



Transforming energy use in America's Heartland since 1983

Mission

To create resource efficiency,
environmental health and economic
vitality in mid-America.

Programs

- Alternative Fuels and Clean Transportation
 - Central Kansas Clean Cities Coalition
 - Kansas City Regional Clean Cities Coalition
- Energy Efficiency in Buildings
- Energy and Environmental Training

Overview

The SAFD Project

Timeline

- Start: July 2015
- End: June 2017
- 40% complete

Barriers Addressed

VTO Deployment - Outreach

- Consumer reluctance to purchase new technologies
- Lack of technical experience with new fuel and vehicle technologies
- Availability of AFV and alternative fuel refueling

Budget

Total project: \$312,650

- DOE: \$250,000
- Local: \$62,420
- Funded with FY15 funds
- Spent: \$73,105 (as of 4/1/2016)

Partners

- Kansas Fire and Rescue Training Institute
- Missouri Fire and Rescue Training Institute
- FS Circle Solutions
- Kansas City Regional Clean Cities Coalition

Project Objectives

The SAFD Project

Objectives

Increase acceptance of alternative fuels by removing financial and logistical barriers for public safety officials to train on alternative fuel safety.

Leverage existing training structures with the State Fire & Rescue Training Institutes (FRTI) in Missouri and Kansas.

Develop gaseous fuel training curriculum for FRTI

Develop online course for use by FRTI

Disseminate curricula in Kansas and Missouri FRTI

Leverage KS and MO FRTI to disseminate courses to the North American Fire Training Directors

Supports VTO-Deployment Program Goals

By 2020, to achieve a petroleum reduction of over 2.5 billion gallons per year through voluntary adoption of alternative fuel vehicles and infrastructure.

To ease market introduction of alternative fuels and new electric drive vehicle technologies through voluntary efforts in partnership with local communities; and

To provide technical and educational assistance to support local communities and partnerships that promote better understanding of the benefits of these new technologies.

Approach

The SAFD Project



Approach: Milestones

The SAFD Project

Period 1 through June 30, 2016 (as of Apr 15, 2016)

Status	Milestone	Type	Description
Complete	Subcontracts Complete	Technical	Execute Contracts
Complete	Advisory Committee	Technical	Convene Advisory Committee
In Progress	Draft and Review of Training	Technical	Draft fire fighter training curriculum and fleet education resources, vetting to key parties
In Progress	Develop Curriculum and Instructional Materials	Go/No Go	Curriculum Finalized
Not Started	Publish Curriculum and Resources	Technical	Publish fire fighter training curriculum and publish/release fleet educational resources

Period 2 July 1, 2016 – June 30, 2017

Status	Milestone	Type	Description
Not Started	Develop online course	Technical	Develop online course
Not Started	Train-the-Trainer	Technical	Train-the-trainer workshops conducted
Not Started	Training	Technical	Conduct end-user training
Not Started	Case Study	Technical	Complete case study

Accomplishments and Progress

The SAFD Project

- ❑ First advisory meeting
- ❑ Completed draft of AFV Awareness course
 - Is the first module of the Gaseous Fuels Safety course
 - Can be used as a standalone course for a variety of audiences
- ❑ Completed draft of Gaseous Fuels Safety course
 - Leverages previous DOE investments
 - Specific to fire safety professionals
 - Free license for use in fire safety training institutes

Developed by fire professionals for fire professionals.

Preparation		
Presentation		
Application		
Evaluation		

Alternative Fuel Vehicle Awareness

Table of Contents

Estimated Total Time: 3 hours 30 minutes

Time	Section/ Activity	Pages
	Overview and Preparation	OP-1
15 mins.	Lesson 1: Course Introduction	L1-1 to L1-5
90 mins.	Lesson 2: Alternative Fuel Vehicle Types	L2-1 to L2-6
45 mins.	Lesson 3: Alternative Fuel Vehicle Safety	L3-1 to L3-5
60 mins.	Lesson 4: Alternative Fuel Vehicle Incentives	L4-1 to L4-5

circumstance.

- Seeding local alternative fuels markets through projects that deploy vehicles and fueling infrastructure.

D. As part of DOE's Vehicle Technologies Office, Clean Cities has saved more than 6.5 billion gallons of petroleum since its 1993 inception.

Instructor Note: Instructors should encourage students to reach out to their local Clean Cities program for resources and funding opportunities.

