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MEETING OF THE RTA BOARD OF DIRECTORS APRIL 21, 2022

Welcome!

Meeting Starts at 9 a.m.

Meeting Agenda

@ RTAChicago.org/about-us/board-meetings

Regional Transportation Authority

RTA BOARD OF DIRECTORS MEETING

1. CALL TO ORDER

Please feel free to listen to the meeting and view slides related to it here.

The meeting agenda can be found at www.rtachicago.org/about-us/board-meetings

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PLEDGE OF ALLEGIANCE

RTA BOARD OF DIRECTORS MEETING

2. ROLL CALL

3. APPROVAL OF MINUTES

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4.
PUBLIC COMMENT

5.
EXECUTIVE DIRECTOR'S REPORT

GOVERNMENT AFFAIRS UPDATES

TODAY'S AGENDA

6.
INFORMATION ITEMS

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6a.
RESOLUTION HONORING JIM REILLY

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6b. PRESENTATIONS ON BUS ELECTRIFICATION EFFORTS BY CTA AND PACE

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Bus Electrification Plan and Near-term Bus Purchases

April 2022

Overview

- On Tuesday, February 22, CTA released the final report for its *Charging Forward* study.
- The plan detailed in this report provides a roadmap for full electrification of CTA's bus fleet, facilities, and supporting infrastructure by 2040.
- CTA is moving deliberately and strategically to implement this plan.
- Equity considerations are at the forefront of CTA's electrification approach.
- Near-term bus purchases, both diesel and electric, support the achievement of this plan.

Electric Bus Charging Technology

Overhead pantograph charging is most appropriate for CTA's needs.

- Charging can occur in a largely automated fashion with minimal staff effort required
- Pantograph can be used for both "slow charging" and "fast charging"
- Chargers can be used both at bus garages and at on-route locations

Where to Install Charging Infrastructure

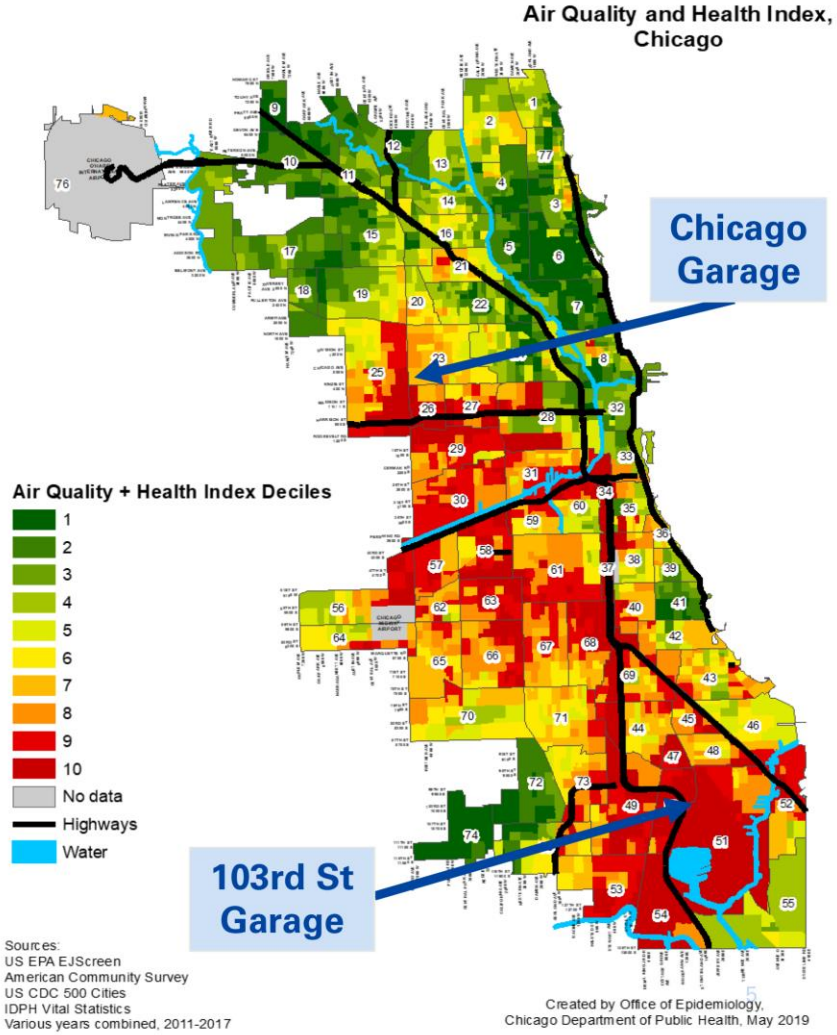
- CTA's best approach to charging electric buses is to **centralize charging at bus garages.**
  - At garages, CTA expects to use a mixture of fast charging and slow charging.

- CTA also plans to construct a limited number of supplemental **on-route fast chargers at key layover locations.**

Equity and Health Benefits

As CTA scales the electric bus fleet, initial deployments will be guided by equity.

- CTA's first two target garages for bus fleet electrification are on the West Side and the Far South Side of Chicago.
- CTA selected these garages because communities in the area currently experience among the highest levels of air pollution and health vulnerability today.

