Pursuing Regional Transformations: NCTCOG Initiatives on Electric Vehicles and Solar Energy

North Texas Renewable Energy Group
December 14, 2013

Lori Clark, Principal Air Quality Planner
NCTCOG AND AIR QUALITY

WHO, WHAT, AND WHY?
WHO AND WHAT IS NCTCOG?

Voluntary Association of, by, and for Local Governments
Established in 1966

16-County Region Centered around Dallas-Fort Worth (DFW)
240 Member Governments (Cities, Counties, Special Districts)
Goals Include Planning for Common Needs, Cooperating for Mutual Benefit, and Coordinating for Sound Regional Development

Metropolitan Planning Organization Designation

12-County Metropolitan Planning Area
10-County Ozone Nonattainment Area
Responsibilities Include Reducing Congestion, Enhancing Mobility, and Improving Air Quality
CRITERIA AIR POLLUTANTS

Carbon Monoxide (CO)
Lead (Pb)
Nitrogen Oxides (NO\textsubscript{x})
Ozone (O\textsubscript{3})
Particulate Matter (PM\textsubscript{10} & PM\textsubscript{2.5})
Sulfur Dioxide (SO\textsubscript{2})

Future ? CO\textsubscript{2}, NO\textsubscript{2}, Etc.
NONATTAINMENT AREA TIMELINE


1-Hour Ozone Standard: 125 ppb
4 North Texas Counties Designated

1997 8-Hour Ozone Standard: < 85 ppb

5 North Texas Counties Designated;
Deadline to Reach Attainment: June 2010

2008 8-Hour Ozone Standard: ≤ 75 ppb
Designations Under New Standard: May 1, 2012

Deadline to Reach Attainment: December 2018

ppb = parts per billion
DFW NONATTAINMENT AREA AND 8-HOUR OZONE STANDARD DESIGN VALUES

Legend
- Counties Classified as Nonattainment Under 2008 8-Hour Ozone Standard

2010-2013 Design Value (ppb)*
- 0 - 59 ppb
- 60 - 75 ppb
- 76 - 95 ppb

* Not a full year of data, current as of October 15, 2013.
2013 OZONE SEASON EXCEEDANCE DAYS

Exceedance Levels
- Purple (116+ ppb)
- Red (96-115 ppb)
- Orange (85-95 ppb)
- Orange (76-84 ppb)

Exceedance Level indicates daily maximum 8-hour average ozone concentration. Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the the revised ozone standard of 75 ppb.

* Not a full year of data, current as of 10/15/2013

Source: TCEQ

ppb = parts per billion
8-HOUR OZONE STANDARD TRENDS

- **1997 Standard < 85 ppb**
- **2008 Revised Standard ≤ 75 ppb**

^Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the three-year average of the annual fourth-highest daily maximum 8-hour average ozone concentration is equal to or less than 75 parts per billion (ppb).

^ This data has not been verified by the TCEQ. This is the most current data, but it is not official until certified by TCEQ technical staff.

Source: NCTC009 TR Dept
**DFW NONATTAINMENT AREA**

**2012 NO\textsubscript{X} EMISSIONS INVENTORY***

Total NO\textsubscript{X} = 370 Tons Per Day (tpd)

- **On-Road**: 181.4, 49%
- **Non-Road**: 100.8, 27%
- **Area**: 18.2, 5%
- **Oil & Gas**: 18.4, 5%
- **Point**: 51.0, 14%

*Source: TCEQ*
INNOVATIVE STRATEGIES: ON-ROAD

www.nctcog.org/evnt
www.dfwcleanCities.org
ON-ROAD NO\textsubscript{x} EMISSIONS INVENTORY* BY SECTOR

*Source: TCEQ
INITIAL AREAS OF FOCUS

Establish Stakeholder Group

Vehicles

- Establish DFW Area as Launch Market
- Implement Incentives for Purchase

Infrastructure

- Implement Public Recharging Infrastructure
- Streamline PEV Purchase and In-Home Charging Installation Process
452 Public Access Locations

Dallas is the 2\textsuperscript{nd} most EV-Ready city based on number of charging stations per capita.*

*Source: PlugShare, September 2012
ALTERNATIVE FUELING STATION LOCATOR

Electric Vehicle Charging Station Locations
Find electric vehicle charging stations near an address or ZIP code or along a route in the United States. For more alternative fueling stations, use the Alternative Fueling Station Locator.

