

H2-Twin Cities Initiative

Summary

This document summarizes a proposed ***“H2 Twin Cities” Initiative*** to incentivize global partnerships and enhanced collaboration, coordination and information exchange between regions in different countries to accelerate hydrogen deployments and user acceptance in communities. While the term “twin cities” is used in the title for name recognition and visibility, the intent is to not restrict engagement only to cities but include towns, communities, municipalities, jurisdictions (small or large) and regions in general that encompass a critical mass of hydrogen and fuel cell deployments across sectors to enable scale. The intent is to create awareness and best practices in accelerating deployment of hydrogen and fuel cell technologies across applications, including in the public domain such as buses, other vehicles, and stationary power in homes and commercial buildings. The concept is modeled after Sister Cities or Friendship Cities to “promote peace through mutual respect, understanding, and cooperation — one individual, one community at a time,” as well as Clean Cities and Smart Cities partnerships which were developed to share information and resources among similar minded entities.

Problem Statement

Today there are very limited regions in the world where hydrogen and fuel cell technologies are being deployed at scale. Buses, other vehicles and stationary fuel cells are being used in a few scattered regions and communities are typically not familiar with hydrogen. Moreover, city and code officials, fire marshals, building and facility developers, construction workers, insurance companies, inspection and maintenance technicians and others are either unaware of, or often opposed to, new technologies such as hydrogen and fuel cells. Awareness through partnerships with communities that share common interests and plans can help accelerate deployments and showcase specific clusters and success stories. A coordinated and targeted effort that addresses unique challenges of hydrogen such as safety, permitting, and end user acceptance, and that bridges activities across different regions of the world is lacking.

Objectives

The H2 Twin Cities Initiative aims to increase awareness and promote best practices and information sharing on the use of hydrogen and fuel cell technologies at scale in specific regions, communities and cities through concrete targeted partnerships.

The initiative will entail a “competition” to solicit entities to partner and develop an online platform and outreach mechanisms to create and share information that would foster community outreach and end use of hydrogen and fuel cell technologies. Funding would be provided to the winning participants to create and utilize the platform with the intent of growing the initiative and accelerating progress towards greater deployments and end use acceptance and within communities. Funds may also be used for personnel exchange and creating business cases, fact sheets, lessons learned and success stories that may be used by new or expanding regions.

Specific criteria and metrics will be developed to evaluate the teams. It is envisioned that the competition will be run on an annual or biannual basis to continue to grow the number of communities in the network based on impact.

Goals

- Develop municipal partnerships between cities, counties, states and/or similar jurisdictions around the world deploying a critical mass of hydrogen and fuel cell technologies in the public domain.

- Provide online information sharing resources to showcase regions that are achieving hydrogen deployments at scale on lessons learned and best practices
- Stimulate communities, city officials and relevant deployment-focused stakeholders to creatively learn, work, and solve problems together through reciprocal educational, municipal, business, professional and technical exchanges and projects. Examples include best practices in streamlined permitting and community acceptance such as through tutorials, webinars, etc.
- Create and share business cases (e.g. bus fleets, hospitals, trucks, etc.).
- Create a global platform to make connections and increase engagement among broad groups aligned with global partnership commitments under CEM, HEM, IPHE, etc.

Criteria: At least 2 partner cities/communities must be proposed with concrete examples that include both existing and planned deployments of hydrogen and fuel cell technologies, particularly in the public domain.

A holistic approach is encouraged to enable large scale regional production, transport, storage and utilization of hydrogen, minimizing carbon and other emissions across the value chain. Opportunities for public engagement and visibility are also encouraged through real-world every day exposure – such as through buses, trains, other vehicles, stationary fuel cells, backup power.

While ‘twinning’ of cities/communities is the goal, satellite cities may also participate and learn from/contribute to the H2 city partners. More than two cities/communities are permitted as long as resources are not too diluted and there is tangible value. Matching funds/cost share by applicants (e.g. cities, states, and the private sector) is preferred.

Member cities/communities would need to provide a letter of support from the city official (e.g. mayor’s office/equivalent) as well as hydrogen and fuel cell developers and relevant end users (e.g. transit agencies) to demonstrate both existing deployments and commitment to future deployments.

The term cities is used generically but represents towns, regions, jurisdictions, communities. Partnering with internationally recognized initiatives such as Sister Cities is encouraged.

Implementation: H2 Twin Cities was proposed as a work item of the Clean Energy Ministerial (CEM) and will be implemented through collaboration with other relevant partnerships including the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE). Aligned with the intent of avoiding duplication and leveraging existing partnerships and mechanisms, H2 Twin Cities will leverage the Education & Outreach Working Group (E&O WG) of the IPHE. This will permit dissemination to several thousand stakeholders and an established network.

The U.S. DOE Hydrogen and Fuel Cell Technologies Office, aligned with its commitment under the CEM Work Plan, will take the lead in developing and implementing the competition in cooperation with other funding contributors, CEM partners and the E&O WG.

Cities that may show interest: Hamburg, Groningen, Lyon, Fukuoka, San Francisco, Ulsan, etc.

Funding partners: U.S. DOE \$100K to \$200K (others TBD- The Netherlands, Germany, FCH JU, France, Japan, Korea, Canada, etc.)