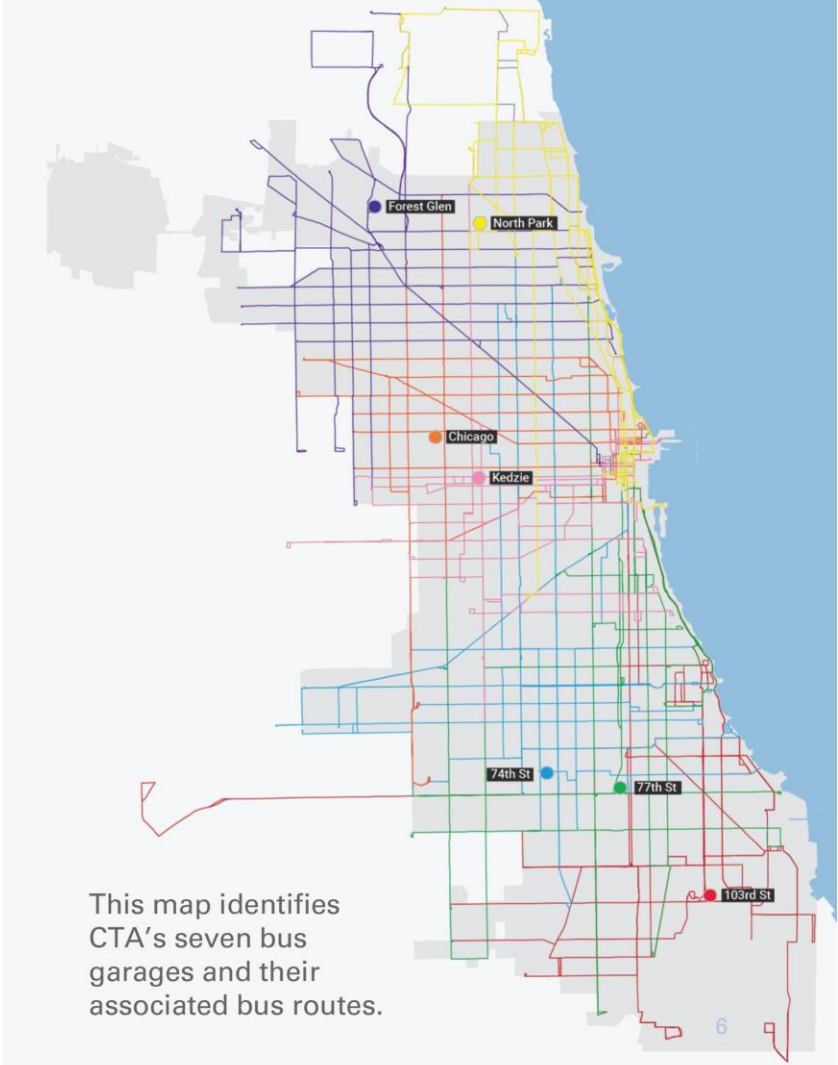


Garage Electrification Sequence Based on Equity

Recommended sequencing of bus garages with equity considerations

Order	Garage	Equity Prioritization
1	Chicago	Very High
2	103rd	Very High
3	77th	Very High
4	74th	Very High
5	New Garage	TBD
6	Kedzie	High
7	Forest Glen	Low
8	North Park	Low

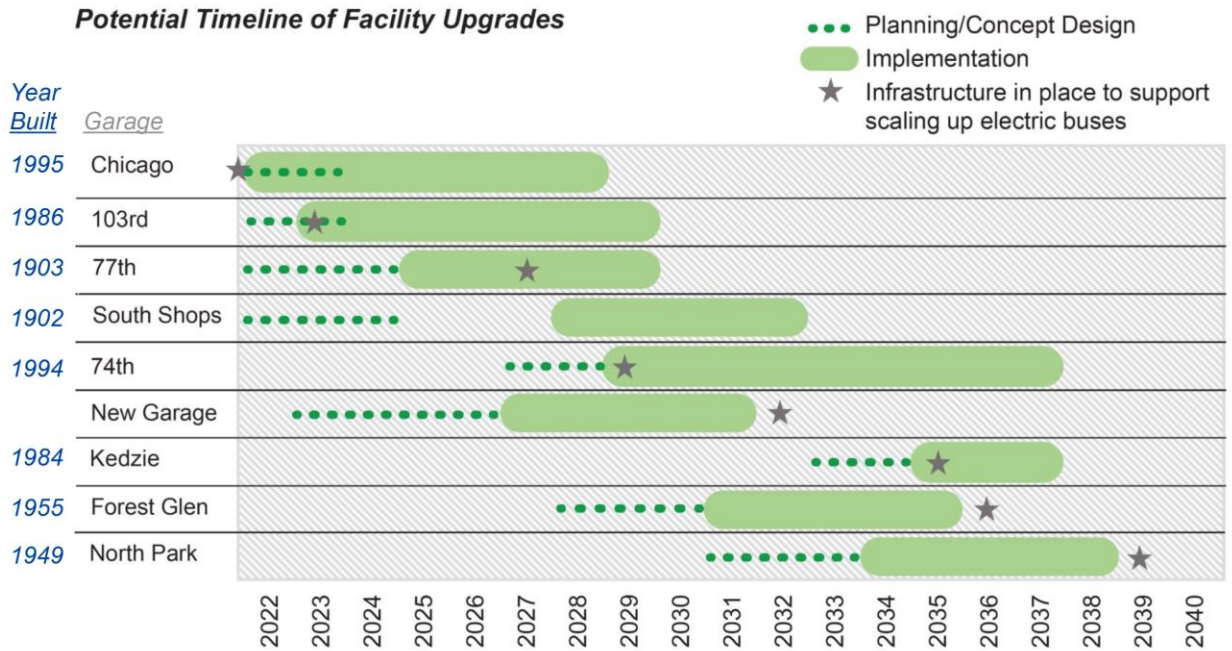
Further study is needed to identify the specific upgrades that should coincide with electrification at each bus facility.



This map identifies CTA's seven bus garages and their associated bus routes.

Potential Transition Timeline to Meet CTA's 2040 Conversion Goal

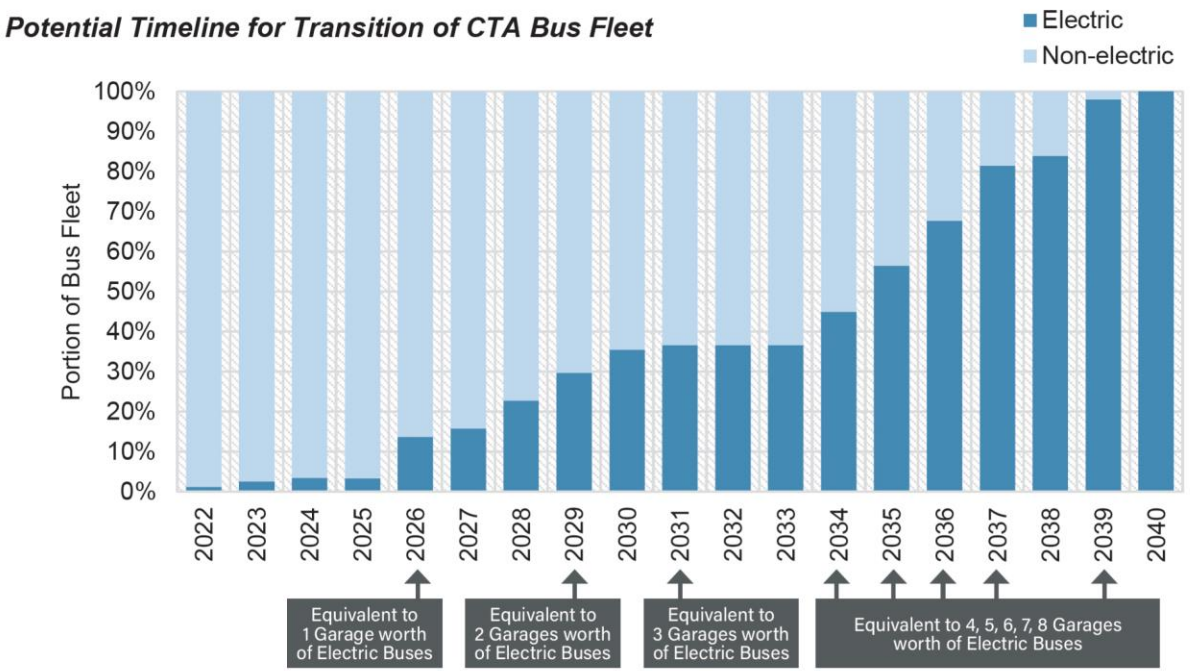
Potential timeline of garage upgrades. Note that full garage modernization projects are shown as a five-year process that includes planning and design.



