Summary of ZE Truck and Vehicle Commercialization Study
For Gateway Cities
Essential Findings

» Commercial ZE Drayage trucks (and other ZE vehicles) are possible by 2025

» A few specific technological approaches seem to have the most promise

» Fuels and Fueling Infrastructure must be developed in parallel

» It will not happen under business-as-usual
  » Immediate and Coordinated action by multiple stakeholders is required for success
Technology Solutions for ZE Drayage

• Several alternatives are viable:
  1) Battery EV (BEV) – the “Nissan Leaf” of trucks
  2) Range Extended Electric Vehicle (REEV) – the “Chevy Volt” of trucks
  3) Fuel Cell Range Extended EV (FC-REEV) – the “Honda Clarity” of trucks

• Not ruling out any technologies, but incorporating current knowledge of hurdles and industry direction

• Fuel/Power infrastructure needs to be developed simultaneously – including looking at catenary and H2 stations

• For Drayage operations, users were clear they wanted a truck that could “handle any job”
  – Near-Dock Drayage is a different case; for general drayage a limited truck would require major changes in business operations
How Do We Get There? What Will It Take?

Near Term Actions

» Expand Technology
  » ZET Demonstration Projects
  » Other ZEV Demonstration Projects
  » Supporting Technologies Demonstrations
  » Advanced Infrastructure Demonstrations
  » ZE Yard Hostler Demonstrations

» Plan and Develop Infrastructure
  » Fuel Infrastructure Availability & Impact Study
  » Infrastructure Deployment Plan
  » Prepare analysis for all communities in Gateway Cities
How Do We Get There? What Will It Take?

Near Term Actions

» Business Case and Operational Model
  » Analysis of ZET Operation and Maintenance Costs
  » Assessment Report of Secondary Use Markets and Residual Value of ZET
  » Refine Specific ZET Operational Cycle from Origin-Destination Data
  » Detailed Business Case Development for ZET
  » Assessment of Ownership Models Supporting ZET Use
  » Organize and operate a Truck OEM Advisory Council
  » Organize and Stage Regular Fleet Workshops on ZET Tech and Operations
  » Prepare similar analysis for other ZEVs’
How Do We Get There? What Will It Take?
Near Term Actions

» Build Supporting Markets
  » Accelerate early deployment of existing ZE trucks and other ZE vehicles in Gateway Cities and Ports region
  » Coordinate targeted incentive funding from regional, state and federal partners for early deployment
  » Research, Determine and Evaluate Markets for Wider ZET and ZEV Use and Deployment
  » Collaborate with regional and state regulators to guide and establish policy for use of ZET and ZEV
QUESTIONS?
Conclusion

Zero-Emission Trucks (ZET) and Zero Emission Vehicles (ZEV) can be deployed in the Gateway Cities and the I-710 region if both public and private stakeholders take action now to accelerate ZE technology commercialization.