Accomplishments and Progress

The SAFD Project

- ❑ Standardized curriculum for Fire & Rescue services.
 - Establishes consistent response strategies and tactics for incidents involving alternative fuels.
 - Includes most current information.
 - Available to all states and provinces at no cost.
 - Developed by fire professionals for fire professionals.
- ❑ Formatted in the style most used by Fire & Rescue services
 - Consistent with existing curriculum formats.
 - Easy to use and support.
- ❑ Takes advantage of existing training infrastructure.
 - **Cost effective - does not require creating a new delivery system.**
 - Course designed to become part of the training menu/infrastructure of state fire training organizations.



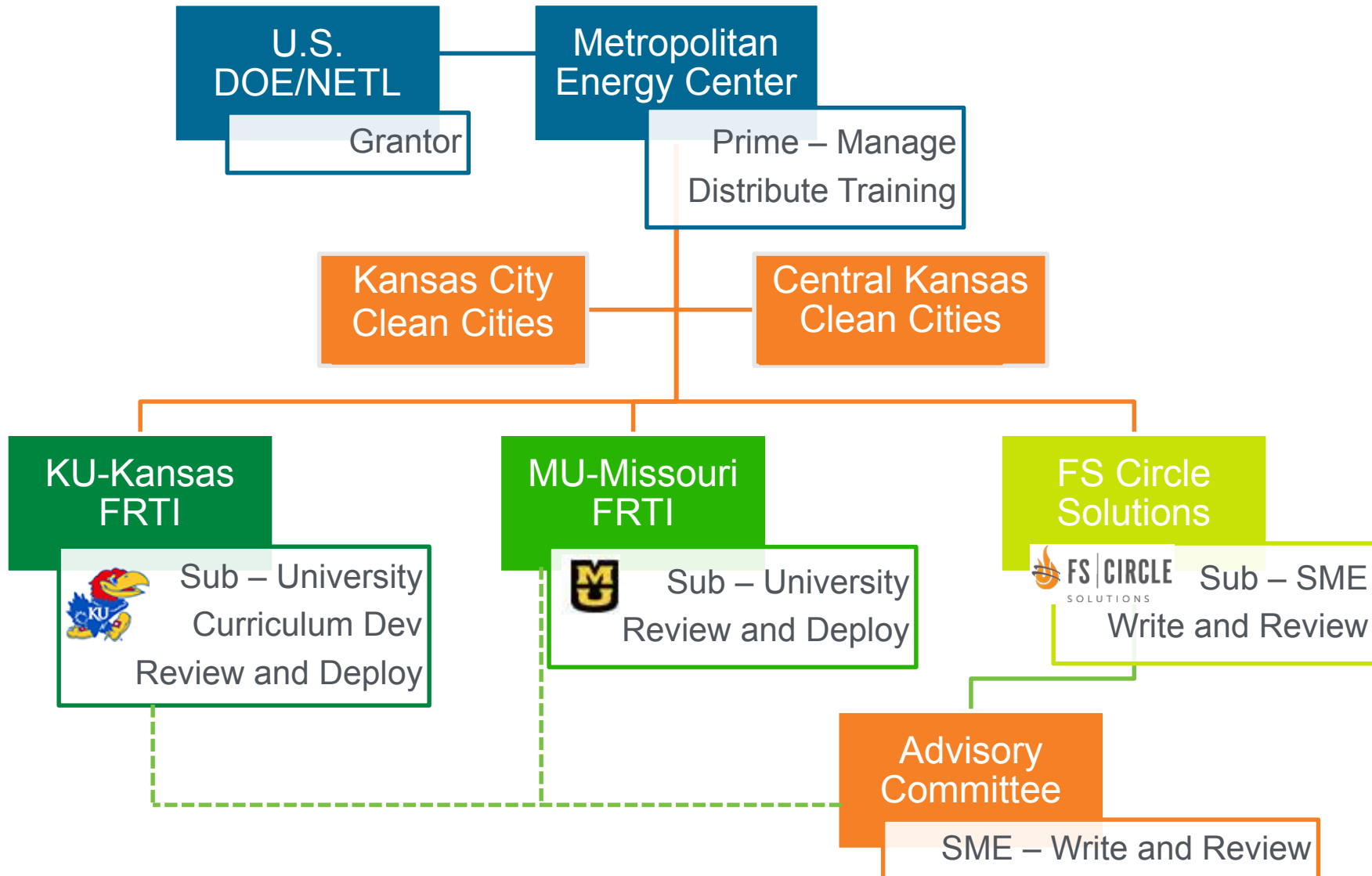
Companion Online Course

- ☐ Online course to be developed for easy adoption into existing state fire training systems.
 - Use of a common platform (Blackboard).
