ABQ RIDE
Public Transit & Climate Change

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Opportunities

• Increase ridership
• Improve fuel efficiency

• To help address the transportation component of greenhouse gas emissions...
• ...with limited resources

“Roughly 17 percent of U.S. greenhouse gas emissions comes from cars and light-duty trucks (including pickup trucks, SUVs, and minivans).”

ABQ RIDE

• 40 routes
  • Weekday service:
    • 1,570 trips
    • 134 peak buses (fleet = 162)
    • 1,450 hours in service (+100 hrs. “deadhead”)
    • 19,000 miles in service (+3,500 “deadhead”)
  • Sats = ~½ weekdays
  • Suns = ~½ Saturdays

• Main types of service
  • Commuter – peaks only
  • Local – all day
  • ART & ARTx (formerly Rapid Ride) – all day
• Sun Van – door-to-door ADA service
**ABQ RIDE**

- **Funding** – City taxes pay for most of service; fares pay for ~8%
- **County** pays for all or part of routes that go out of the City into the County
  - #10 North Fourth St.
  - #51 Atrisco
  - #53 Isleta
  - #54 Bridge-Westgate
- **Rio Metro** pays for all or part of routes that go into Rio Rancho or specifically connect to the Rail Runner
  - #96, 155, 222, 250, 251 & 551
Annual Ridership by Service Provider

Source: MRCOG Connections 2040 Metropolitan Transportation Plan
Increasing Ridership

• More people in the vehicle = less emissions per person
• Bus transit is good for environmental sustainability when enough people ride it (estimate ~8-10 riders for GHG)
• Environmental sustainability isn’t the only goal of transit
• Transit service needs to balance:
  • High ridership service = climate benefits and social benefits
  • “Coverage” (low ridership) service = social benefits but not climate benefits (Coverage may be geographic or temporal.)
Increasing Ridership

• Ridership recipe:
  • Land use (market/demand)
  • Transit service provided
  • Cost to potential riders (time/money)

• Our service is budget-constrained, so focus on optimizing use of current resources
Land use = market

• More people who can reach bus stops on both ends of their trips = more riders. This relies on:
  • # people & destinations within walking distance (density & street layout)
  • Walkability: sidewalks, ease of crossing streets – safety, comfort, accessibility
  • Park & rides, bike & ride, drop-offs can mitigate low density
  • Variety of destinations – very few generate a lot of demand alone
  • Paid parking!

• Land use good for transit is also good for other non-auto modes
Impact of street/walking network

5 and 10 minute walk from Central Ave. and Carlisle Blvd.

5 and 10 minute walk from N.M. 528 and High Resort Blvd.

Source: MRCOG Connections 2040 Metropolitan Transportation Plan
Importance of density

<table>
<thead>
<tr>
<th>City</th>
<th>Area</th>
<th>Population</th>
<th>Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albuquerque</td>
<td>189.5 sm</td>
<td>545,700</td>
<td>2,960/sm</td>
</tr>
<tr>
<td>Copenhagen</td>
<td>33.3 sm</td>
<td>592,000</td>
<td>17,700/sm</td>
</tr>
</tbody>
</table>
Results of density
Regional & local efforts to encourage infill
Service

• Frequency
  • Waiting is part of travel time – including waiting for connecting buses and arriving earlier than you want. High frequency reduces waiting.
  • High frequency = you can go when you want (without needing to check a bus schedule) – 15 minutes or better
  • Frequency is expensive.

• Hours of service
  • Does the bus run early enough or late enough for both going and returning to work/other purpose?
  • Does it run on weekends? Holidays?
  • Off-peak service is another form of “coverage” – likely to be low ridership.
Other service attributes

• In-vehicle travel time
  • How direct is the route? (Deviations serve one group of riders at the expense of others.)

• Does it come when it’s scheduled to?

• How easy is it to figure out when/where to go to ride?

• How much does it cost, and how easy is it to pay?

• Does it feel safe, clean and comfortable (bus stops as well as vehicles)?
Fuel Efficiency

• Current fleet primarily diesel, diesel-electric hybrid, and compressed natural gas (CNG)
  • Note that buses often operate all day – up to 20 hours/300 miles
  • Not like a household car

• New, more efficient technologies - promise and problems to overcome
  • Battery-electric buses
  • Hydrogen fuel-cell buses
Fuel Efficiency

• Battery-electric buses
  • ABQ RIDE is buying 5 as a pilot program.
  • Advantages:
    • Much more energy efficient
    • No “tail-pipe” emissions & quiet
    • Require charging infrastructure – basics now installed at our Daytona facility
  • Disadvantages:
    • Cost
    • Limited range
    • Battery degradation making it worse
    • Not sufficient for ABQ RIDE all-day routes without on-route charging (expensive)
    • Weather can significantly impact range
    • “Re-fueling” time
Fuel Efficiency

• Hydrogen fuel-cell buses
  • Advantages:
    • More energy efficient
    • No “tail-pipe” emissions (except water vapor) and quiet
    • Range comparable to current buses
    • Fueling time and process similar to current vehicles
  • Disadvantages:
    • Source of hydrogen short-term
    • Hydrogen fueling infrastructure long-term
    • Cost of infrastructure, vehicles, and fuel
    • Technology less widely deployed than battery-electric buses
    • Limited vehicle availability and lack of public familiarity

Source: Center for Transportation & the Environment
What you can do

• Ride the bus and encourage others (after COVID-19)!
• Keep “tabs” on Transit by participating in TAB meetings (Transit Advisory Board) – second Thurs. every month 4 – 5:30 PM
• Online at abqride.com