NJ TRANSIT
BOARD ENERGY AND SUSTAINABILITY
POLICY COMMITTEE MEETING AGENDA
OPEN TO MEMBERS OF THE PUBLIC
THURSDAY, AUGUST 25, 2022
9:00 AM

ONE PENN PLAZA EAST – 9TH FLOOR – BOARD ROOM – NEWARK, NJ

MEETING ATTENDEES ARE REQUIRED TO GO THROUGH SECURITY SCREENINGS UPON ENTERING THE BUILDING. PLEASE ALLOW EXTRA TIME.

The public can listen to the meetings by calling: 1-800-346-7359 Conference Entry Code: 701939.

1. PUBLIC COMMENT PRE-REGISTRATION:

Members of the public are encouraged to pre-register to provide public comments. Members of the public who wish to provide public comments should use the “Submit public comments for an upcoming Board Committee Meeting” form on NJ TRANSIT’s website at: https://njtransit.secure.force.com/customerservice/site_app#/board_committee and indicate the comment is for the Energy and Sustainability Policy Committee Meeting.

**DEADLINE TO PRE-REGISTER IS 9:00 A.M. ON WEDNESDAY, AUGUST 24, 2022.** We recommend using Microsoft Edge, Google Chrome, Firefox, or Safari for the best experience.

2. PUBLIC COMMENT PROCEDURES:

Each speaker will have two (2) minutes to provide comments.

**IN PERSON:** Speakers who pre-register and attend the meetings in-person will be given priority and have their comments taken first. In-person speakers who did not pre-register in advance will then be taken on a first-come-first-serve basis.

**TELEPHONE:** Speakers who pre-register and participate by telephone will follow the in-person speakers. Telephone participants who did not pre-register in advance, and queue to speak, will have their comments taken on a first-come-first-serve basis thereafter.
Speakers participating by telephone can begin calling in at 8:30 a.m. to check in with the call proctor for the Energy and Sustainability Policy Committee Meeting. Once checked in, participants can press *1 to enter the queue to provide public comments. There will be a brief tone to indicate you have successfully entered the queue. The toll-free dial-in phone number is 1-800-346-7359 and the Conference Entry Code is 701939.
STAFF REPORTS

PRESENTER: KIRAN PATEL
DEPARTMENT: CAPITAL PROGRAMS

TOPICS:

ZERO EMISSION BUS PROGRAM BRIEFING
SUSTAINABILITY PLAN UPDATE

PUBLIC COMMENTS (Two minutes per speaker)
AGENDA

Zero Emission Bus Program Briefing

Sustainability Plan Update
Zero Emission Bus Program Briefing
On January 17, 2020, Governor Murphy signed S2252/A4819 that established requirements for NJ TRANSIT to move toward zero emission bus purchases by 2032.

- Dec 2024, 10% of bus purchases shall be ZEB
- Dec 2026, 50% of bus purchases shall be ZEB
- Dec 2032, 100% of bus purchases shall be ZEB
STEPS NJ TRANSIT IS TAKING TO ADVANCE A ZERO EMISSION BUS FUTURE

• Release of the 5-year Capital Plan in 2020
• Board Presentation on NJ TRANSIT’s Zero Emission Bus Roadmap in the spring of 2021
• Award of the Garage Modernization RFP in May 2022
• Commissioning of Newton Infrastructure in Feb 2022
• Release of the Zero Emission Bus System Design and Investment Planning RFP in the beginning of 2022
• Board Presentation on NJ TRANSIT’s for Updated Zero Emission Bus Roadmap in the spring of 2022
GARAGE MODERNIZATION

- Expanded garages with equipment to support electric buses
- New diagnostic equipment on buses and in garages help monitor health of fleet
- Strengthen roof to support new and replaced infrastructure
ZERO EMISSION BUS SYSTEM DESIGN AND INVESTMENT PLANNING STUDY

- Best Practices Review
- Standards, Practices, and Specifications
- Network Design
- Capital Needs and Investment Planning
- Investment Plan, Transition Plan, Capital Plan
ZEB PROGRAM ROADMAP

