Country update: European Commission

IPHE ILC/SC Meeting, Washington 1-3 Dec. 2009

Beatrice Coda - European Commission
DG Research Energy Conversion &Distribution System

Outline

- Context: SET Plan- Energy Targets
- Key Features of the Fuel Cells and Hydrogen Joint Undertaking (FCH JU)
- State of Play
- Other results

Context: EU Energy Targets

- By 2020 – three 20s:
  - 20% reduction in GHG emissions
  - 20% reduction in global primary energy consumption
  - 20% share of renewable energy within total consumption, with 10% share in transport
- By 2050: 80% reduction in GHG in industrially developed countries – G8 in Aquila, Italy

Strategic Energy Technology Plan: SET Plan

- The Technology pillar of EU's energy and climate policy
- It calls for a coordinated and complementary action of public and private actors at EU level in financing energy technology research
- October 2009: EC proposal "Investing in the development of low carbon technologies
  - 50 billion investment in R&D over the next 10 years
  - Based on "technology roadmap" in key low carbon technologies with strong potential at EU level
  - EU Industrial Initiatives in 6 areas

Fuel Cell and Hydrogen Technologies

- Great potential to contribute to Community policies, in particular:
  - Energy
  - Environment
  - Transport
  - Industrial competitiveness
- With market growth, most importantly, longer-term contribution to 2050 goal of 80% reduction in GHG
- EU instrument: Joint Technology Initiative- FCH JU) –Public Partnerhsio at EU level

FCH JU
Key Features

Objectives

- Accelerate the development and deployment of fuel cell and hydrogen technologies

- Technology base for commercialisation in timeframe 2015-2020

A Public-Private Partnership

- The European Community represented by the Commission
- European Industry Grouping for the Fuel Cells and Hydrogen Joint Technology Initiative (NEW-IG)
- New European Research Grouping on Fuel Cells and Hydrogen (N.ERGHY)

Bodies

- Executive Bodies:
  - Governing Board
  - Executive Director supported by Programme Office
- Advisory Bodies:
  - FCH States Representatives Group
  - Scientific Committee
  - Stakeholders' General Assembly (SGA)

Funding

- By launching annual, open and competitive calls for proposals

- Budget and cost-sharing:

For 2008-2013: EUR 940 million (minimum)

EC budget: EUR 467 million (in cash)

