You Will #FindYourPark is now Greener!
Clean Cities Partnerships are bringing AFVs to Our National Parks

LAF 2016 Conference & Expo – 4/14/16
Jonathan Overly, ETCleanFuels

ETCleanFuels.org
Reducing oil dependence one fleet at a time.
Agenda

✓ Brief DOE and TN Clean Cities Introduction
✓ NPS turns 100!
✓ The Clean Cities National Parks Initiative - CCNPI
✓ What Parks are working on cleaner fuels & options?
✓ Example: Great Smokies work in 2014-2015
✓ GRSM Video

TNCleanFuels’ 2016 Platinum Members:

ETCleanFuels.org
Reducing oil dependence one fleet at a time.
What is Clean Cities?

Clean Cities advances the nation's economic, environmental, and energy security by supporting local actions to reduce petroleum consumption in transportation. A national network of nearly 90 Clean Cities coalitions bring together stakeholders in the public and private sectors to deploy alternative and renewable fuels, idle-reduction measures, fuel economy improvements, and emerging transportation technologies.
Who is ETCleanFuels?

- 14-year old nonprofit in East TN, 501(c)3
  - 2 full-time staff, several interns
  - Became Designated member of U.S. DOE Clean Cities Program in 2004
  - Contract with UT Knoxville for staffing & office space
  - 1 of 2 Clean Cities coalitions in TN

- Helps Fleets Save $$$ & Reduce petroleum use
  \(( GGE = \text{Gasoline Gallon Equivalents})\)
How We Serve Our Members

No one in Tennessee has the knowledge we do to help you evaluate any of the alt fuels, and the connections to get you industry & fleet user insights.

- Review w/you different alt fuels or advanced vehicles; ROI analysis; loaner AFVs for you test drive; outside entity promoting you as PROACTIVE (suggest for TN or regional awards)

- **Writing grants – We have won over $2 million in funding in last 5 years**

- Associate with other fleet managers & industry leaders via coalition meetings, events & webinars

- **Access to our network of alt-fuel professionals from across U.S.**
Member Projects

ETCleanFuels.org
Reducing oil dependence one fleet at a time.
Happy Birthday National Parks!

- The National Park Service turns 100 on August 25, 2016!
- The centennial will kick off a second century of stewardship of America's national parks and engaging communities through recreation, conservation, and historic preservation programs.
Objective: Support visible projects that reduce petroleum consumption, vehicle greenhouse gases, and other emissions.

Goals: Educate park visitors, employees, and communities about the benefits of using cleaner, more efficient vehicles and renewable and alternative fuels.

Supports the NPS “Call to Action” to help focus sustainability efforts, deepen community collaboration and make a concentrated difference as we celebrate the Centennial anniversary.

A critical component of the CCNPI is leveraging the impact from influencing visitors.
Clean Cities National Parks Initiative: Projects Summary to Date

- 32 projects
- 29 National Park Service Units
- 19 Clean Cities Coalitions
- Over 80 million annual visitors
- Direct 70,000 gallons of petroleum reduced annually
- Direct 425 metric tons of GHG emissions reduced annually

- Leveraging Visitor Idle Reduction Education and Awareness results in incremental displacement (while in the parks):
  - ~69,000 gallons of petroleum
  - ~700 metric tons of GHG emissions

Long Term Impacts becomes Extraordinary if visitors are motivated to take action when they return home.

cleancities.energy.gov/national-parks
Goal #5 - Green Our Rides

- The NPS will transform the agency fleet and adopt greener transportation methods.
- The NPS will evaluate and transform the size, types of vehicles, and technologies used in its fleet.
- The NPS will increase the use of high-efficiency and low-GHG emitting vehicles and will reduce fuel consumption by 20% by 2015 (from 2005 baseline).
- The NPS will support alternative commuting practices, including employee telework.
- The NPS will reduce GHG emissions attributable to official travel.
In 2012, NPS greenhouse gas (GHG) emissions totaled approximately **320,000 tons**.

- The majority (43 percent) originate from employee travel through fleet vehicles, commuting, and business travel.

- Remaining emissions stem from park building energy consumption (42 percent) and smaller sources such as waste disposal and wastewater treatment.
GRSM – Previous Vehicle Projects

- **Biodiesel** – After investigating in 2004 and 2005, GRMS started using B20-B50 in all its vehicles... and as B20 bioheat in the Headquarters building! Have been using B20 for over a decade.

- **Low-speed EVs** – Starting in 2005, the Park replaced several ½- or ¾-ton work trucks with these smaller EV mini-trucks; perfect fit!

- **Hybrids** – Have acquired ~20 hybrids over last 10 yrs. With some DOE assistance, Toyota donated 4 Prius in 2004 that have been used for over a decade as Visitor Assistance Vehicles.
GRSM – 2014-15 Projects

✓ Replaced 3 full-size work trucks with low-speed EVs – rightsizing, electrification, save $$

✓ Converted 5 gasoline zero-turn mowers to propane – Cleaner burning; reduced noise, spillage concerns, save $$

✓ Installed EVSE: DCFC + Level 2 – Placed nation’s first DCFC equipment in a national park; added one Level 2 unit and one dual-connector DCFC unit at each the primary Visitor Centers in TN (Gatlinburg) & NC (Cherokee)
GRSM – 2014-15 Projects

1. Low-speed EVs: Vantage “GreenTruck” (with GREAT wrap!)
GRSM – 2014-15 Projects

2. Gasoline mowers: Converted to propane autogas  *(bought 2 add’l OEMs in Oct. ‘15)*
GRSM – 2014-15 Projects

3. EVSE: DCFC & Level 2
GRSM – 2014-15 Projects

3. EVSE: DCFC Up-close
GRSM – Video

Worked with our Clean Cities intern Donna Vanderbilt to shoot, edit and complete this video that is on the “CleanCitiesTV” YouTube channel

- 289 views
  since Feb. ’16

Click on image or here to access video: bit.ly/GRSM-CCNP1
GRSM – 2014-15 Projects

Additional: Idle-reduction Signage
- Placed sets of signs at 4 parking areas
Questions?

Thank you!

Jonathan Overly
✓ www.ETCleanFuels.org
✓ jonathan@etcleanfuels.org
✓ 865-974-3625

Follow us on Twitter, Facebook, Flickr or YouTube – “ETCleanFuels”

Follow us on Instagram – “TNCleanFuels”
Pictures of EVSE - Level 2

- Different charging levels (AC, DC)
- Cost
- “Dumb” vs. “Smart”
EV Charging Locations in TN

December 2015

303 electric stations
707 charging outlets in Tennessee
Excluding private stations