Potential Transition Timeline to Meet CTA's 2040 Conversion Goal

- Graph shows **only electric bus purchases starting in 2026**, assuming a 14-year useful life for a bus.
- Black boxes at the bottom of the graph illustrate how charging infrastructure should align with fleet growth along the transition timeline.
- In practice, multiple garages could have mixed electric and diesel fleets throughout the transition.

Graph of potential CTA bus fleet transition timeline. Figures represent purchases that would be needed to replace all buses after 14 years of age.



Service Reliability Through the Transition

To maintain service reliability and to reduce environmental impacts in the near term, CTA must decrease the age of its bus fleet.

- Today, the average age of buses in CTA's fleet is 13 years. Industry standard lifetime for a transit bus is 12 years. CTA's target bus lifetime is 14 years.
- 1,285 of the 1,839 active buses (70%) in CTA's fleet are Model Year 2008 or earlier.
- Older buses have worse fuel mileage, worse reliability, and higher maintenance costs than newer buses.
- Diesel buses purchased before 2026 and run 14 years will be retired before CTA's 2040 target for full fleet electrification.
- Limited electric bus manufacturing capacity and lack of installed charging infrastructure preclude CTA from purchasing electric buses to meet the scale of replacement necessary.

Near-term Bus Purchase Plans

In the near term, CTA's new diesel bus purchases will ensure service reliability.

- 100-bus base order delivery in mid-2022
- Change Order #1 for 100 more buses
- 400 additional options as funding enables

Simultaneously, CTA will take required steps to prepare for future larger-scale purchases of electric buses, including:

- Learning from current deployments
- Modernization of bus garages
- Upgrades to ComEd electrical service
- Installation of charging infrastructure
- Ongoing training for bus personnel

Benefits of Near-Term Bus Purchases

Replacement of CTA's oldest diesel buses with new Nova diesel buses will yield emissions and cost reductions while CTA prepares for larger-scale electric bus deployment.

- The new Nova buses are estimated to emit 12.5% less CO_2 (carbon dioxide), 80% less NOX (nitrous oxides), and 49% less PM2.5 (particulate matter) on a per-mile basis compared to the buses slated for retirement.
- The table below illustrates the new Nova Bus improvement in fuel consumption and operating cost.

CTA Diesel Bus Model	Fuel Consumption	Operating Cost
New replacement buses: 7900 Series – Nova	3.8 miles per gallon	$2.42 per mile
Old buses to be retired: 1000 Series – New Flyer	3.0 miles per gallon	$3.69 per mile
Improvement	**26%**	**52%**

Near-term Electric Bus Deployment Steps

By mid-2022, CTA anticipates operating a total of 25 electric buses in service.

- 2 New Flyer electric buses launched in 2014
- 8 Proterra pilot electric buses launched in 2021
- 3 Proterra IEPA/VW-funded electric buses launched in Q1 2022 (change order pending)
- 14 Proterra base-order electric buses anticipated to launch Q2 2022

Critically, CTA is also working on planning, design, and installation for charging infrastructure:

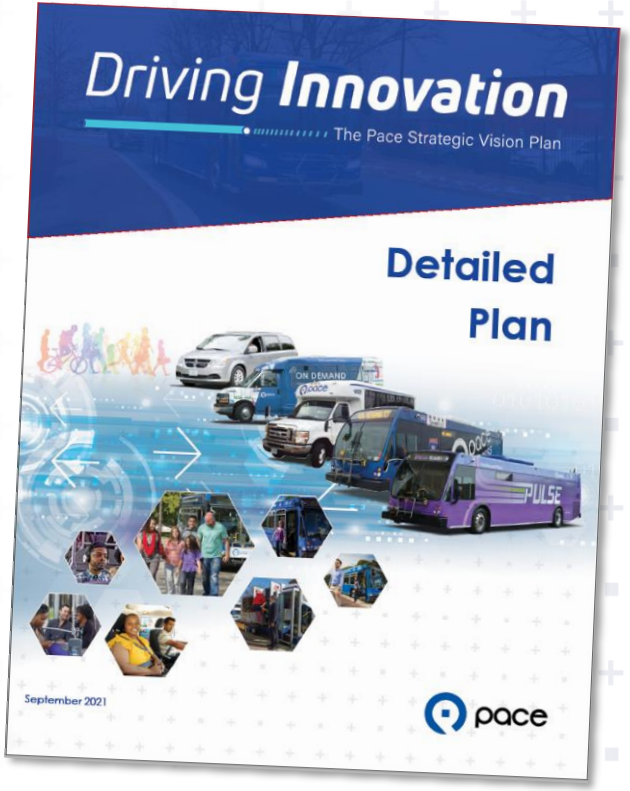
- ComEd upgrades at Chicago Garage & 103rd St Garage
- 6 overhead slow-charge pantographs at 103rd St Garage
- 2 overhead fast-chargers at Chicago Garage
- In-depth studies of power requirements and garage modernization needs

Questions?

Electric Substation for E Bus Charging with Public Artwork
At Chicago and Austin Bus Terminal

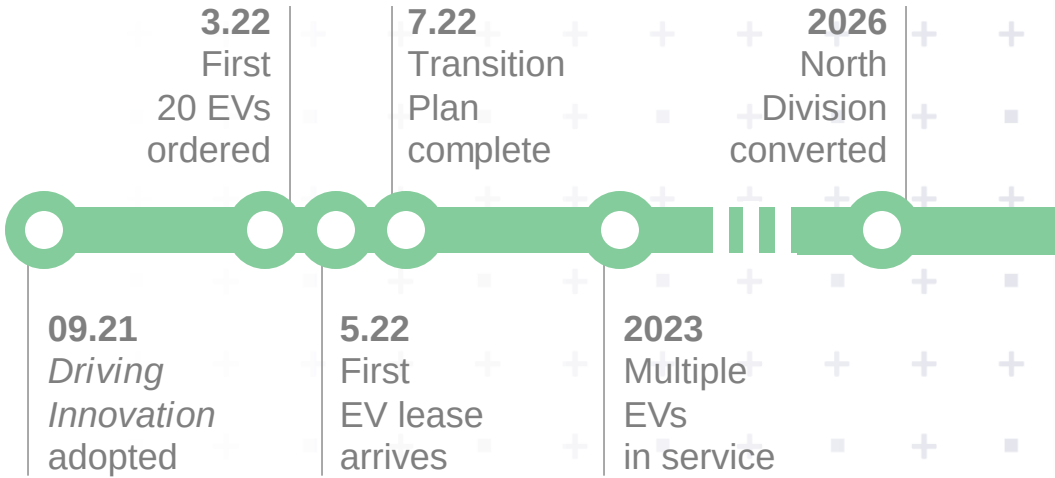
Pace's Transition to Zero Emission

Zero emissions by 2040.