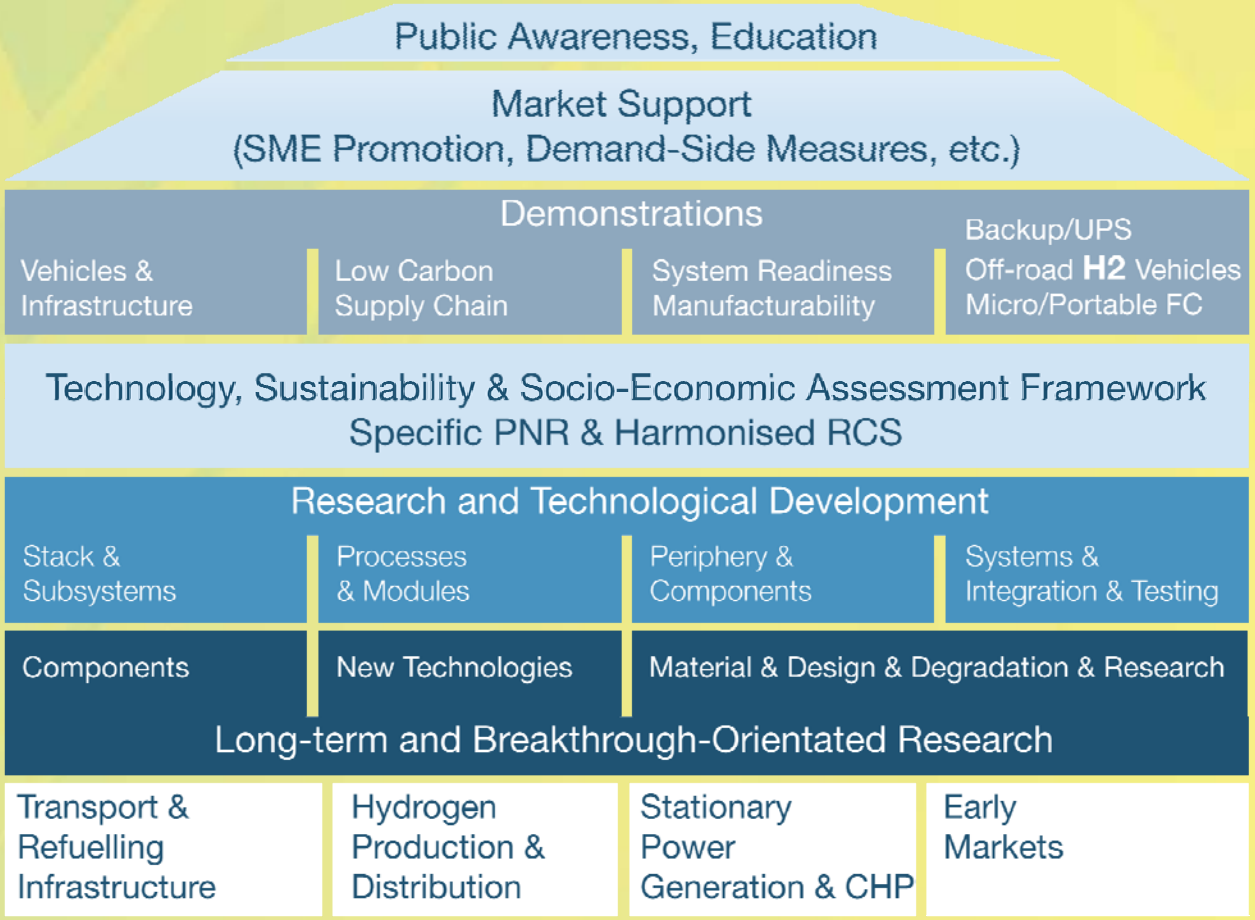
Industry: EUR 450 million (minimum in kind)
EUR 20 million (in cash)

Research: EUR 3 million (in cash)

