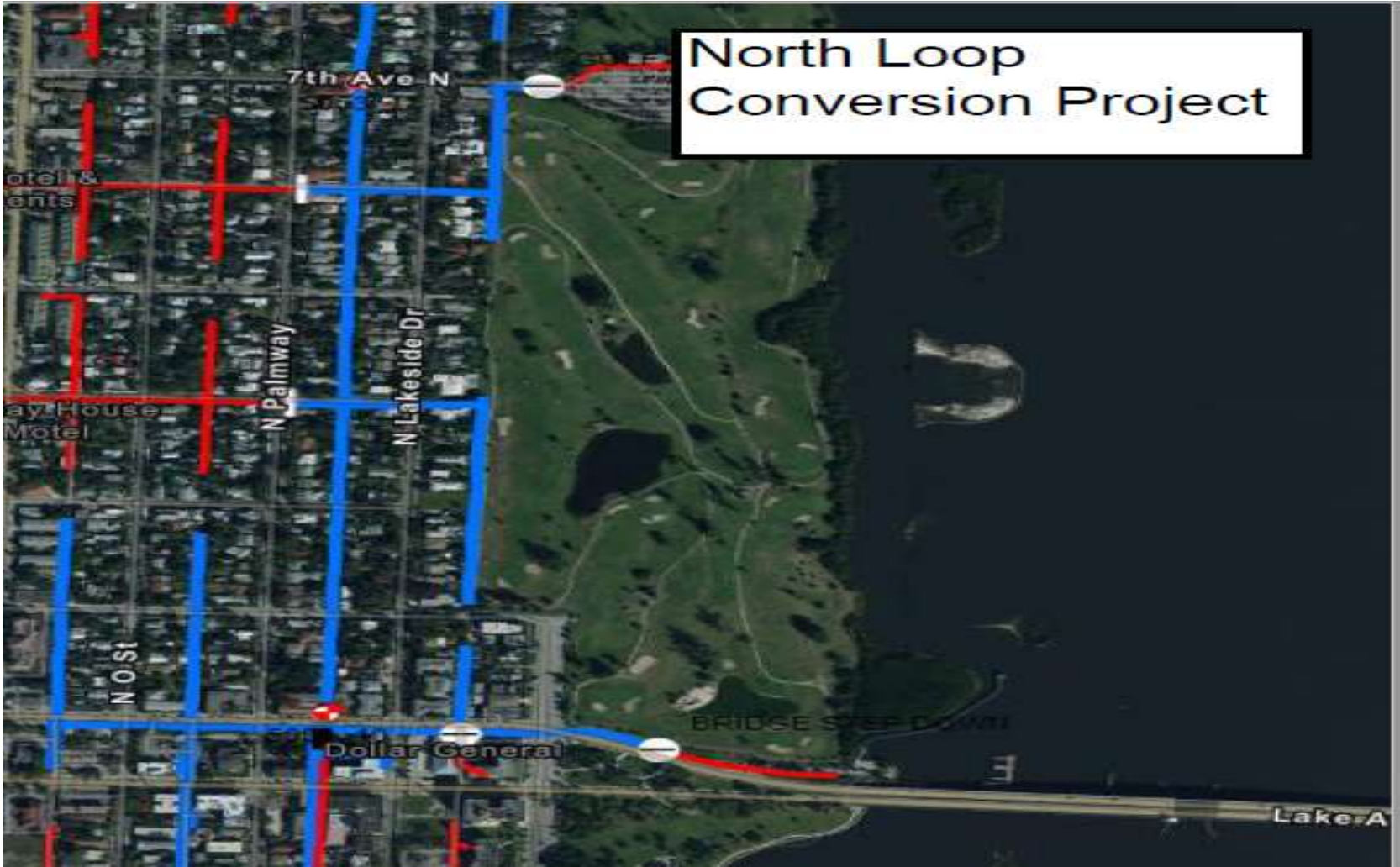
- Phases 2 & 3 are currently at 95% design
- Construction of Phases 2 & 3 is currently scheduled to begin by summer of this year.



Projects Undertaken Using Our Resources

- Productive use of in-house labor
- Learning opportunity for larger scale work to come
- Alleviated immediate needs ahead of availability of bond funds

North Loop Project Phases 1,2 &3 Area Covered



North Loop Project Phases 1,2 &3 Area Covered (cont.)





North Loop Project Phases 1,2 &3

- There was a need to reduce load on aged 4kv circuits and harden the system in the Northeast-City area of the System
 - Old 4kv circuits operating beyond ideal limits
 - A total of 6 circuits were touched during this project
 - 26R1801, 26B5003, 4R1102, 4R1103, 4R0402, 4R0401



North Loop Project Phases 1,2 & 3 (continued)