Timeline: 18 years to…

- Secure hundreds of millions in funding
- Replace over 700 buses
- Finalize vehicle plan & facilities plan (by July)
- Ensure electric grid will accommodate vehicles
- Convert Pace garages & build charging infrastructure
- Work through implementation issues



Working Towards Zero Emission *Today*

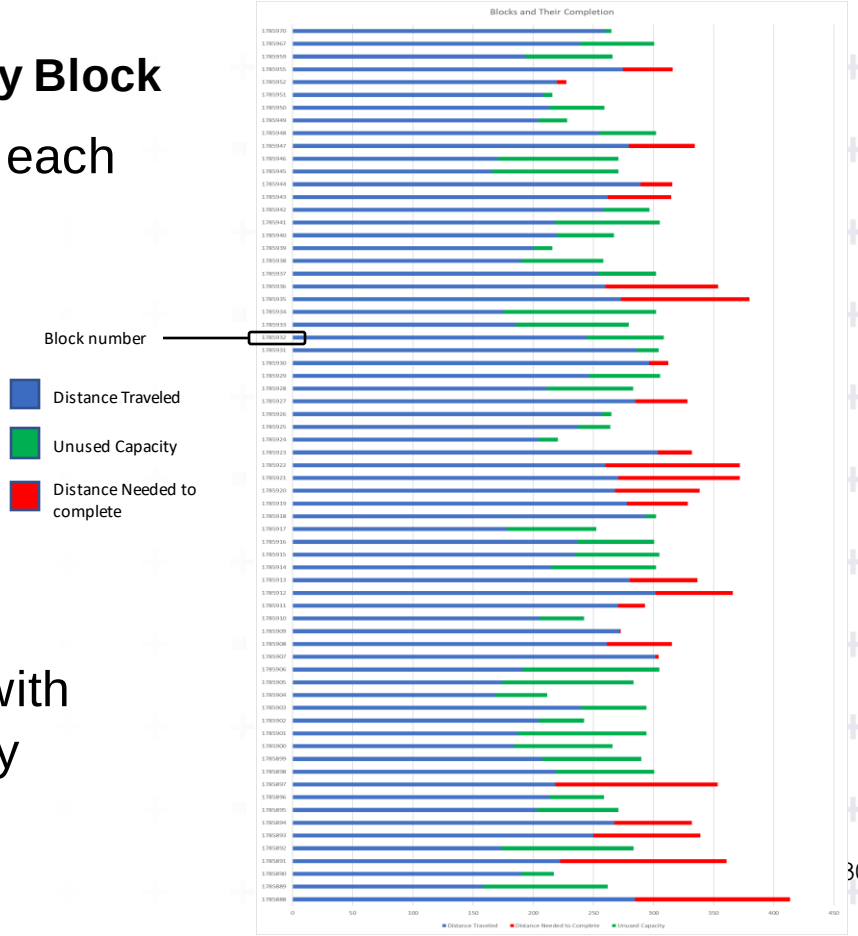
- 2022 Capital Program establishes the first electric vehicles and associated infrastructure, which will be implemented at Pace's North Division in Waukegan
- **20 Electric Proterra vehicles**
- GILLIG Lease pilot vehicle

Pace's Ongoing Transition to Zero Emission

- Detailed route analysis to assess charging requirements
- Assessment of current and proposed bus maintenance and storage facilities for electrification
- Evaluation of current fleet capacity, proposed growth over time, and plans for fleet replacement
- Review of costs associated with the conversion

Determining the BEB Viability Of Every Block

- Energy requirements simulated for each route based on:
  1. Passenger loading by route
  2. Bus type and properties
  3. Heating mechanism
  4. Temperature
  5. Route elevation profile
  6. Annual climate conditions
- Route profiles are then combined with Driver Schedules to develop energy requirements per driver block



Facility Evaluations

Comprehensive analysis of Pace fixed-route operating facilities

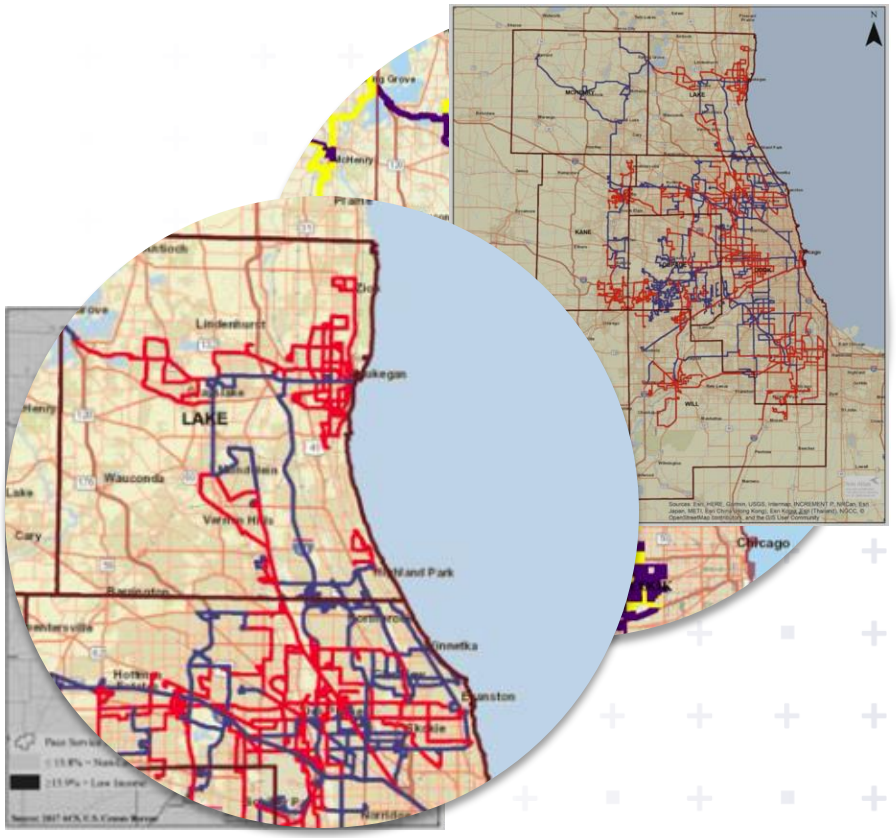
- Space requirements
- Electrical demand
- Maintenance bay requirements
- Architectural/structural requirements for overhead charging
- Fire suppression
- Vehicle circulation