 - Can be easily converted to other platforms (Moodle, etc.)
- ☐ Provides alternative to “classroom” presentations.
 - Reduces delivery costs for host entity.
 - Provides opportunities for independent study in an interactive and engaging format.
 - Enables access for volunteer and rural departments.
- ☐ Establishes possibility of creating a national host for online availability of this training.
 - MEC, DOE, NAFTD member, etc.
- ☐ Online format utilizes current trends in training & education.



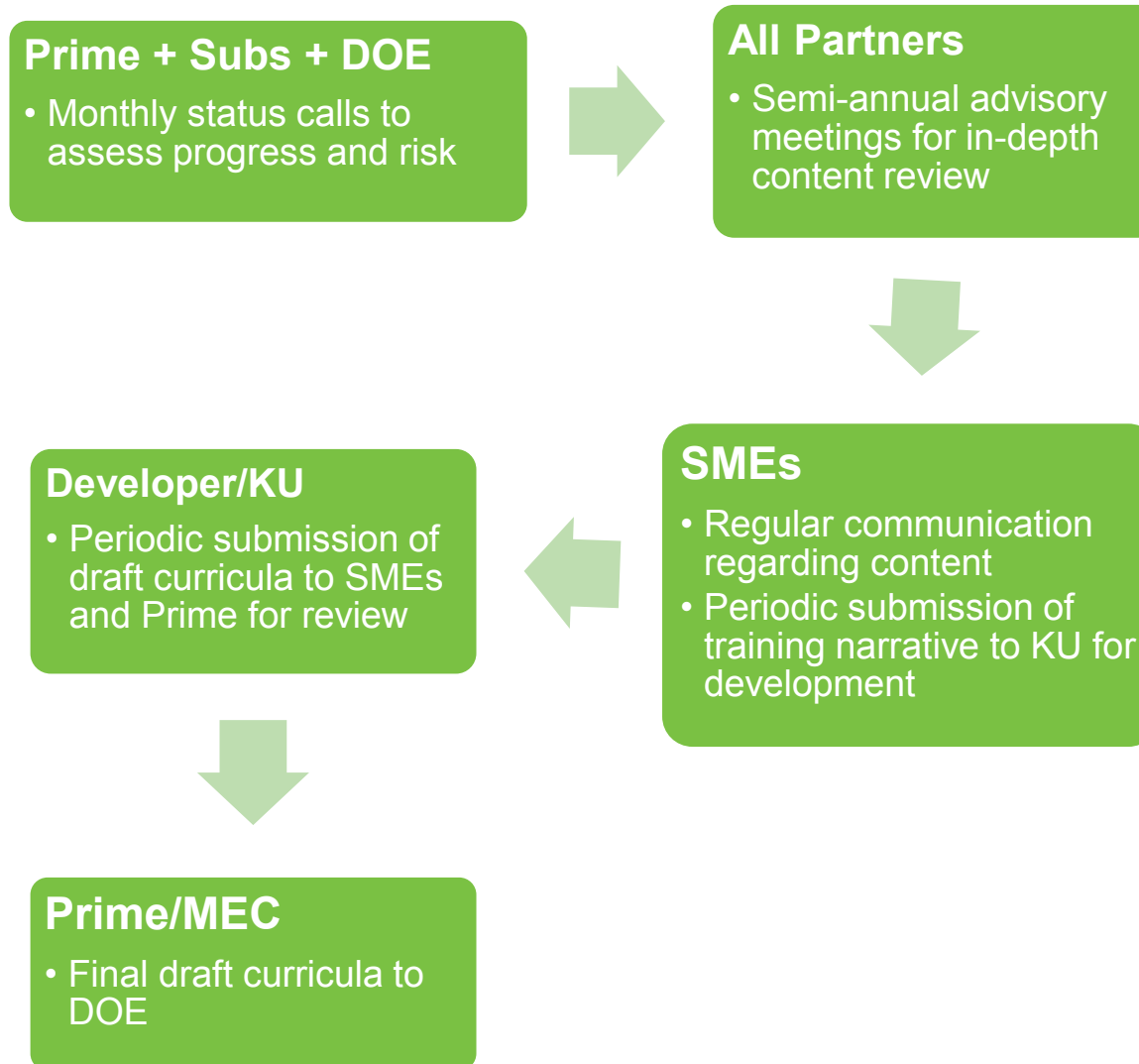
Collaboration and Coordination

The SAFD Project



Collaboration and Coordination

The SAFD Project



Market Impact and Sustainability

The SAFD Project

Petroleum Displacement Impact

Once the training programs are incorporated into state fire training centers, adoptions of gaseous fueled vehicles will accelerate due to fewer objections from well-prepared critical emergency and mechanical services personnel.

