

Fuel Cell and Hydrogen Opportunity Center

Project ID # - MN013

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Virginia Clean Cities

1401 Technology Drive

Harrisonburg, VA 22802

One designated statewide Coalition in Virginia - since 1996

501c3 not-for-profit & James Madison University partnership

Supported by stakeholder members, DOE, DMME, and grants

Managing alt fuel deployment and education programs on behalf of governments, fleets, and other stakeholders

Strategies:

- Partner with States & Local Organizations, Public and Private fleets
- Provide Outreach, Education, & Information Resources
- Facilitate Infrastructure Development
- Provide Technical & Financial Assistance

Timeline

- Commence: July 1, 2015
- End: June 30, 2018

Budget

- Total Project Budget
 - \$475,743
- Federal Share
 - \$450,000
- Recipient Share
 - \$25,743
- Total DOE Funds Spent*
 - \$139,386

*As of 3/31/16

Barriers

- Barriers Addressed
 - The lack of updated readily available, objective, national and accurate supplier information
 - Holes in supply chain information – high soft costs of collaboration

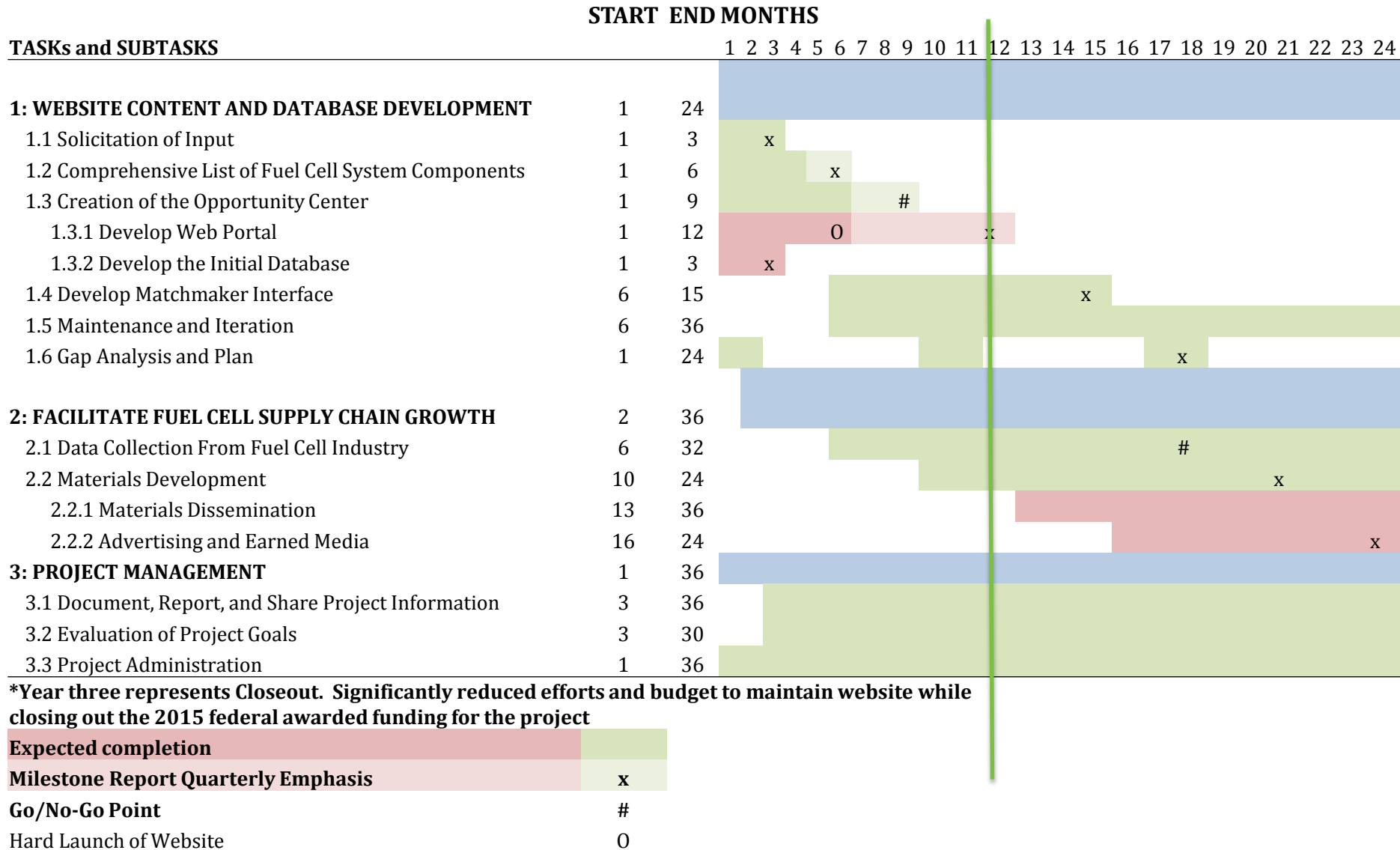
Partner/Collaborators

- VCC at James Madison University, Alleyn Harned and John Hulvey
- Birch Studio, David Robinson
- Breakthrough Technologies Institute (BTI), Robert Rose

- Project Objectives

- To expand the domestic supply chain of hydrogen components and systems.
- Scale-up of the fuel cell and hydrogen supply chain by building and populating a comprehensive communications database.
- Drive U.S. companies to the website via an aggressive outreach campaign.
- Advance hydrogen fuel cell suppliers in the transportation, utility, industrial, commercial, and residential sectors, with a focus on the transportation sector in fuel and infrastructure supply chain systems
- Reduce greenhouse gas emissions, and air pollution and contribute to a more diverse and efficient energy balance by facilitating the widespread commercialization of hydrogen and fuel cell technologies.