Facility Transition

- North (Waukegan)
- River (Elgin)
- Southwest (Bridgeview)
- North Shore (Evanston)
- West (Melrose Park)
- Fox Valley (Aurora)
- South (Markham)
- Northwest Wheeling (Wheeling)
- South Campus (Markham)
- Plainfield Division (Plainfield)

North Division (Waukegan)

- North first: efficiency, environment, **equity.**
  - Most routes can be served using present limits of battery technology
  - Large % of riders are low income and/or from traditionally underserved groups
  - History of disinvestment, environmental degradation in Waukegan



Questions?

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6c.
STRATEGIC PLAN UPDATE

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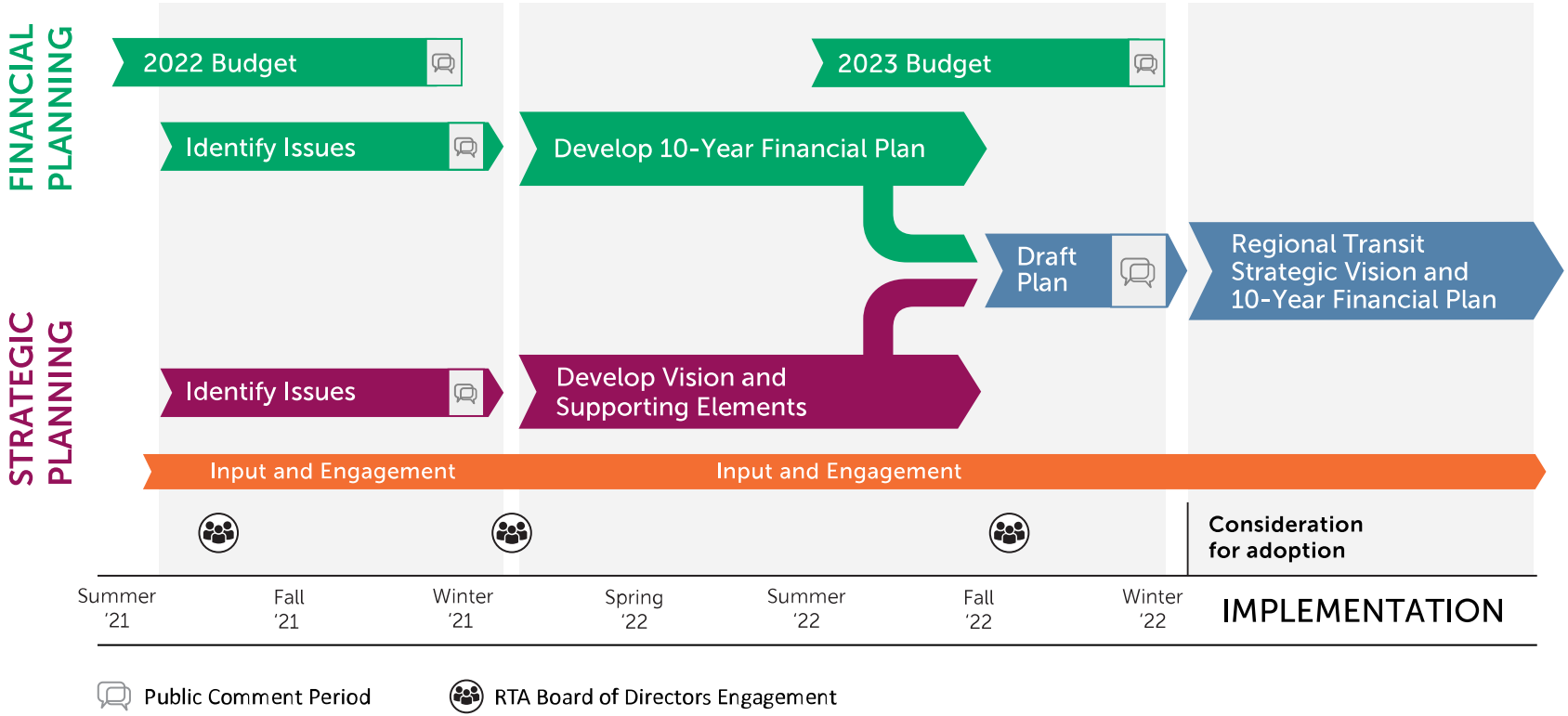
Regional Transit Strategic Plan Timeline

Collaborative development of a new strategic direction for the region's transit system will occur along three tracks and consist of multiple overlapping activities.



VISION

Safe, reliable, accessible public transportation that connects people to opportunity, advances equity, and combats climate change.

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PRINCIPLES

- Equity
- Stewardship
- Committed to Change

OUTCOMES

Our transit system will be…

- Safe, accessible, reliable, and useful for riders
- In a state of good repair
- Financially stable

Our region will be…

- Connected
- Winning the fight against climate change
- Thriving

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WORKING GROUPS

- Stakeholder Groups
  - Transit Service
  - Infrastructure Investment
  - Financial Responsibility

Kick off April 20, 21

- Technical Groups
  - 10-Year Financial Plan
  - Priority Projects

Kicking off late April/early May

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THANK YOU!