Sustained activities beyond the period of performance

By integrating the curricula into existing training systems, it is likely that this project, if successful, will have a long-term, sustainable impact.

The project incorporates a train-the-trainer component that is intended to replicate and advance training material dissemination beyond the project period.

Project replicability

The project includes a case study and presentation describing the project and will be freely available for distribution to First Responder organizations and Clean Cities Coalitions.

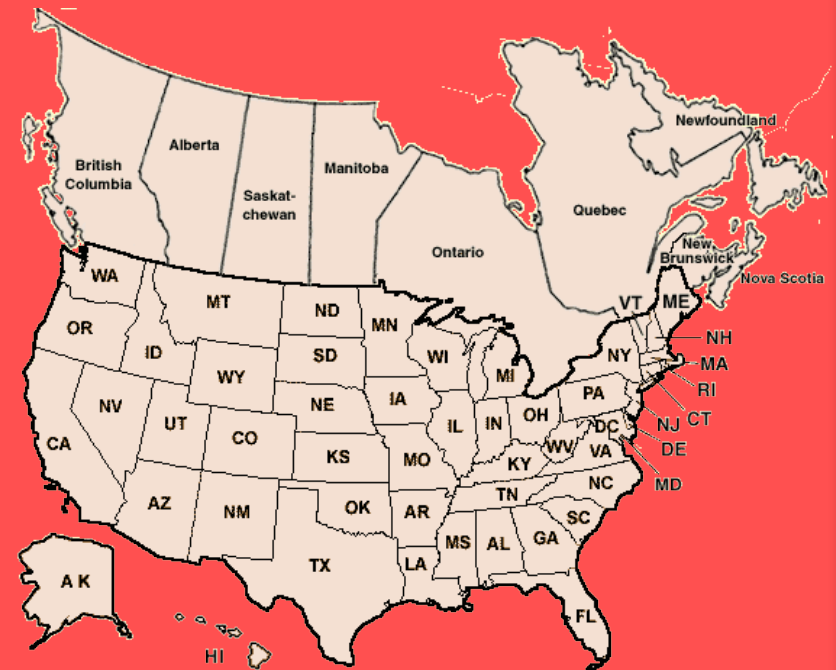
Remaining Project Activities	Sustained After Project Period
Publish classroom trainings	Both classroom and online trainings enter regular rotation in KFRTI & MFRTI
Adapt curriculum to online training platform (currently assumed to be Blackboard)	KFRTI presents program at annual meeting of North American Fire Training Directors (NAFTD)
Test both training platforms and make critical improvements	Members of NAFTD may adopt one or both curricula at no cost
Train-the-trainer for KFRTI, MFRTI and other regional fire safety trainers	Presumably, other fire and rescue training institutes adopt the curricula
Write and release User Guide/Case Study	MEC leverages relationship with OAI, Inc. to offer train-the-trainer in another region

Market Impact and Sustainability

The SAFD Project

- Piloted in Missouri and Kansas; shared and distributed through the North American Fire Training Directors (NAFTD) - www.naftd.org

- ★ *NAFTD represents state & provincial fire service training agency directors.*
- ★ *NAFTD member organizations:*
 - ★ *Train over 940,000 firefighters per year.*
 - ★ *\$200 million operating budget (combined).*
 - ★ *Own/operate 469 classroom, 1,925 fixed or mobile training props.*



Objective

Affordable and
Readily Available
Training



Educated First
Responders



Fewer
Objections to
AFV Adoption



More AFV
Deployments

- Increased petroleum reductions
- Fewer GHG emissions
- Lower cost to market

Collaboration

- Universities
- Clean Cities
- Fire Safety Professionals
- Training Professionals

Project Sustainability

- Free usage licenses for fire safety trainers and Clean Cities
- Leveraging relationships to disseminate free licenses as widely as possible