



# International Codes and Standards

PATH Workshop

20 May 2010



# Introductions

- Karen Hall – UK Hydrogen Association member and technical lead on the US National Hydrogen Associations Codes & Standards activities
- Representatives from many countries and standards development organizations present
- Support from the US Department of Energy



# Introduction

- Codes and Standards are cross-cutting activities important to all member countries
- International Standards allow technologies to be deployed worldwide
- Collaboration at events such as this workshop helps identify priorities and issues
- PATH member representatives are typically not directly involved in codes and standards
  - Need to identify and engage the C&S experts in each country



# Who is not here today but should be? How can we get them more involved?

Country	Contact	Comments
US	Jay Keller	
Canada	Randy Dey	
US	Dan Dedrick – Sandia, Carl Rivkin – NREL, Jim Ohi – Consultant to DOE	
Japan	K. Koseki	
France	F. Barth	
Argentina	Jose-Luis Aprea	
Brazil – see ISO list		
China	Mr. Gen Wang	
Spain	Antonio Gonzalez, INTA	



# Key Priorities in C&S

Need	Discussion
Spain	refuelling stations CSR – ISO is developing one, but Countries have regulations that must be followed – need to be developed and recognized by the laws also licensing and regulations for the vehicles themselves – to put them on the road GTR under development – what about retrofit/conversions?
US	fork lift trucks – tanks, pressure cycling, structural issues
Canada	Parking structures – enclosed or open, mix of vehicle, home parking garage Canadian Hydrogen Installation Code (not under law) process for approvals – should try to share internationally (US has permitting guidelines as well) HY-PER for Europe
US	– Harmonization of codes, standards
Argentina:	harmonization with CNG requirements
H2-CNG blends	– vehicles, refuelling stations, connections, pressures, infrastructure, etc....
US	– NFPA addressing metal hydrides
Canada	– backup power, telecom – moving hydrogen – CSR for tanks – transport and tank specs micro and portable FC markets – transporting hydrogen (IEC TC 105?) transporting the small quantities of hydrogen – aircraft, other transport H2 inside closed buildings – such as exhibits!



# Follow-up

- To be able to exchange information and measure progress and success in the areas we have identified, follow-up activities may be needed.
- Form a new PATH Working Group on Codes, Standards & Regulations?
- Other ideas?

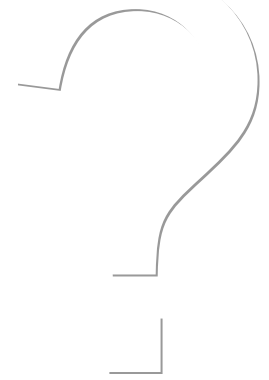


# Next Steps

- Contact the C&S experts identified earlier
- Disseminate Report from this workshop
- Arrange next workshop or working group meeting
- Develop a Roadmap to achieve the priorities identified.



Q&A



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***Thanks!***