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6d.
REPORT ON MONTHLY FINANCIAL RESULTS – FEBRUARY 2022

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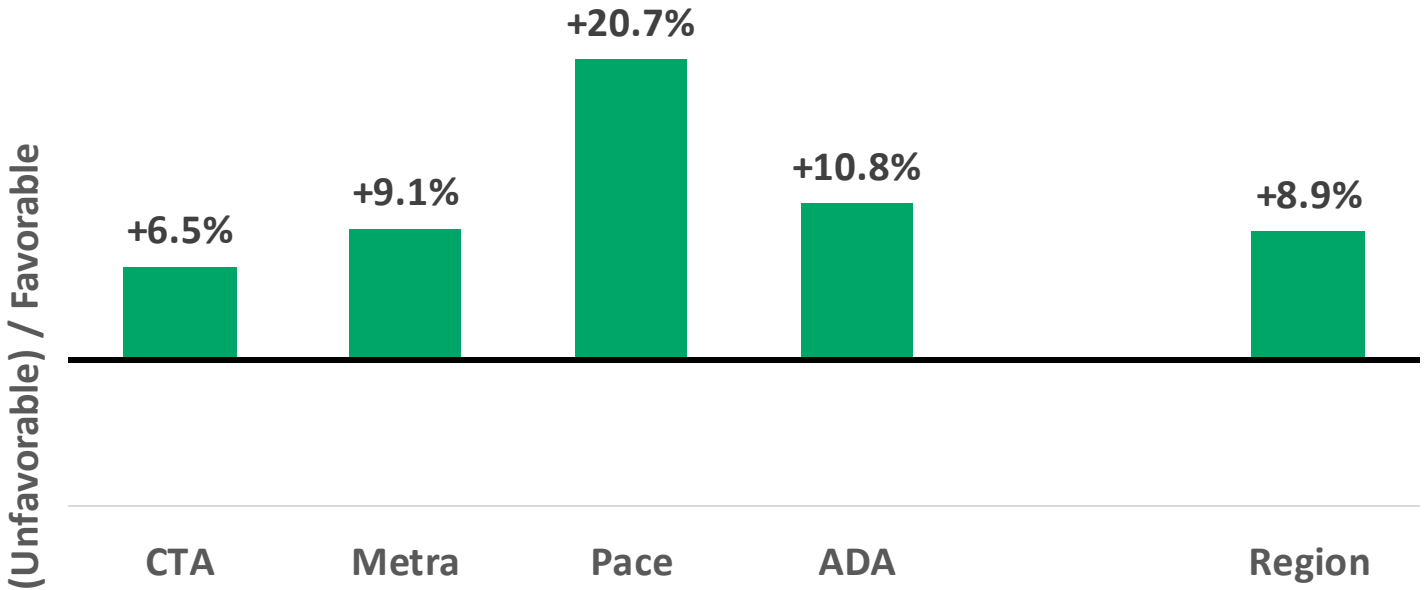
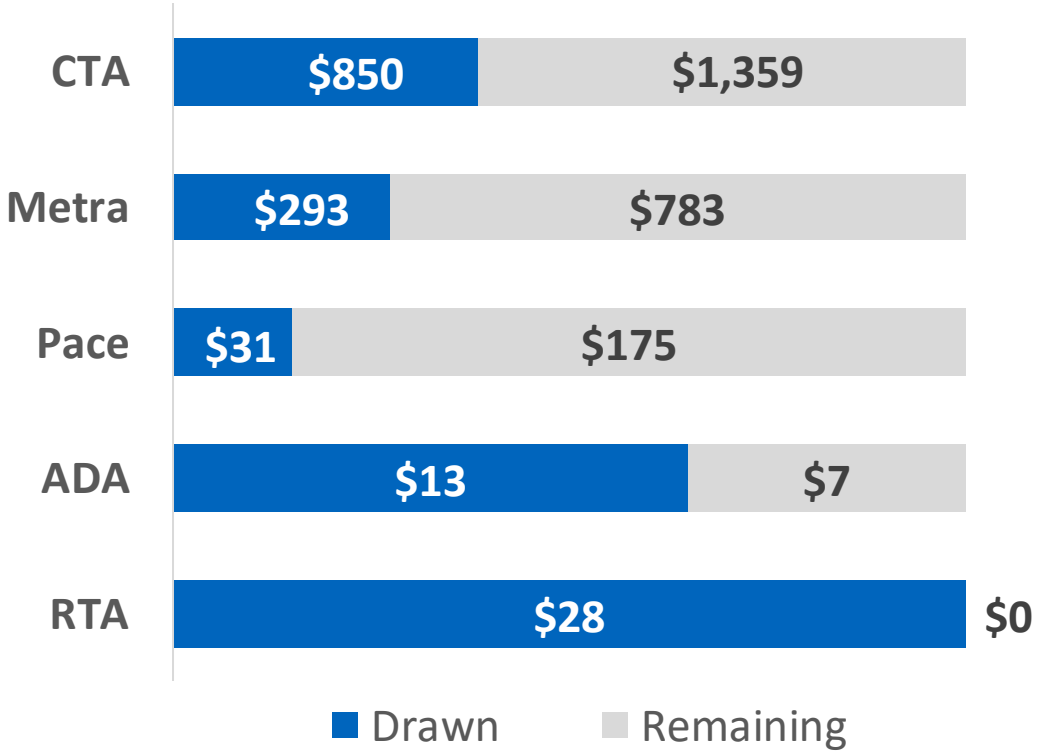
OPERATING DEFICIT VARIANCES FROM BUDGET – YTD THROUGH FEBRUARY



RELIEF FUNDING DRAWN (IN MILLIONS)



