Municipal Best Practices

Reducing Transportation Energy Use

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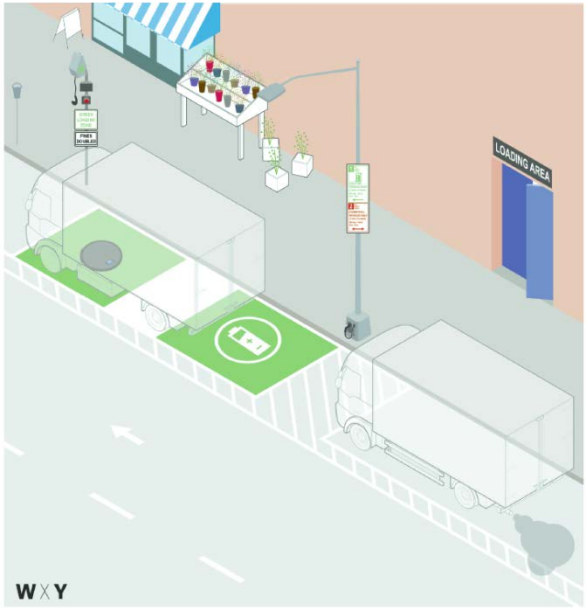
NYSERDA Examples at Work

Examples at Work: TDM



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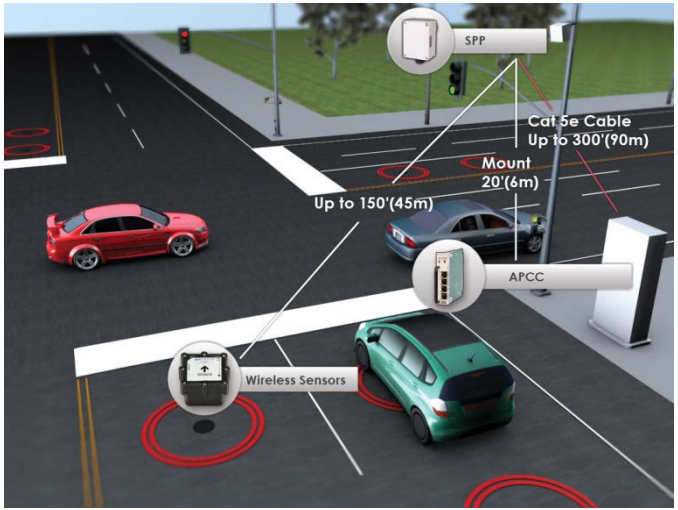
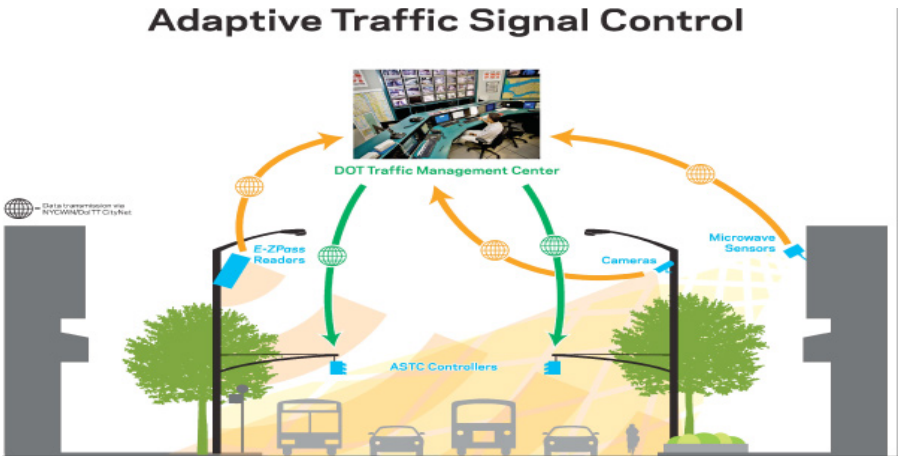
Examples at Work: Traffic Signals





Examples at Work: Complete Streets

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Electric Vehicle Best Practices

Why Should Munis Care?

- Promoting EVs is a great way to make a city more energy efficient and cleaner
- Building codes allow for, but don’t encourage, EVSE
- Comprehensive plans probably don’t mention EVs or EVSE
- Most zoning and parking ordinances are silent on EVSE
- Allowable settings for EVSE may not be well considered

What Can Munis Do?

