SmartWay Advances Sustainable Transportation Supply Chains

FHWA Talking Freight Webinar

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Today's Discussion

- Impacts: sustainable energy, environment and community
- SmartWay overview
- SmartWay program success
- Key challenges for communities
- SmartWay is relevant for communities
- Planning for SmartWay in communities
- SmartWay best practices & technologies for communities

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Sustainable Energy Impacts

- Freight = about 39% of world transportation energy use
- Experts project global freight volumes to quadruple by 2050

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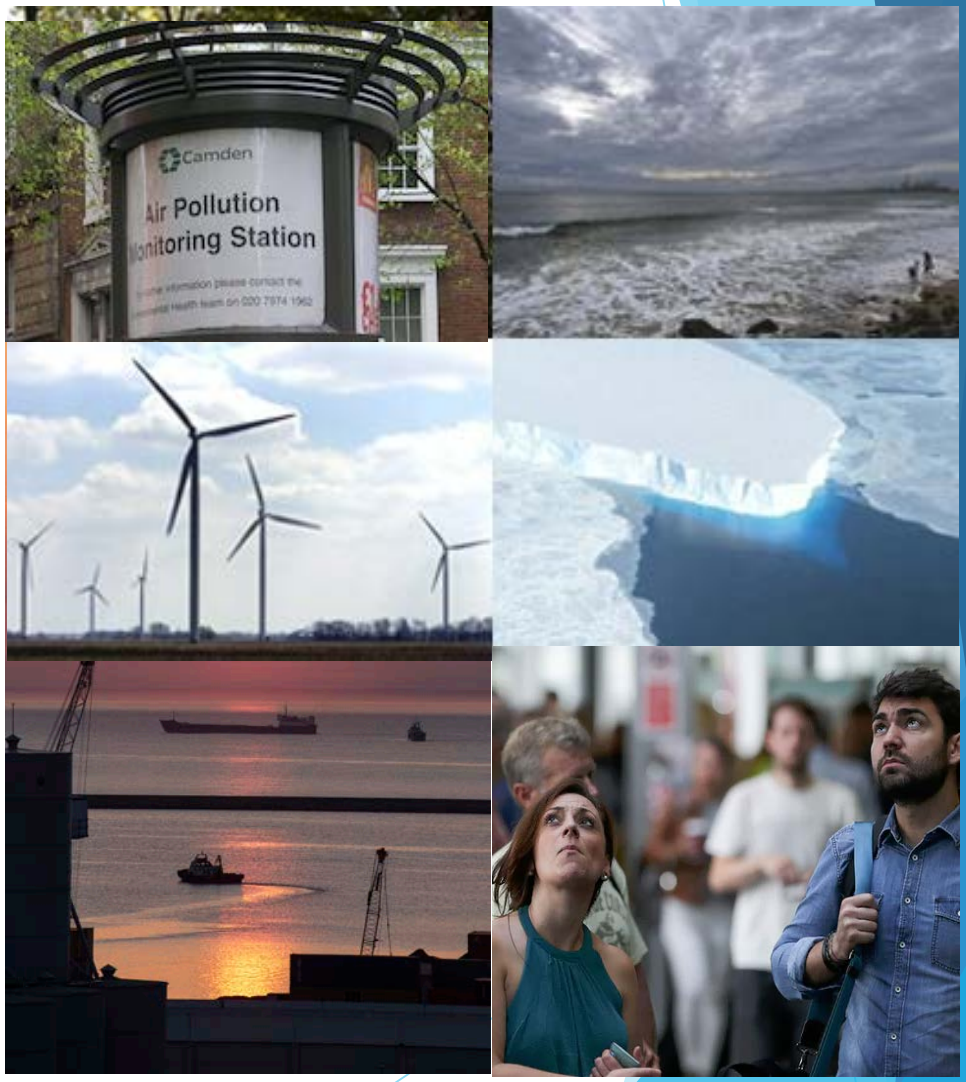
Environment & Community Impacts

- Transportation = up to 30% of all global emissions, including particulate matter, methane, carbon and other harmful air pollutants
- Freight fastest-growing transport emissions in U.S. and globally
- Ports and other communities near to freight hubs are disproportionately impacted