Region Total Drawn = 34.3%

$1.216B of $3.540B

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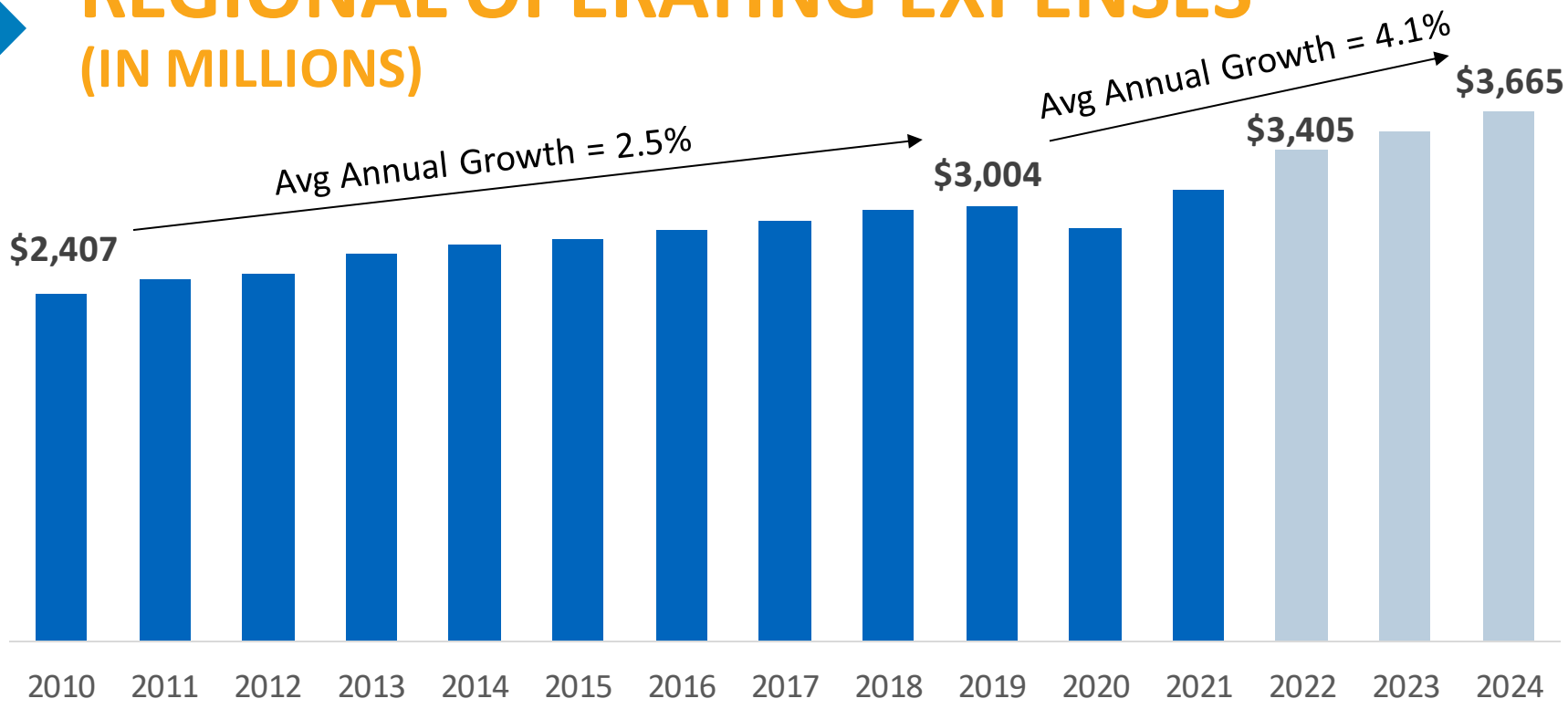
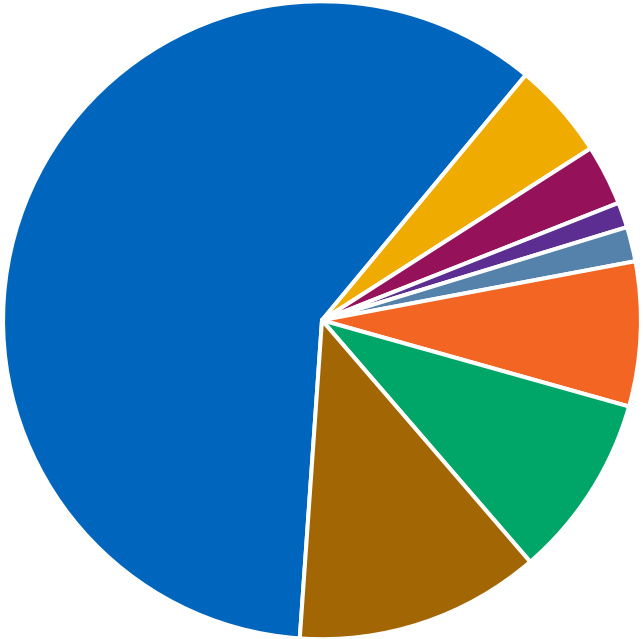
REGIONAL OPERATING EXPENSES
(IN MILLIONS)



2022 OPERATING EXPENSE BY CATEGORY

REGION TOTAL $3.405B



- 60% Labor
- 13% Other Expenses
- 9% Debt Service
- 7% Purchased Services
- 5% Material
- 3% Fuel
- 2% Insurance
- 1% Power

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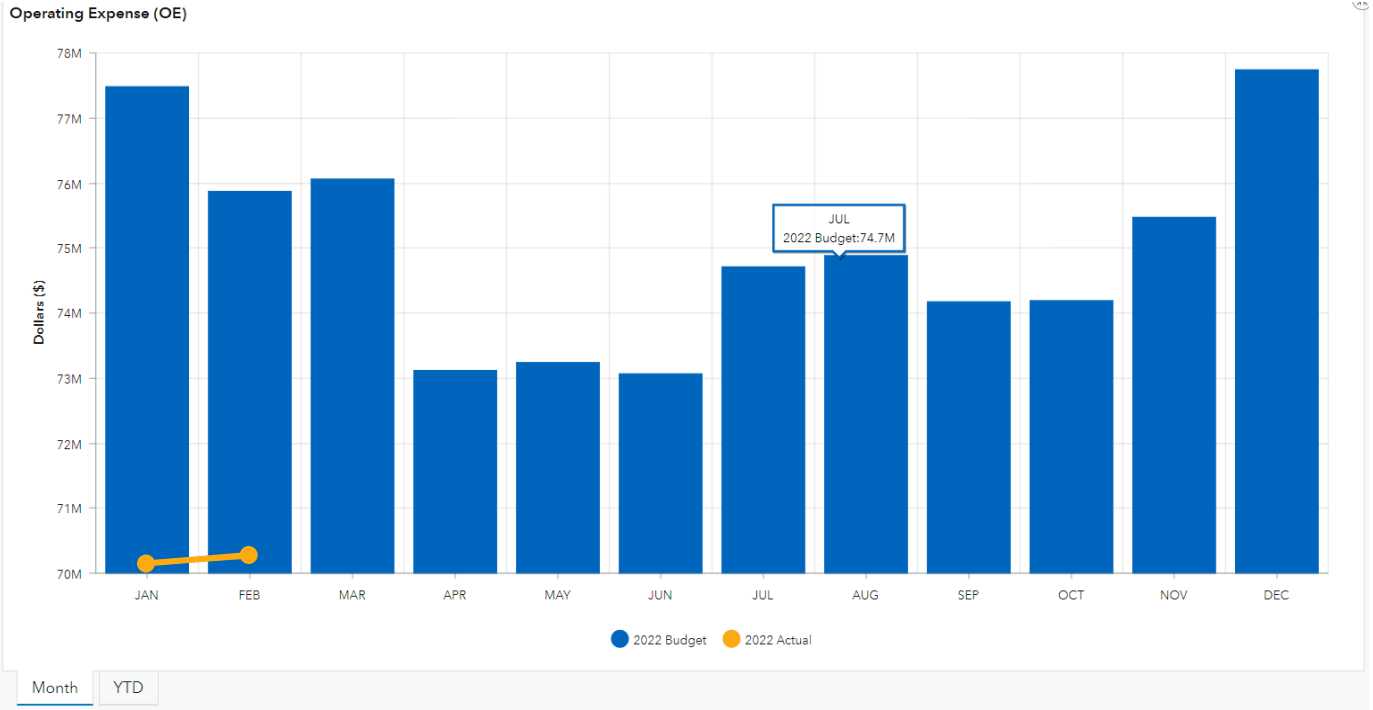
EXPENSE SEASONALITY



https://www.rtachicago.org/finance-management/financial-results

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FINANCE TERMS AND EQUATIONS

Operating Deficit = Operating Revenue – Operating Expense

- Also known as “Funding Requirement”
- Primary metric for quarterly certifications