www.afdc.energy.gov
Mobile App for iPhone
ELECTRIC VEHICLE REGISTRATION
(CURRENT AS OF AUGUST 2013)

Total EV Registration:
Texas: 2,994
DFW Area: 979 (33%)
(As of August 2013)

*Four additional EV models tracked beginning April 2013
Source: NCTCOG
CURRENT AREAS OF FOCUS

Structure
Integrate Stakeholder Group with DFW Clean Cities Coalition

Vehicles
• Promote Light-Duty Motor Vehicle Purchase or Lease Incentive Program
• Promote Fleet-Level Adoption
• Explore Dealer Partnerships and Education
• Evaluate Rental Car Partnerships
• Coordinate with Texas Department of Motor Vehicles to Record Fuel Type

Infrastructure
• Ensure Sufficient Resources After EV Project
• Facilitate Education for Permitting Officials
• Engage Local Businesses in Workplace Charging Challenge
• Integrate “EV-Ready” Practices into Regional Codes
DFW CLEAN CITIES COALITION

National Clean Cities Program

- Goal: Reduce Petroleum Use by 2.5 Billion Gallons/Year

DFW Clean Cities

- Local Coalition
- Displaced 12.8 Million Gallons 2012
- Increase Reductions by 15% Year
DFW CLEAN CITIES COALITION

Technologies:
- Alternative/Renewable Fuels
- Fuel Economy
- Idle Reduction
- Trip Elimination

Services:
- Training and Information
- Technical Assistance
- Education and Outreach
- Connecting Fleets with Industry Partners
PROMOTE VEHICLE INCENTIVES

Light-Duty Motor Vehicle Purchase or Lease Incentive Program

Funding
• $2,500 Incentive Amount per Vehicle
• $3.8 Million Available for 2014-2015 Biennium

Eligibility
• Purchases or Leases
• Individuals, Businesses, and State/Local Governments
• Vehicles Must be Registered and Operated in Texas for One Year
• Vehicles Must Incur 75% of Annual Mileage in Texas

Pending TCEQ Rulemaking - Key Dates
• December 18, 2013: Deadline to Submit Comments
• April 2014: Rule Adoption Anticipated
WORKPLACE CHARGING CHALLENGE

Department of Energy Program

Goal to Increase Number of Employers Offering Workplace Charging by Tenfold in Five Years

Process - Employers sign Pledge as “Partners”
  Commit to Assess Employee Demand
  Develop Plan to Install Infrastructure
  Share Progress

DFW Area Partners
  Schnieder Electric, Carrollton
  Verizon, Irving
  Who’s Next?
INNOVATIVE STRATEGIES

SOLAR READY II

www.nctcog.org/solar
SOLAR READY II GOALS

Department of Energy SunShot Initiative

Goal to Make Solar Energy Cost-Competitive With Other Energy Sources

- Reduce costs through regulatory reform
- Increase access to financing
- Promote solar adoption
SOLAR READY II PARTICIPANTS

National Partners
- Mid-America Regional Council (MARC)
- National Association of Regional Councils (NARC)
- Meister Consultants Group
- Council of State Governments

Regional Planning Councils
SOLAR READY II PROCESS

Establish Stakeholder Group

Identify Region-Specific “Soft Cost” Barriers

Engage Local Governments

Submit Data on Current Practices
Evaluate Existing Processes/Policies
Implement Best Management Practices

Administer Training Programs
“SOFT COST” BARRIER AREAS

Permitting
Zoning
Financing
Labor Cost
Lack of Education/Information
Utility Support
Lack of Incentives
Other

Results From Polling at December 11 Meeting

- Permitting: 12%
- Zoning: 10%
- Financing: 15%
- Labor Cost: 12%
- Lack of education/info: 16%
- Utility support: 13%
- Lack of incentives: 14%
- Other: 8%
BEST MANAGEMENT PRACTICES

Process Improvements
- Standardize Permit Fees
- Pre-Qualify Plans and Installers
- Streamline Permits
- Notify Utility

Planning Improvements
- Improve Solar Access
- Educate Developers
- Educate Homeowners
- Improve Solar Readiness
- Engage HOAs

HOA = Homeowners Association
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