- 50/50 cost-sharing between the Community and industry

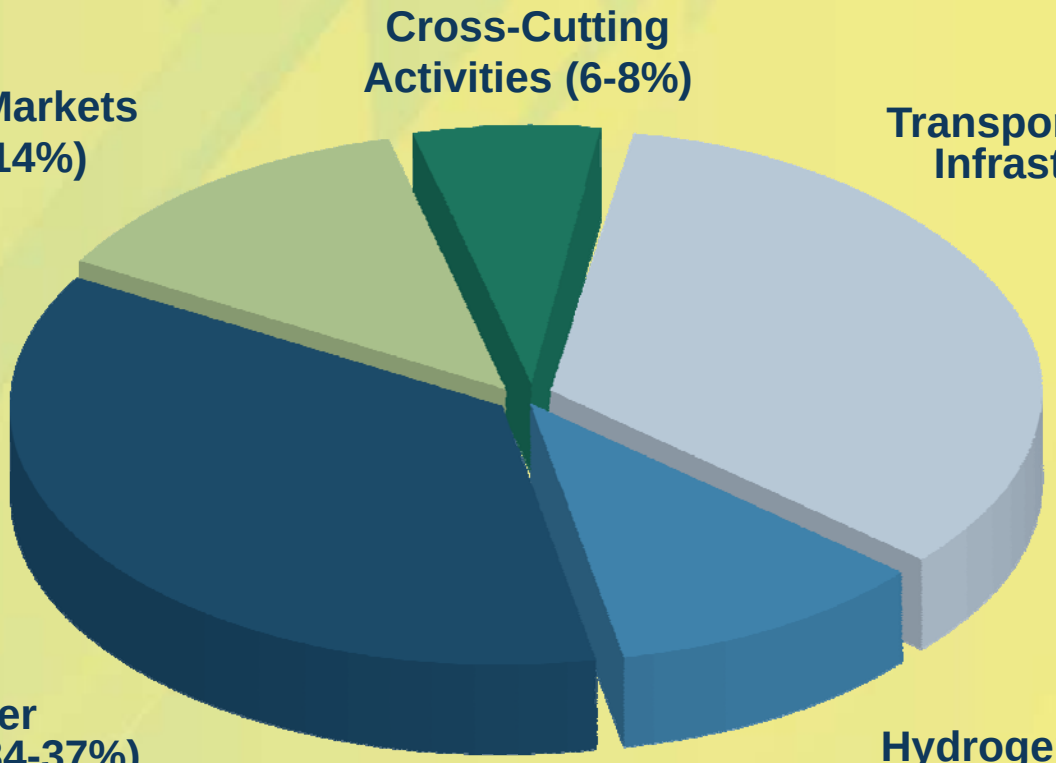
Budget of Annual Calls

Multi-Annual Implementation Plan

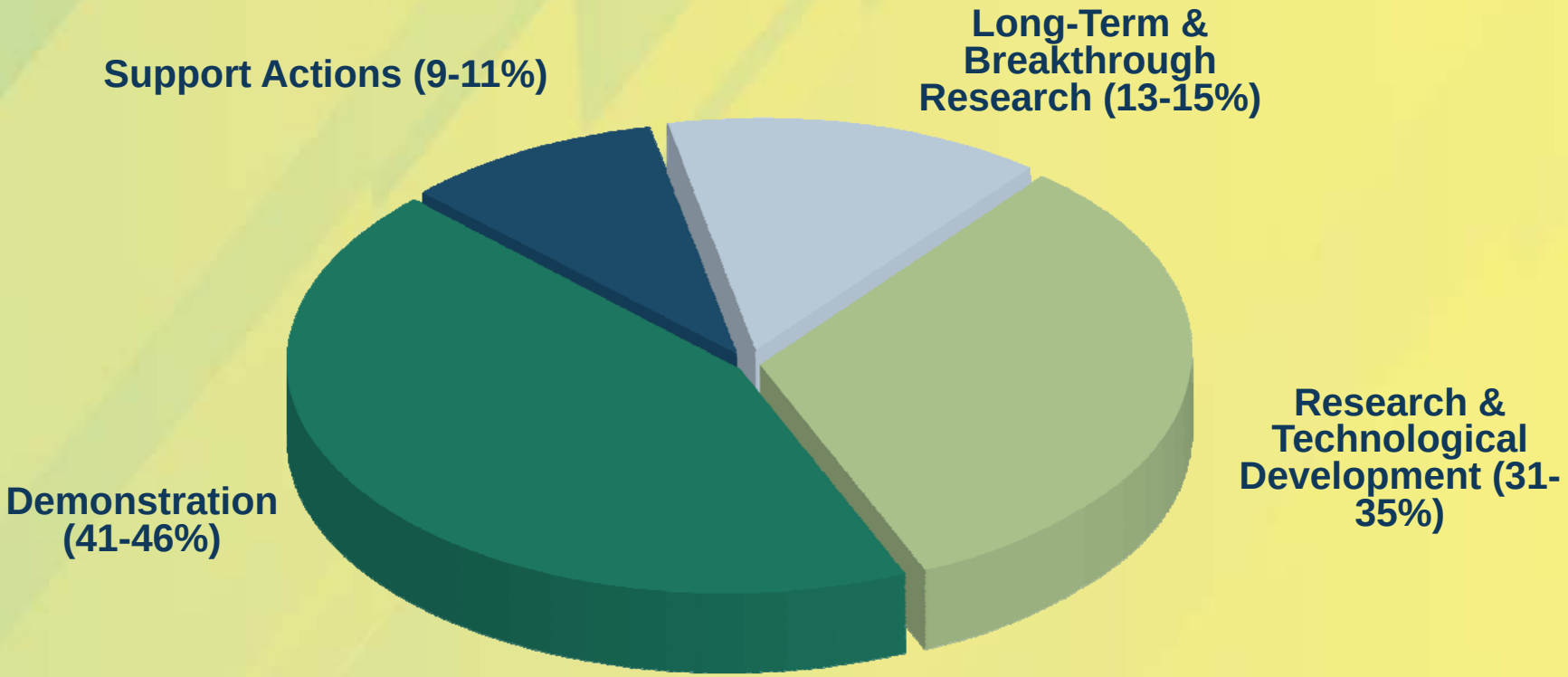


Adopted in May 2009

Budget Breakdown by Application Area



Budget Breakdown by Action Category



Call 2008
Overview

- Publication date: 8 October 2008
- Deadline: 15 January 2009
- Budget: EUR 28.1 million
- Topics in areas:
  - Transportation and refuelling infrastructure (EUR 8.9 million)
  - Hydrogen production & distribution (EUR 2.9 million)
  - Stationary power generation & CHP (EUR 12 million)
  - Early markets (EUR 2.6 million)
  - Cross-cutting issues (EUR 1.7 million)

- 16 projects selected for negotiations which started in early June;
  15 projects expected to start Janury 2010

Call 2009
Overview

- Publication date: 2 July 2009
- Deadline: 15 October 2009
- Budget: EUR 71.3 million
- Topics in areas:
  - Transportation and refuelling infrastructure (EUR 26.4 million)
  - Hydrogen production & distribution (EUR 5.7 million)
  - Stationary power generation & CHP (EUR 25.9 million)
  - Early markets (EUR 10.3 million)
  - Cross-cutting issues (EUR 3.0 million)

- 50 Proposals received: Evaluation 16-20 November 2009

Work in progress

- **Cooperation with Member States and Regions**
- **Targets and milestones**
- **Strategy for implementing large demonstration projects**
- **Modalities for interface with other EU polices**
- **International cooperation strategy**