Recovery Ratio = Operating Revenue / Operating Expense

- Types include “Farebox Recovery Ratio” and “Statutory Recovery Ratio”

Net Result = Operating Revenue + Public Funding – Operating Expense

- Also known as “Surplus / (Deficit)”

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7.
ACTION ITEMS

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7a. ORDINANCE AUTHORIZING AMENDMENT OF THE 2022, 2023, AND 2024 SERVICE BOARD OPERATING FUNDING AMOUNTS

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REASON FOR AMENDMENT

- Continue periodic amendments we have executed since COVID began
- Strong sales tax performance has been causing large variances above adopted funding
- Address $226 million of Budget Balancing Actions in currently adopted 2024 Plan

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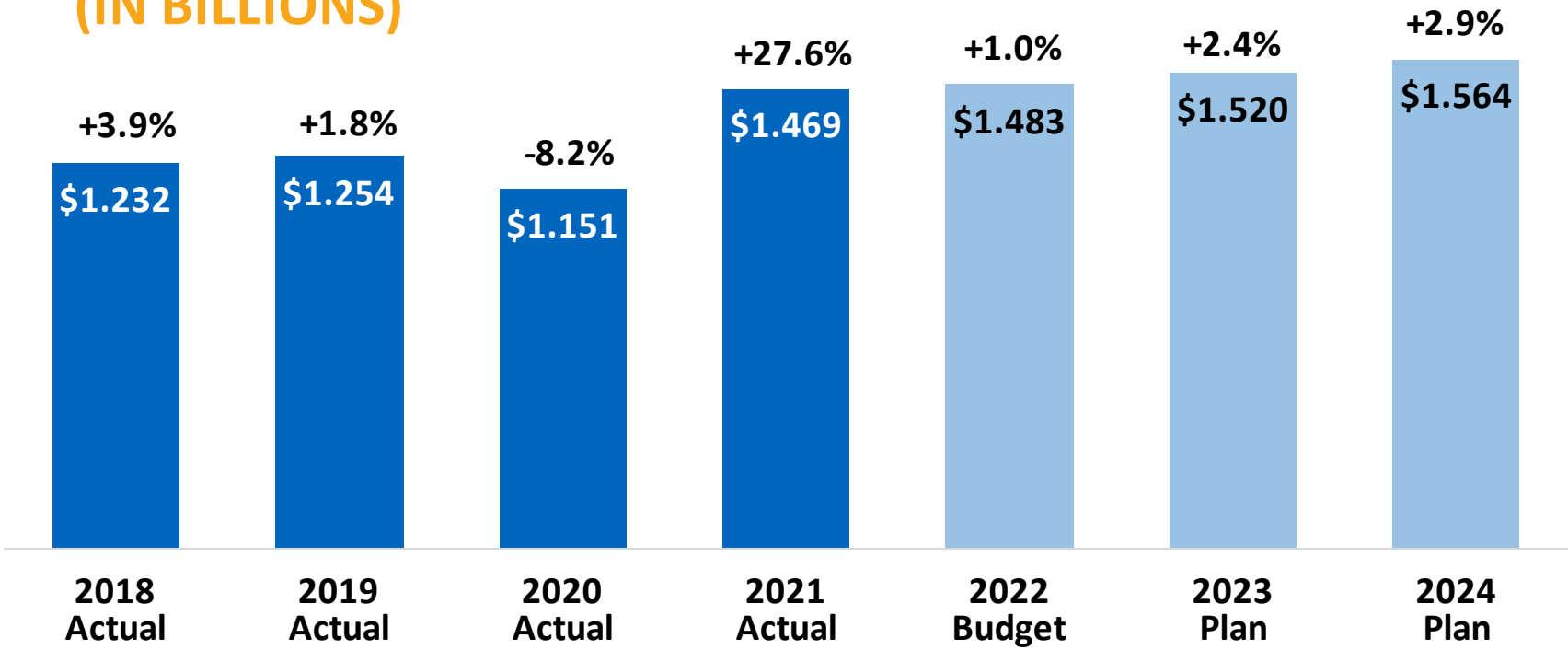
RTA SALES TAX RECEIPTS AND GROWTH
(IN BILLIONS)



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2022 RTA FUNDING INCREASES

2022 Funding Increase (in millions)	CTA	Metra	Pace	ADA	RTA	Total
Sales Tax [1]	$43.1	$34.3	$12.9	-	-	$90.3
PTF [2]	$27.1	$4.9	$2.0	-	-	$34.1
RETT	$9.5	-	-	-	-	$9.5
RTA Funding Change	**$79.7**	**$39.3**	**$15.0**	**-**	**-**	**$134.0**

[1] Includes ICE funding and, for Pace, SCMF.

[2] Includes PTF on RETT. State 5% PTF cut ended in July 2021.

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RECOVERY RATIO CHANGES

System-generated revenue recovery ratio	2022 Previous Requirement	2022 Amended Requirement	Proposed Change
CTA	54.75%	42.0%	(12.75 pts)
Metra	52.5%	39.0%	(13.5 pts)
Pace Suburban Service	30.3%	17.0%	(13.3 pts)
RTA Regional	**50.0%**	**37.0%**	**(13.0 pts)**
Pace ADA Paratransit	10.0%	10.0%	---

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NEXT STEPS

- Service Boards submit revised 2022-2024 budgets to RTA by May 2nd
  - Incorporate this funding amendment
  - Adjust ridership, revenue, expenses as needed
  - Reforecast projected federal relief funding drawdowns
- Board to consider 2022 Regional Operating Budget and 2023-2024 Plan amendment at next month's meeting

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7b. ORDINANCE AUTHORIZING A CONTRACT FOR MANAGED SECURITY SERVICES

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7c.
APPROVAL OF TRAVEL EXPENSES REIMBURSEMENT(S)

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8.
NEW BUSINESS

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NEXT MEETING AND ADJOURNMENT

The next meeting of the RTA Board of Directors is scheduled for Thursday, May 19, 2022. We will advise you of the location or virtual nature of this meeting as the date approaches and the status of the COVID-19 situation is updated.

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