- Provide incentives for EV drivers (reduced parking fees, installations of public EVSE)
- City-wide or regional plans to identify prime locations for EVSE
- Building code, permitting, or zoning/parking ordinance updates to promote EVs
- Site design guidance for public and private parking facilities
- Signage standardization

Incentives for Drivers

- Preferred or reduced price parking for EV drivers – example: Sacramento
- Line-jumping for parking permits for EVs – example: MNRR stations
- EV charging stations at public parking lots (possibly free to use for a period, like Rochester)

Municipal Fleets

- Incorporating EVs into municipal fleets can be difficult
  - Limited selection on state contract (but getting better)
  - Need to train drivers on use, plugging in

- Example of success: New York City

Planning Under Way

- New York City and Albany have each undertaken major EV planning efforts
  - NYC has extensive plans for EVs and has new initiative to update building codes to install up to 10,000 EVSE in NYC by 2020
  - Albany crafted a city-wide EV plan that identifies key spots around city for EVSE

Building & Electrical Code Options

- Building codes can be used to
  - Require a set amount of wiring for EVSE in specific types of buildings
    - Vancouver requires 20% of parking spaces in multi-family homes to be wired for EVSE, requires space in electrical room for electrical expansion to service 100% EVs
  - Require accessibility of EVSE
    - Sunnyvale, CA requires at least one EVSE per installation be wheelchair-accessible
- Electrical codes can be used to
  - Reserve space for EV circuits
  - Streamline permitting and inspections
    - Oregon sets rules for what permits and inspections are required for EVSE

Zoning Options

- Zoning ordinance best practices include:
  - Define what types of EVSE are allowable and appropriate in each land use type
  - Request developers install EVSE or wiring with new developments or significant renovations
  - Establish design criteria for EVSE installations
  - Provide density bonuses for EVSE installations
- Different levels of requirements/requests may be appropriate for different communities

Parking Options

- Parking ordinances can help municipalities to:
  - Enable towing or fines for parking in EV-only spaces
  - Require minimum amounts of EVSE for large lots
    - Hawaii requires all parking lots over 100 spaces to have at least one EVSE near the building entrance

Permitting Options

- A wide range of permitting policies have been implemented, including:
  - Online permitting and/or standardized forms specific to EVSE
  - Low-cost EVSE permits
  - Labeling EVSE as minor work
  - Same-day inspections
  - Inclusion of electric service worksheet to confirm that electric service is sufficient
- Permitting guide available from NYSERDA

Permitting – Costs Can Vary

Residential Lessons Learned

- Permit timeliness has not been a problem
- Majority are over-the-counter
- Permit fees vary significantly- $7.50 to $500.00

Region	Count of Permits	Average Permit Fee	Minimum Permit Fee	Maximum Permit Fee
Arizona	66	$96.11	$26.25	$280.80
Los Angeles	109	$83.99	$45.70	$218.76
San Diego	496	$213.30	$12.00	$409.23
San Francisco	401	$147.57	$29.00	$500.00
Tennessee	322	$47.15	$7.50	$108.00
Oregon	316	$40.98	$12.84	$355.04
Washington	497	$78.27	$27.70	$317.25

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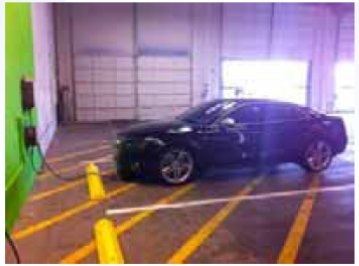
Permitting – Costs Can Vary

Commercial Lessons Learned

- Commercial permits range $14 to $821

Region	Count of Permits	Average Permit Fee	Minimum Permit Fee	Maximum Permit Fee
Arizona	72	$228	$35	$542
Los Angeles	17	$195	$67	$650
San Diego	17	$361	$44	$821
Texas	47	$150	$37	$775
Tennessee	159	$71	$19	$216
Oregon	102	$112	$14	$291
Washington	33	$189	$57	$590



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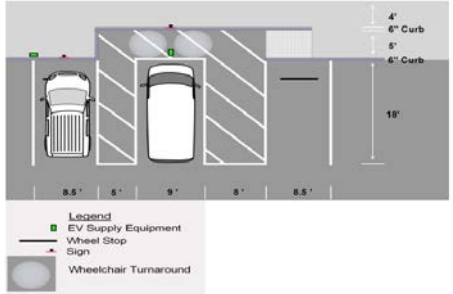
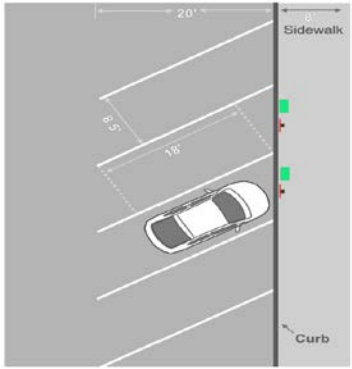
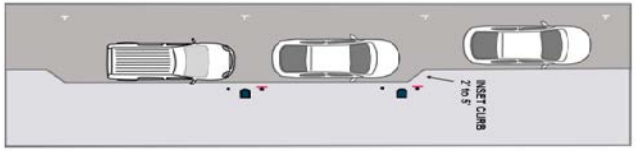
Siting & Design Options

- Inclusion of siting and design standards in zoning ordinances or traffic manuals can help avoid costly, unsafe EVSE installations
- Best practice guides are available at www.northeastevs.org and www.sustainabletransportationstrategies.com







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Siting & Design Factors to Consider