**Garage Modernization**
- Notice to Proceed (May 2022)
  - Phase 1 (Partially Funded)
    - Stage 1: System-wide Surveys, Early Deployment Infrastructure Improvements at Hilton Garage
    - Stage 2: 10% Conceptual Design, 30% Preliminary Engineering (Spring 2023)
    - Stage 3: Engineering & Construction (Spring 2023)
  - Phase 2 (Funding TBD)
    - Stage 2: 10% Conceptual Design, 30% Preliminary Engineering
    - Stage 3: Engineering & Construction
  - Phase 3 (Funding TBD)
    - Stage 2: 10% Conceptual Design, 30% Preliminary Engineering
    - Stage 3: Engineering & Construction

**Zero Emissions Bus System Design and Investment Planning**
- Notice to Proceed (June 2022)
  - Data Gathering and Existing Conditions Assessment
  - System Design
  - Investment Planning
  - Final Zero Emissions Bus Investment & Transition Plan (Spring 2025)

**Zero-Emission Bus Purchase Milestones**
- 10% (2024)
  - 50% (2026)
  - 100% (2032)

**New Northern Bus Maintenance Facility**
- 30% Preliminary design (Fall, 2023)
- 100% Design completed (Spring, 2025)
- Construction start (Spring, 2026)
- Construction finished (Spring, 2029)
Updated Program Timeline 2022

**Early Deployments**
- Newton Garage (Spring 2022)
- Phase 1/Stage 1: Hilton Garage (Fall 2026)
- Design (Winter 2023/24)
- Procurement (Winter 2024/25)
- Construction (Fall 2026)
- Study (2026)

**Planning, Practices And Standards**
- Zero Emission Bus System Design and Investment Planning Study
  - $9.3M

**Garage Programs**
- New Northern Bus Garage
  - Preliminary Design: $13.8M
  - Final Design: $22.4M
  - Design (Spring 2025): $500M
  - Construction (Spring 2029)
- Garage Modernization Phase 1/Stage 2-3
  - Procure: $25-35M
  - Design/Build: $380M
  - Construction (2029)
- Garage Programs Phase 2
  - Procure: $25-35M
  - Design/Build: $700M
  - 2031
- Garage Programs Phase 3
  - Procure: $25-35M
  - Design/Build: TBD
  - 2032

**Zero Emission New Bus Purchase Milestones**
- 10%
- 50%
- 100%
# APPLIED FOR GRANTS FY23

<table>
<thead>
<tr>
<th>Program</th>
<th>Project</th>
<th>Budget (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Federal</td>
</tr>
<tr>
<td>Bus &amp; Bus Facilities</td>
<td>Meadowlands</td>
<td>$31</td>
</tr>
<tr>
<td></td>
<td>Union City Bus Garage</td>
<td>$42</td>
</tr>
<tr>
<td></td>
<td>Hybrid Bus Acquisition</td>
<td>$30</td>
</tr>
<tr>
<td>Low or No Emission</td>
<td>Meadowlands</td>
<td>$42</td>
</tr>
<tr>
<td></td>
<td>Greenville Bus Garage</td>
<td>$49</td>
</tr>
<tr>
<td></td>
<td>Hilton Bus Garage</td>
<td>$57</td>
</tr>
<tr>
<td></td>
<td>**Total</td>
<td>**$220</td>
</tr>
</tbody>
</table>
Key Takeaways

• We are advancing a responsible Zero Emission Bus Program.

• We oriented ourselves to maximize grant opportunities and all available funding sources such as IIJA.

• We have strategically initiated and sought funding.

• We require sustainable and dependable funding to program major infrastructure upgrades and expansions, that are required for the transition.
IDENTIFIED CHALLENGES

- Existing Conditions and State of Good Repair
- Design Standards and Specifications
- Regulatory & ROW Issues
- Footprint and Spatial Challenges
- Utility Upgrades
- IT Investments

- System and Network Impacts
- Redesign Efforts
- Reliability & Availability
- Precision of Operations
- Future Facility Siting and Planning
- Supply Chains & Vendor Availability
- Staffing, Training, Equipment, and IT
- Safety
ORGANIZATIONAL & STAFFING NEEDS – BUS OPERATIONS

• Operations Staffing Needs

  • Workforce Development Opportunities in Coordination with the Union
  • Separate Equipment Maintenance & Facilities Technician Teams at each ZEB Facility
  • Management Staff for Equipment Maintenance & Facilities Team at HQ
  • Additional ZEB Initiatives Staff in HQ & Regional Management, including Safety & Training
  • Expanded Staff in Bus Operations Scheduling & Planning
ORGANIZATIONAL & STAFFING NEEDS – CAPITAL