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SmartWay Overview: Collaboration to Lean Supply Chains

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Shippers

Shippers

Want to hire high performing carriers

Logistics

3rd Party Logistics

Help shipper clients with carrier selection

Carriers

Carriers

Being asked by shippers & logistics to improve environmental performance

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SmartWay Overview: Balanced Approach

Simplicity

- Standard benchmarking tools and methods

Accuracy

- Performance based assessment of CO_2, NOx, PM

Flexibility

- Multiple metrics, multimodal, multi-fleet, multi-categories

Transparency

- Manageable granularity, protects sensitive info

Barge

Rail

Truck

Air

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SmartWay Overview: Verification to level the playing field

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Snapshot of SmartWay Success

- Since 2004, SmartWay has grown to over 3,500 Partners and Affiliates with broad industry support

- Since 2004, SmartWay Partners saved:
  - $28 billion dollars in fuel costs
  - 84 million metric tons of CO_2

- SmartWay Partner energy savings are equivalent to eliminating annual energy use in over **12 million** homes

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Key challenges for communities

- Rapidly changing geopolitical landscape
  - impacts how we source and move goods
  - influences policy choices around transportation, infrastructure, commerce
  - affects energy options
- Large demographic shifts
  - the equivalent of one new city of one million people will be created every 5 days between now and 2050 -- *International Geosphere-Biosphere Programme*
  - seismic changes in consumer demand (millennials already expect mobile commerce, 1-hour delivery)
  - expanded market scale and scope (more customers; omni-channel retail)
  - new logistics challenges (mega-city congestion, parking shortages, vertical urban "freight" corridors?)
- Unprecedented technical change
  - increase or decrease logistics activity, emissions (drone delivery, 3D printing, big data, connected/autonomous vehicles)
- Urgent environmental challenges
  - climate change and extreme weather events disrupting logistics
  - increased urban populations being exposed to local/regional air pollutants
  - more freight hubs create more "fence-line" communities

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SmartWay is Relevant for Communities

- Supply Chain happens within communities
  - Manufacturing, delivery and consumption/use of goods
- Encourage innovative partnerships that work for both industry and the public:
  - Goods movement is a promising area for new approaches
- Potential government roles:
  - Information clearing house
  - Leveling the playing field

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Planning for SmartWay

- Goals for Planners
  - Safe streets
  - Clean air
  - Strong economy
  - Quality of life
  - Sustainable cities
- Consider freight: people need it
- Partnerships
  - Pursue long term relationships based on carefully selected, suppliers, carriers, and logistic companies which have committed to reduced impact
  - Encourage Shippers in your community to implement strategies that will reduce emissions and fuel use.
  - Collaborate with affiliates who share a philosophy of sustainability
- Change consumer behavior/attitude
  - Marketing
  - Social norms

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Planning for SmartWay

- Policy Development - Strategies
  - Electric-Hybrid Delivery Vehicles
  - Intelligent Infrastructure
  - Prioritized right-of-ways for efficient storage, movement and delivery of goods between close-in warehousing and industrial districts in the downtown core
  - Develop partnerships with logistics service providers AND private sector entities with innovative technologies for improving freight and goods movement efficiency in the central city
  - Incorporate delivery sites into housing development; provide incentives or policy requirements
  - Provide incentives for low-emission delivery
  - Public-private partnership urban consolidation centers

SmartWay Best Practices & Technologies for Communities

- Shipper strategies that reduce emissions and fuel use
  - "No-Idling" policies at their warehouses.
  - Utilize appointment times for both pickup and deliveries to avoid waiting and idling.
  - Eliminate waiting time for carriers to enter and exit distribution areas.
  - Ensure that all empty trailers are in one portion of the distribution yard, while loaded trailers are in another.
- Urban Planning emphasis to maximize air quality and health benefits of freight movement
  - Plan new facility locations
  - Design ideas for new facilities
    - Adequate facility footprint
    - Allow adequate parking/staging areas for rail & truck
    - Electrified truck/trailer parking for delays, layovers, and cold cargo pulldown
    - Indoor comfort stations for operators
    - Shore Power: truck loading docks; resident switcher locomotives

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QUESTIONS? THANK YOU!

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For more information:

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