Approach



Approach



Type	Milestone #	Milestone Description	Milestone Verification Process	Anticipated Date	Anticipated Quarter
Milestone	1.1	Input and feedback will be collected from DOE and Laboratories on the visually accessible public interface to ensure critical parties interests are addressed.	Team will complete a survey input from key industry members	Month 3	Q 1
Milestone	1.2	The team will compile data and solicit information from suppliers to populate all components of a fuel cell system.	The team will sign off on a completed list of fuel cell system components to be incorporated into the web portal.	Month 4	Q 2
Go/No Go	1.3	The opportunity center will be up and running within 6 months of sub agreement completion and be populated with the information collected to date.	Team will release the website to a wider audience and seek feedback on any issues which may have been missed in our smaller testing group. Critical bugs (i.e. functional failures) will be addressed within 24 hours of submission. Aesthetic issues will be addressed within 72 hours.	Month 6	Q 4
Milestone	1.3.1	The web portal will be developed to house the opportunity center for industry to gather and input information.	Team will confirm and test the site to ensure the site is working .	Month 6	Q 3
Milestone	1.3.2	Input and feedback from project partners on technical specifications of the opportunity center including user experience and functionality.	Team will collect feedback from the project partners and incorporate the input into the opportunity center. Full database iteration complete.	Month 3	Q 3
Milestone	1.4	An interface will be developed to allow fuel cell companies and hydrogen companies to partner based off of similar needs.	The project manager will consider this tool a success if 10 companies opt in to the "interested in partnering with others" function.	Month 15	Q 5
Milestone	1.5	The project team will update the database continuously and technical specification will be monitored and updated quarterly.	The project team will follow data management protocol to ensure proper real time data is available.	Months 6-36	Q 3,4,5,6,7,8,9, 10,11,12
Milestone	1.6	The project team will identify the fuel cell system gaps and cater the opportunity center to narrow the gaps identified.	Once the opportunity center has been up and running for a full quarter the project team will identify gaps in the supply chain by data mining the existing information. They will then seek information bi-annually from additional suppliers not previously captured.	Months 18, 24	Q 6

- Name of website chosen: **www.HFCnexus.com**
- Server space acquired from James Madison University and creation web portal
- Website design, graphics and user interface in development
- Developing branding and launch in cooperation with Department of Energy
- Data entry of 220 hydrogen and fuel cell companies into website for initial database
- Developing the Matchmaker Interface

- Virginia Clean Cities at James Madison University
 - Manages project through Virginia Clean Cities – 20 year old program with past hydrogen education project with DMME /DOE
- Birch Studio
 - an experienced branding agency that has advanced a diversity of online informational tools and networking opportunities and focused visualization and user interface design in the alternative energy sector. Birch has advanced thousands of projects and currently hosts over 100 websites.
- Breakthrough Technologies Institute
 - an independent, non-profit educational organization dedicated to promoting advanced environmental and energy technologies from the perspective of the public benefit and operator of Fuel Cells 2000 which advances the commercialization of fuel cells including sharing information in a website that attracts 15,000 visitors monthly

- Website Development and Database Management
 - VCC will work with DOE and program partners to perform a Gap Analysis and develop a plan to address gaps in the industry
 - The primary barriers to success for this task are obtaining meaningful cooperation from organizations that can share the opportunity with target audiences and developing or expanding interest in the fuel cell and supplier marketplace at this stage.
- Facilitating Fuel Cell Market Growth
 - VCC will continue the process of marketing the website through advertising and earned media.
 - VCC will work with DOE and project partners to develop informational and promotional materials that will highlight the benefits of participating in this database.

Remainder for FY 2016

- For Website Development
 - Develop Matchmaker Interface
 - Site Maintenance
- Develop the Matchmaker Interface
- Site Maintenance and Iteration
- Gap Analysis
- For Advertising and Marketing
 - Materials Development
 - Materials Dissemination
- Document, Report, and Share Project Information

FY 16 GO/NO GO

1.3 –Website up and populated with 220 initial companies **GO**

-Variance: site still private

2.1 Collect Data from Suppliers

10% increase in year 2 to 242

For FY 2017

- Site Maintenance and Iteration
- Continue Advertising and Marketing
 - Materials Development
 - Materials Dissemination
- Increase database size by 10%
- Document, Report, and Share Project Information

- **Objective:** Build and market a comprehensive hydrogen database for U.S. companies interested in alternative fuels.
- **Relevance:** Reducing barriers to education on hydrogen as an industry and expand market opportunities for the fuel
- **Approach:** Develop a comprehensive list and database of fuel cell system components. Begin work with partners on the creation of the Fuel Cell and Hydrogen Opportunity Center and Web Portal. Develop marketing plan for the promotion of the website.
- **Accomplishments:** www.HFCnexus.com, 220 entries, UI and website designed, Gap Analysis and Plan
- **Collaborations:** JMU, Birch Studio, and BTI

Virginia Clean Cities

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