Winning the Battle against Climate Change
Transit Authority of River City

Rail~Volution
November 3, 2007
Miami, Florida
Louisville KY - TARC at a Glance

- Located on Ohio River south of Indiana, north of Tennessee
  - population of ~1 million

- TARC at a Glance
  - 16.3 million customers (FY07)
  - 12.2 million miles (FY07)
  - 55,000 daily boardings
  - 52 routes in 5 counties
  - 268 buses and trolleys
  - 90 paratransit vehicles
  - 697 team members
BOTTOM LINE:
    The transportation sector is the largest consumer of petroleum in America
    - Consuming 70% of America’s petroleum
    - Emitting 30% of climate-changing greenhouse gases

Much of this from people driving alone in private automobiles

Source: American Public Transportation Association
Two basic strategies

- Create policies and programs to promote greater use of public transportation
- Shift TARC’s operations into a sustainable energy and environmental strategy
Improving Fuel Economy & Air Quality

Hybrid Fuel Economy

22% better fuel economy

41 - 57% better fuel economy

Emissions reductions

- Oxides of Nitrogen (Nox) – 61% less
- Particulate Matter (PM) – 93% less
- Carbon Monoxide (CO) – 90% less
- Hydrocarbons (HC) – 21% less

Source: internal research and analysis
Snapshots from TARC: Fleet

Purchasing hybrid-electric vehicles:

- Used grants and other discretionary awards
- Much higher initial cost
- Life cycle cost savings

Administrative fleet cars can use ethanol or diesel

- Ethanol not available at many locations
Increasing ridership & promote TARC

Bikes-On-Board Year-to-Year Comparison

- Total usage for 2006 = 104,000
- 58% use bike to work
Snapshot from Louisville: Programs

• Travel Training with AARP
• Integration with development review
• Bus stop inventory
• Complete Streets policy
• Mayor’s Strategic initiative
Snapshots from TARC: Partnerships

TARC Means Business

- 8,500 downtown employees use Humana IDs as transit passes
- “Next Bus” information displayed in lobbies of five buildings
  - Software & AVL cost by TARC
  - Display terminal costs by Humana
- Humana has reduced parking needs
Triple bottom line:

- Financial costs
- Environmental costs
- Social costs

- Needed additional space for day to day cleaning of vehicles & training

- Work is done in the dark and takes up space needed for buses coming out of service
TARC Maintenance Annex (training, bus cleaning)

- First LEED registered building in Louisville; a few in state
- Vegetative roof over portion; collecting runoff from metal roof in graywater collection system for plumbing
- Overall property runoff captured in new bioswale
- Low energy footprint
  - ‘custom’ HVAC system
  - Natural lighting
  - Open-air ventilation
  - Photovoltaic electricity to power buses
- Out to bid next month; Construction in 2008
Longer Term Solutions

- Managing fuel and other costs
- Looking at options for alternate fuels and power
- Encourage people to try or take transit
- Develop/foster employer pass program
- Use national reports to galvanize local efforts
- Partnerships and buy-in with local government, air quality or pollution groups, other environmental groups
If Louisville can do it, y’all can too.
TARC Maintenance Annex (training, bus cleaning)

- Had property available next to existing garage
- Allowed for efficient use of land, buses leaving garage
- Interior cleaning of buses out of the service lanes where they are fueled and checked, fareboxes
- During the day those lanes are used for interior cleaning, dark, dirty
- With everything they need
- Electricity use
- Water consumption from washing the vehicles
- Waste collected on vehicles
- Photo voltaic
Today’s transit usage reduces petroleum consumption by 1.4 billion gallons of gasoline each year. This means:

- 108 million fewer cars filling up; almost 300,000 everyday.
- 34 fewer supertankers leaving the Middle East; one every 11 days
- Over 140,000 fewer tanker truck deliveries to service stations per year.
- A savings of nearly 4 million gallons of gasoline every day
Five principles

1. Transit use reduces energy consumption and Greenhouse Gas emissions

2. Energy use and Greenhouse Gas reductions from increased transit use are long-term, recurring savings

3. Public entities, like transit agencies, should be eligible to receive revenues generated from carbon tax plans or “cap and trade” programs

4. Energy conservation and Greenhouse Gas reduction should be factors in transportation and land-use planning

5. Investments in energy efficient transit vehicles can compound transit’s energy savings and emissions reductions from transit.
• Transportation Energy Security and Climate change Mitigation Act (pending in House)
  – 100% federal share for Clean Fuel and Alternative Fuel vehicle-related equipment or facilities
  – 100% federal share for CMAQ projects
Pending Legislation 2007

- Renewable Fuels, Consumer Protection and Energy Efficiency Act (Senate passed)
  - Infrastructure Pilot program for renewable fuels
  - Electrical Drive Vehicle Demo program
  - Energy and Environment Block Grant to improve energy efficiency
Pending Legislation 2007

• Renewable Energy and Energy Conservation Act (pending in House Ways and Means)
  – Fringe Benefit for bicycle commuters
  – Energy Conservation bonds
Development Incentives

- Expedite local government review of transit-oriented development permits
- Streamline development permits for brownfield development
- Increase tax incentives for Transit-Oriented Development with Green Building practices
- Provide a federal grant program for 20 pilot Transit-Oriented Development corridors.
Planning Incentives

- Consider the petroleum consumption consequences of transportation investment decisions
- Adopt “complete streets” requirements
- Encourage air-quality non-attainment areas to simultaneously address energy conservation and climate change goals
Planning Incentives

- Encourage Transportation Demand Management (TDM) programs
  - Pay-as-you-drive auto insurance
  - Parking cash-out
  - Road pricing/Congestion pricing
  - Parking pricing
  - Car-sharing
Priority Uses for Transit

• Assure transit systems receive a reliable supply of petroleum and electrical power at affordable prices
• Limit the amounts of fuel cost-increases transit agencies should be expected to absorb
Federal Location Decisions

- Build federal buildings in locations that are readily accessible by public transportation
- Require federal assistance programs such as housing to be accessible by transit
- Ensure that all Federal buildings (new construction and retrofits) meet LEED standards for construction
- Set Green Building standards for all new developments receiving public subsidies