

H2@Rail Workshop: Examples of Key Questions Discussed by Panelists

Domestic Government Perspectives on Hydrogen Rail:

1. What most excites you about the potential for hydrogen and fuel cell technologies on rail applications? What do you consider to be the foremost challenges for rail?
2. What actions need to be undertaken by government to ensure safe operation of hydrogen and fuel cell technologies for rail applications?
 - a. Do you consider the safety codes and standards effort supporting CNG/LNG to be a good foundation for hydrogen fuel cell technologies?
3. What applications (e.g. line-haul/switcher/passenger) should be the focus for hydrogen and fuel cell technologies in the United States?
4. How should government organizations coordinate and collaborate to enable success in hydrogen rail commercialization?

Hydrogen Rail Status International Overviews:

1. What recent changes or innovations have you seen in hydrogen and fuel cell technologies that encourage you about their future potential for the rail transportation sector in your country/continent?
2. What needs to be done to encourage industries developing hydrogen fuel cell rail applications worldwide?
3. What needs to be done on a global basis to ensure hydrogen fuel cell technologies on rail are deployed safely?
 - a. What groundwork has been undertaken to serve as the foundation for the safe operation of hydrogen fuel cell technologies?
 - b. What are the codes and standards that need to be harmonized worldwide?
4. How should government organizations coordinate and collaborate to enable/accelerate successful hydrogen rail commercialization worldwide?

Industry Perspectives:

Operators

1. What in your opinion are the biggest challenges for hydrogen and fuel cell technologies in rail worldwide:
 - a. How would you like to see these challenges be addressed?
 - b. How does your organization intend to deal with these challenges?
2. What hydrogen-related innovation, application, or technology makes you most excited about its potential for rail transportation applications?
 - a. Are there any inspiring or exciting hydrogen related projects underway that you would like to tell us about?
3. What needs to be done to ensure disruptive clean technologies like hydrogen are deployed safely in rail applications?
 - a. What groundwork has been undertaken to serve as the foundation for the safe operation of hydrogen fuel cell technologies?

4. Do you consider the safety codes and standards effort supporting CNG/LNG to be a good foundation for hydrogen fuel cell technologies? If so, what areas can be adapted for relevance to hydrogen?

Technology Developers

1. What are the biggest technology barriers to hydrogen rail applications and what R&D is needed to overcome these barriers?
2. What are the “learnings” from the CNG/LNG/all electric developments in rail that are applicable to hydrogen fuel cell technologies and must be successfully addressed for commercialization?
3. What are the economic challenges that must be overcome for hydrogen fuel cell technologies to be commercialized for rail transportation applications?
4. Which type of rail application has the highest penetration potential and potential for impact?