- Cost of Installation
  - Length of cable run from electrical panel
  - Pavement
- Convenience for PEV drivers
- ADA Compliance
- Impacts on Pedestrians and Traffic Flow
- Protection from Traffic and Plows
- Optics of Potentially Empty Parking Spaces

Signage Options

- MUTCD-approved signage is now available
- Wayfinding signs – similar to gas stations, but may need more in parking lots
- Signage should be distinct from other uses
- Signage design guide available from NYSERDA

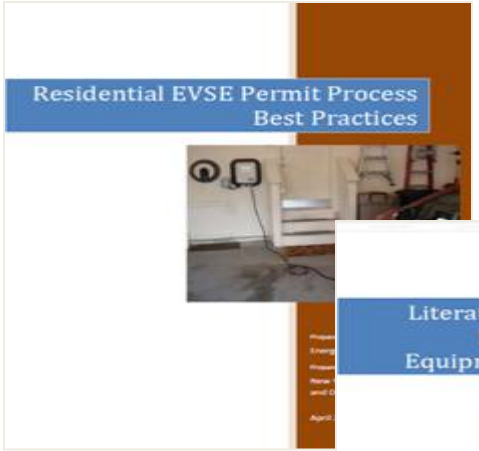
How to Implement

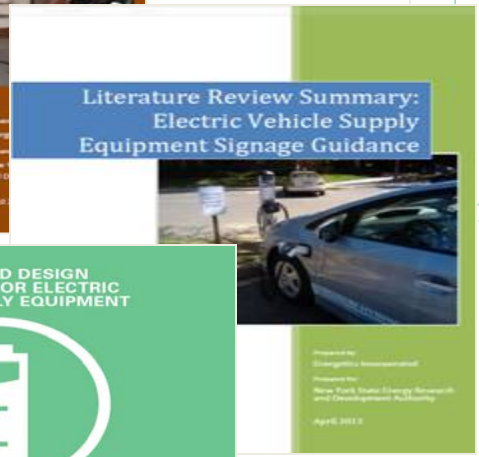
- Tools can be phased in or made optional at first before becoming mandatory
  - Consider pilot phases for new rules
- Rules should be enforceable and not cause undue local burdens
- As with other similar processes, consult with local stakeholders

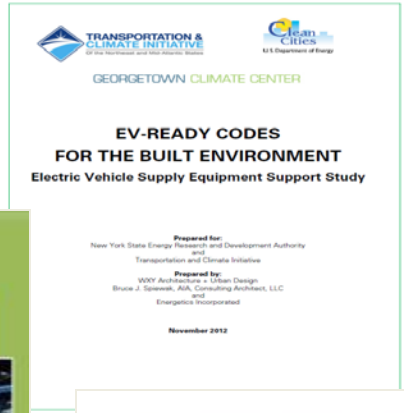
Ways to Work with NYSERDA

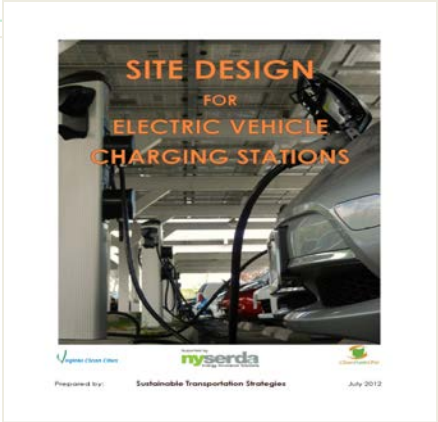
- Cleaner, Greener Communities
  - $5,000 per municipality to update permitting and zoning ordinances
- Future EVSE Incentives
  - Purchasing collaborative
  - Incentives for municipalities
- Demonstration Projects
  - Opportunities to study new technologies, policies

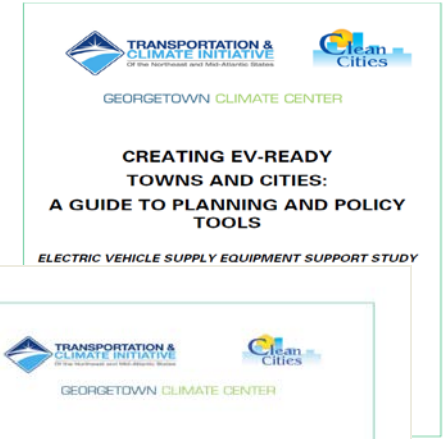
Sources to Support Munis

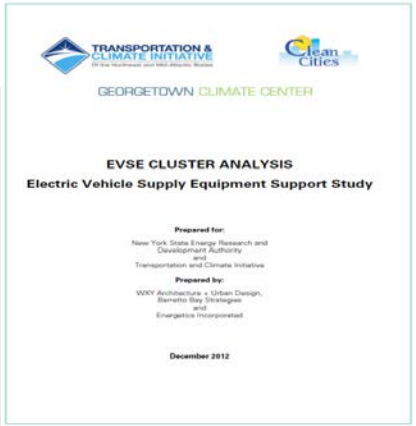












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Thank you!

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