

Outline for the Cape Cod Renewable Fuels Partnership Strategic Implementation Plan

Study Purpose

Identify potential renewable fuel markets and infrastructure needs for Cape Cod and develop recommendations and steps required to make the use of renewable fuels viable and maximize economic benefits through the development of cooperative efforts.

Scope Outline

- 1.0 Identify Potential Market
 - 1.1 Inventory major market segments including both public and private applications as practical. The market segments' inventory is expected to include:
 - Municipal vehicles – state, local, and federal fleets including military, postal services, and resource agencies
 - Transportation; public transportation providers, long & short haul carriers, large transportation service providers, school transportation contractors, postal services contractors, rail and service based companies, i.e. large contractors
 - Marine; ferries, commercial fishing, research vessels, Coast Guard, Navy, service providers, i.e. whale watching, sight seeing, recreational and sport fishing.
 - Inventory existing private Flex Fuel/diesel vehicles registered on Cape Cod.
 - Heating options
 - Electricity generation; direct and stand by
 - 1.2 Identify the appropriate fuels and volumes required for each of these market segments.
- 2.0 Research and Education
 - 2.1 Develop a resource library and credible sources of information on:
 - Technology
 - Conversion and startup issues for Cape applications
 - Fuel costs and trends
 - Current Emerging technologies and long term considerations
 - Other emerging fuel options such as hydrogen and synthetic fuels from municipal solid waste and wastewater sludge.
 - Current engine technology and warranty policies
 - 2.2 Develop considerations and criteria for sources of biofuels
 - Environmental impacts of production

- Social, economic and sustainability issues
 - Performance compatibilities for the Cape Cod climate of different biofuel strains e.g. compare soy, palm oil, grease, and fish oil biodiesels
- 3.0 Develop Partners
 - 3.1 Develop an education and outreach program to attract committed partners. This would include outreach to the major fleet owners and the existing New England based fuel and distribution industry.
- 4.0 Develop Funding Programs
 - 4.1 Develop incentives for fleet conversions and for municipal contractors such as school bus operators. This will be through federal and state programs as well as potential fuel industry subsidies.
 - 4.2 Investigate opportunities for the development of infrastructure to serve the market segments identified in Task 1.0. This will include direct grant programs and identification of potential partners that can administer loan programs from federal, state, and private sources.
 - 4.3 Contact potential fuel suppliers to investigate opportunities for joint investment with local wholesale and retail distributors.
 - 4.4 Create incentives for personal renewable fuel vehicles through auto manufacturers and lending institutions.
- 5.0 Identify Infrastructure Needs
 - 5.1 Inventory existing renewable fuel outlets, suppliers and capacities.
 - 5.2 Develop geographic relationships between existing suppliers and potential demands identified in Tasks 1.0 and 2.0
 - 5.2.1 Identify fleets and areas not currently served by renewable fuel suppliers.
 - 5.3 Prioritize areas for infrastructure improvements through measures including opportunities and cost/benefit.
 - 5.4 Investigate other limiting factors such as delivery & storage to Cape Cod from off-Cape sources.
 - 5.5 Develop a cost database
- 6.0 Investigate viability of Regional Resources and Sustainable Options
 - 6.1 Local Production including the use of:
 - Waste oil
 - Fish oil
 - Algae
 - Other local biomass sources
 - 6.2 Municipal Waste Opportunities
 - 6.2.1 Anaerobic Digesters
- 7.0 Permitting
 - 7.1 Investigate laws and environmental permitting issues with regard to renewable fuel production, distribution, storage and use.

- 8.0 Make Recommendations
 - 8.1 Develop performance measures and goals for plan implementation for each of the tasks.
 - 8.2 Local agency/resource for facilitating plan implementation
 - 8.3 Infrastructure
 - 8.3.1 Target areas
 - 8.4 Funding to Pursue
 - 8.4.1 Private Sources
 - 8.4.1.1 Industry Partners
 - 8.4.1.2 Financial Institutions
 - 8.4.1.3 Philanthropic Foundations
 - 8.4.2 Government Programs
 - 8.4.2.1 Grants
 - 8.4.2.2 Loans
 - 8.5 Continued Development and Educational Programs
 - 8.6 Incentives for renewable fuel use
 - 8.6.1 School transportation providers
 - 8.6.2 Public Works construction vehicles
 - 8.7 Supply
 - 8.7.1 Bulk and/or guaranteed price programs
 - 8.7.2 Rail/truck/sea delivery
 - 8.7.3 Storage
 - 8.7.4 Local Production
 - 8.8 Standards for biofuel sources for Cape Cod