• Currently seeking a Director of Zero Emission Bus Systems Planning
  • Need: Technical, Policy, and Fleet Engineering

• Planner/Engineering & Project Management:
  • Transportation & Capital Planning
  • Facilities Engineering
  • Systems Engineering
  • Electrical Engineering
  • Mechanical Engineering
  • Chemical Engineering
SUSTAINABILITY PLAN UPDATE
TARGETED MILESTONES

Public and Stakeholder Engagement
Align on Priority Themes
Data Management*
Sustainability Framework Development
Establish and Engage with a NJ TRANSIT Sustainability Committee*
Sustainability Plan Vision
Final Sustainability Plan

* The lighter shade reflects continual work as needed during Sustainability Plan development
FOCUSING ON ENVIRONMENTAL SUSTAINABILITY
SUSTAINABILITY SURVEY OBJECTIVE

A formal stakeholder engagement process to understand the relative importance of sustainability issues.

Informs an approach to sustainability that focuses on the issues that matter most.

- Impact to NJ TRANSIT
- Importance to Stakeholders
The sustainability survey was announced by press release and during the public webinar on March 10, 2022, made available on the NJ TRANSIT website, and promoted on digital display boards and social media.
WHAT DID THE SUSTAINABILITY SURVEY ASK?

- Relative ranking of sustainability themes and aspects
- Perspective on disclosure
- Parting thoughts on sustainability

Who we heard from

- NJ TRANSIT Customers
- General Public
- Community Leaders & Advocacy Organizations
- NJ TRANSIT Employees
- Stakeholder Agencies
<table>
<thead>
<tr>
<th><strong>EXPLORING SUSTAINABILITY THEMES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Community Engagement</strong></td>
</tr>
<tr>
<td>Engage diverse groups across transit service, customer service and good design.</td>
</tr>
<tr>
<td><strong>Energy</strong></td>
</tr>
<tr>
<td>Improve fuel and energy use efficiency while transitioning to electrified transportation and clean vehicle technology.</td>
</tr>
<tr>
<td><strong>Mobility and Accessibility</strong></td>
</tr>
<tr>
<td>Make it easier for people of all abilities to affordably and reasonably access different goods and services to meet their daily needs.</td>
</tr>
<tr>
<td><strong>Water</strong></td>
</tr>
<tr>
<td>Improve water use efficiency through conversation, reuse, and best practices.</td>
</tr>
<tr>
<td><strong>Waste</strong></td>
</tr>
<tr>
<td>Minimize waste and increase recycling levels.</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
</tr>
<tr>
<td>Minimize air quality impacts resulting from greenhouse gas (GHG) and other criteria air pollutant emissions.</td>
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</table>
SUSTAINABILITY SURVEY RESULTS
SUSTAINABILITY SURVEY
OBSERVATIONS & INSIGHTS

Themes related to **NJ TRANSIT’s core services** were similarly ranked as the most important:

- Mobility and Accessibility
- Energy
- Air Quality
INDUSTRY BENCHMARKING SUSTAINABILITY THEMES

ENVIRONMENTAL

- Community Engagement
- Mobility and Accessibility
- Air Quality
- Energy
- Water
- Waste

SOCIAL & FINANCIAL

- Economic Impact
- Employees and Workforce
- Financial Resiliency
- Safety and Emergency Preparedness
**Sustainability Disclosure Hierarchy**

- **GOALS + MEASUREMENT**
  Measurable targets in place and performance metrics reported

- **MEASUREMENT**
  Performance metrics reported

- **DISCLOSURE**
  Topic addressed qualitatively

- **NOT REPORTED**
  Topic not addressed

**EXAMPLES**

- Reduce water consumption by 20% from 2020 baseline levels by 2025
- Report water consumption (gallons)
- Qualitatively describe water conservation measures
- Publicly available information about water use is not available
INDUSTRY BENCHMARKING HIGHLIGHTS
THEME: COMMUNITY ENGAGEMENT

- All peer agencies address some aspect of community engagement.
- 4/5 peer agencies highlight partnerships with community partners, but not all highlighted collaboration with environmental organizations.
- All peer agencies address good design elements, but not all directly connected to sustainability.
- 4/5 peer agencies address transit-oriented development, highlighting community sustainability benefits.
INDUSTRY BENCHMARKING HIGHLIGHTS
THEME: MOBILITY AND ACCESSIBILITY

- **4/5** address multi-modal connectivity through first/last mile plans, cycle transit plans.