- **Goal: Autonomy by 15 March 2010**

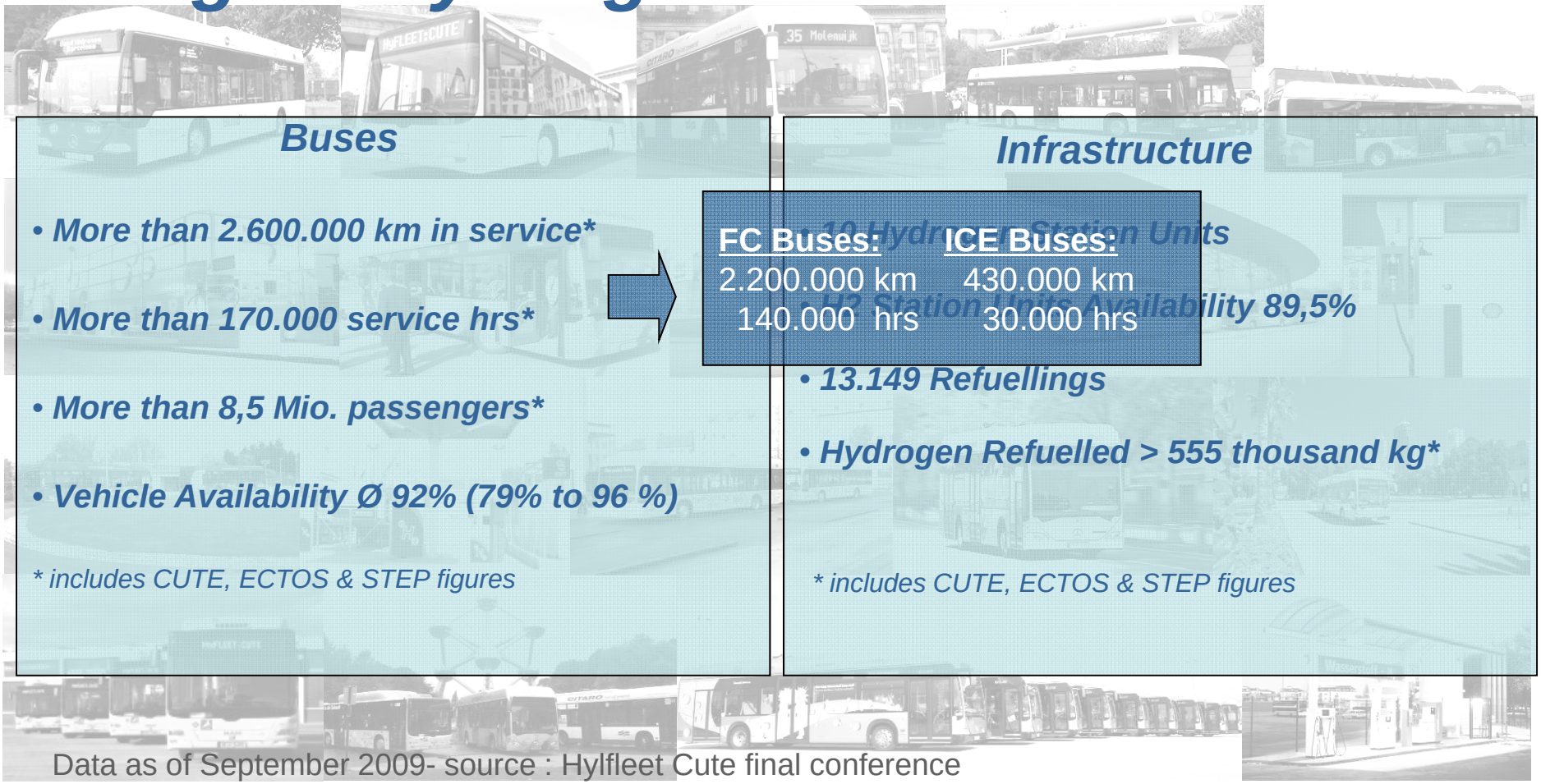
HyFLEET-CUTE

Continued operation of
33 H2 powered Fuel Cell Mercedes-Benz buses in 7 European cities, Perth (Western Australia) and Beijing (China)
and
Design, Construction and Testing of "next generation"
H_2 powered Fuel Cell Bus

Design, Construction and Testing of "next generation"
Internal Combustion Engine H_2 buses
and
Operation of 14 H_2 powered Internal Combustion Engine MAN buses in Berlin (Germany)

Continuous operation and optimization of existing H_2 filling stations
and
build-up of Berlin H_2 filling station

Achievements of the Worlds´ Largest Hydrogen Powered Bus Fleet



Buses

- *More than 2.600.000 km in service**
- *More than 170.000 service hrs**
- *More than 8,5 Mio. passengers**
- *Vehicle Availability Ø 92% (79% to 96 %)*

** includes CUTE, ECTOS & STEP figures*

FC Buses:	ICE Buses:
2.200.000 km	430.000 km
140.000 hrs	30.000 hrs

Infrastructure

- *10 Hydrogen Station Units*
- *H2 Station Uptime Availability 89,5%*
- *13.149 Refuellings*
- *Hydrogen Refuelled > 555 thousand kg**

** includes CUTE, ECTOS & STEP figures*

Data as of September 2009- source : Hylfleet Cute final conference

Achievements of the Worlds´ Largest Hydrogen Powered Bus Fleet

Quality & Safety and Environmental Impact

- *Nil Accidents*
- *> 1 million liters diesel replaced*
- *79% Share of renewable energy used for on-site H_2 generation*

Dissemination & Communication

- *Global outreach*
- *67 thousand unique visitors to Website/ 2000 viewings of Project video*
- *800 Subscribers to News Service from 95 different countries*

Data as of September 2009- source : Hylfleet Cute final conference

More information

FCH JU official website:

http://ec.europa.eu/research/fch

European Industry Grouping for a FCH-JTI (NEW-IG):

http://www.fchindustry-jti.eu

New European Research Grouping on FCH (N.ERGHY):

http://www.nerghy.eu