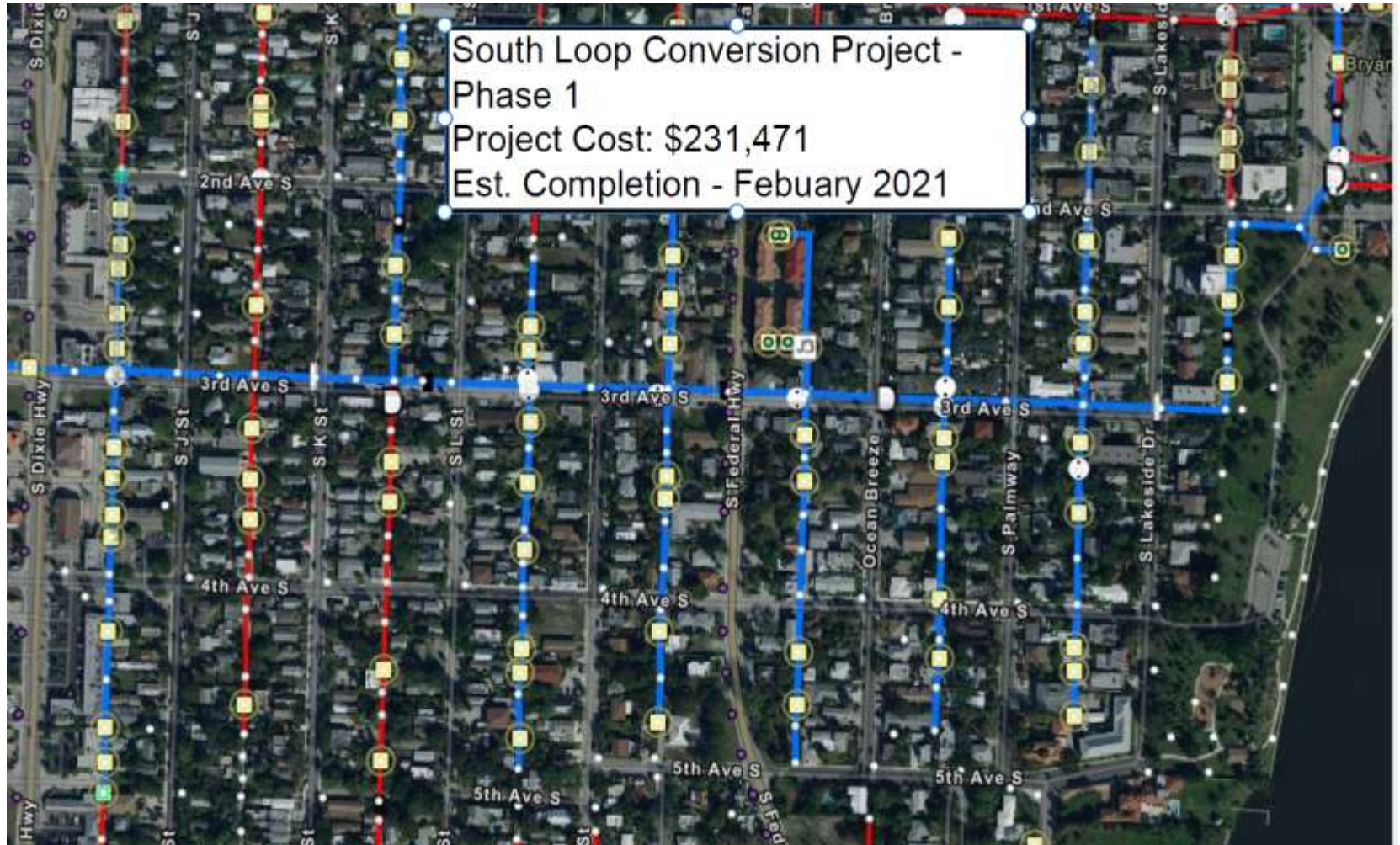
- All design and construction was completed by our own in house engineers and line crews
 - Total project costs \$542,601
 - project completed in 14 weeks
 - while maintaining the rest of the electric service territory
 - No safety issues / No Unplanned Outages



North Loop Project Phases 1,2 &3 (cont.)

- 541 customers converted to 26kV service and looped for reliability
 - 49 new poles set
 - 28 – 50ft Class 1 wood
 - 13 – 45ft Class 2 wood
 - 8 – 35ft Class 2 wood
 - 47 new transformers
 - 1,800ft of 336 ACC Conductor
 - 3,000ft 4/0 Triplex Al installed to replace outdated open wire

South Loop Project Phase 1





South Loop Project Phase 1

- There was a need to convert load and harden the 4kV circuits in the Southeast City area of the System
 - A total of 3 circuits were touched during this project
 - 26B5003, 26R0603, 4R0602



South Loop Project Phase 1

- Again all design and construction was completed by our own in house engineers and line crews
 - Total project costs \$231,471
 - Project still ongoing with completion expected Feb. 2021
 - while maintaining the rest of the electric service territory
 - No safety issues / No Unplanned Outages



South Loop Project Phase 1

- 406 customers converted to 26kV service and looped for reliability
 - 77 new poles set
 - 17 – 50ft Class 1 wood
 - 60 – 45ft Class 1 wood
 - 51 new transformers
 - 2,000ft 336 ACC Conductor
 - 4,000ft 4/0 Triplex Al installed to replace outdated open wire



South Loop Project Phase 2

- Phase 2 is currently at 99% design by in house engineers
- Approximately 300 additional customers will be converted to 26kv
- Construction will be performed by in house line crews is currently scheduled to begin in February
 - Consisting of the following:
 - 9 – 50ft class 1 wood poles
 - 15 – 55ft H8 Ductile Iron Poles
 - 80 – 45ft class 2 wood poles
 - 7,000ft 4/0 Triplex Al will be installed to replace outdated open wire
 - 44 transformers

Emergent Concerns

- Trend of failures of underground conductors installed in 1970s
- Affects multiple substations and power plant feeders
 - GT1 2016, East Switch 2020, GT2/S5 2020/2021
- Industry-wide issue with insulation failures on direct buried conductors
- All need to be replaced; will require accelerated attention under SHRIP



End.....Questions