- **5/5** emphasize equitable access, highlighting need to connect underserved communities.

- **5/5** describe fair pricing programs to make transportation affordable for those who need it most.

NOT REPORTED

GOALS + MEASUREMENT

MEASUREMENT

DISCLOSURE

NOT REPORTED
INDUSTRY BENCHMARKING HIGHLIGHTS
THEME: AIR QUALITY

• 5/5 address GHG emissions.
• 2/5 have carbon reduction and/or displacement goals.
• Inconsistent frequency of reporting GHG emission inventory.
• Limited disclosures related to other air pollutants.
5/5 address clean vehicle strategy, including zero emission bus fleet, EV charging infrastructure, and regenerative braking.

4/5 have zero emission bus fleet goals.

5/5 highlight energy efficiency, ranging from individual projects to programmatic adoption of green building rating systems.

2/5 set goals to reduce energy use and integrate renewable energy.
• Split between quantitative and qualitative disclosures regarding **water conservation**.

• *3/5* share **water consumption** data, *2/5* have **water reduction goals**.

• Only *2/5* have goals related to **water discharge**, primarily related to stormwater management.
INDUSTRY BENCHMARKING HIGHLIGHTS
THEME: WASTE

• 5/5 address waste management, with 2/5 having specific landfill diversion rate goals.
• 1/5 has a landfill diversion rate goal for C&D waste.
• 2/5 qualitatively discuss recycling and reuse efforts.
BENCHMARKING FINDINGS

ALL THEMES

- Community Engagement
- Mobility and Accessibility
- Air Quality
- Energy
- Water
- Waste

Goals + Measurement: 30%
MEASUREMENT: 16%
DISCLOSURE: 47%
NOT REPORTED: 7%
RECOMMENDED SUSTAINABILITY PRIORITIES

Community Engagement
Mobility and Accessibility
Air Quality

Energy
Water
Waste
Climate Resilience
Sustainability Indicators
- GHG emissions and GHG savings
- Criteria air pollutant emissions
- Energy use (electricity, fuel)
- Recycling levels/waste
- Water usage
- Operating expense

Normalizing Metrics
- Unlinked passenger trips per capita
- Vehicle miles traveled per capita
<table>
<thead>
<tr>
<th>Sustainability Themes</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Environmental Leadership</td>
<td>Management strategies to establish accountability for environmental performance</td>
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**NJT Strategic Initiatives**

### NJ Energy Master Plan

**American Public Transportation Association (APTA)**

**Global Reporting Initiative (GRI)**

**UN Sustainable Development Goals**

### Sustainability Commitment Core Principle #1
Make sustainability a part of your organization’s strategic objectives.

### Sustainability Commitment Core Principle #2
Identify a sustainability champion within the organization coupled with the proper human and/or financial resources and mandates.

### Sustainability Commitment Core Principle #3
Undertake a sustainability inventory of your organization.

### Sustainability Commitment Indicators:

- **GRI 302-1** Energy consumption within the organization
- **GRI 302-2** Energy intensity
- **GRI 302-3** Reduction of energy consumption
- **GRI 302-4** Reductions in energy requirements of products and services

### Sustainability Commitment Indicators:

- **GRI 302-1** Energy consumption within the organization
- **GRI 303-1** Interactions with water as a shared resource
- **GRI 303-2** Management of water discharge-related impacts
- **GRI 303-3** Water withdrawal
- **GRI 303-4** Water discharge
- **GRI 303-5** Water consumption
- **UN Goal 6: Clean Water and Sanitation**
- **UN Goal 13: Climate Action**

**Promote a more sustainable future for our planet**

**1.1.6 Continue to improve NJ TRANSIT’s environmental performance.**

Maximize ridership, pursue pollutant reduction strategies, and prioritize electrifying buses and clean vehicle technology.
TARGETED MILESTONES

Public and Stakeholder Engagement
- Align on Priority Themes
- Data Management*

Sustainability Framework Development
- Establish and Engage with a NJ TRANSIT Sustainability Committee*
- Sustainability Plan Vision
- Final Sustainability Plan

* The lighter shade reflects continual work as needed during Sustainability Plan development

Next ESPC Meeting
HOW TO STAY INVOLVED

Learn more: njtransit.com/sustainabilityplan

Email us: sustainability@njtransit.com