

The Convenient Truth Powering the Future

Fuel Cells and Hydrogen Energy Outreach Campaign
Proposal and Background

2011



The world is changing

- The worldwide increase in the demand for energy, combined with the challenge of reducing the greenhouse gas emissions, will have an effect on future energy supply.
- As energy carrier hydrogen will play a major role in the future energy society, either as a fuel, or as intermediate storage in isolated, but integrated, renewable energy systems.

IEA releases World Energy Outlook 2010, “peak oil is an inevitability”

- The IEA states in no uncertain time that Peak Oil is inevitable
- It sees crude oil output hitting an “undulating plateau of around 68-69mbpd by 2020”
- while total oil production including unconventional oil and natural gas liquids is expected to peak at around 96mbpd after 2035, under the “new policies scenario”.

World Energy Outlook 2010

- The age of cheap oil is over, though policy action could bring lower international prices than would otherwise be the case
- Renewables are entering the mainstream, but long-term support is needed to boost their competitiveness
- Getting the prices right, by phasing-out fossil-fuel subsidies, is the single most effective measure to cut energy demand

Key Messages

- Fuel Cells and Hydrogen are integral components of the **clean energy** portfolio and a key building block for economic growth in the energy age
- Fuel Cells and hydrogen energy technologies are complete “systems” that function as servers in the **clean energy** network

Benefits of Hydrogen and Fuel Cells as Part of a Portfolio of Clean Energy Technologies

- Hydrogen is a clean fuel. When used in fuel cells, the only byproducts are water and heat.
- Clean hydrogen technology has the potential to strengthen national economies and create high-quality jobs in industries such as fuel cell manufacturing.
- Hydrogen can be derived from renewable sources and is fully interchangeable with electricity – hydrogen can be used to generate electricity, while electricity can be used to produce hydrogen.
- Over 100 years of safe production, transportation and use of hydrogen shows that it carries no more risk than natural gas or gasoline.
- Hydrogen can be produced from diverse domestic sources and processes, freeing it from the political instabilities that affect the world's oil and gas supplies

Benefits of Hydrogen and Fuel Cells as Part of a Portfolio of Clean Energy Technologies

- Fuel cells have more than double the energy-efficiency of internal combustion engines.
- Fuel cells have no moving parts – they are silent, vibration-free, and require little to no maintenance.
- Fuel cells provide high-quality, direct-current power that is ideal for many advanced electrical and electronic devices.
- Fuel cells do not require time-consuming recharging and thus have much lower down-time and refueling requirements compared to battery-electric vehicles (BEVs).
- Fuel cells can provide energy at all scales, ranging from micro power sources for small consumer devices to multi-MW power plants

Challenges to Commercialization

- As with several of the other energy alternatives, hydrogen and fuel cell technologies have not developed to the point where they exceed the capabilities of some incumbent technologies. As the technology cost and performance continues to improve, commercialization will increase.
- Safe, lightweight, low-volume hydrogen systems are available now, but their cost remains an issue.

Challenges to Commercialization

- Public awareness of hydrogen and fuel cell systems is low, and a misconception that hydrogen is unsafe and unreliable is still prevalent.
- More extensive outreach and better public education will help to remove this barrier.
- Cost-effective, emission-free methods of hydrogen production, including carbon capture and storage systems, are possible today and will continue to improve with further development.
- Current regulations and standards do not reflect real-world use of hydrogen and fuel cell technologies and are not synchronized between countries.
- This can be mitigated by a strong commitment to international cooperation and coordination.

The Convenient Truth

- A multimedia outreach initiative designed to broaden awareness about the power of fuel cells and hydrogen, the most abundant element on earth
- Revolutionize the energy industry by providing alternative power solutions
- An ongoing public awareness campaign that paints a dramatic picture of the fuel cell and hydrogen powered future and brings to light the global impact, economic opportunities and wide array of jobs this unprecedented energy transition will create over the coming decades

Organization

- Produced by Earth Minded Online, LLC and distributed in partnership with the non-profit Imagine it! Project (imagineitproject.com)
- The outreach campaign brings together fuel cell and hydrogen energy industry insiders and experts along with [award winning media producers](#) to report on the important initiatives, feasible concepts, early markets and marquee customers

Results

- Unprecedented, multi-media library of informative and entertaining media content, outreach materials and educational curriculum that will be shared with millions on a global scale.

Phase One

- Development of a long-term production and distribution strategy, website, presentational video and outreach media
- Initial media components designed as a versatile communications toolset utilized to raise general awareness of the fuel cells and hydrogen story and initiatives across the globe
- Utilize Imagine It! Project global network of influential people, businesses, government organizations and educational institutions for worldwide media distribution

Phase Two

- Creation and distribution of additional media content, outreach materials and educational curriculum that will spotlight specific projects and applications around the world that are underway as examples of how fuel cells and hydrogen will play a major role in the future energy society and is fast becoming a viable energy source

Timeline

- The timeline for Phase 1 & 2 to be produced and deployed is approximately one year. There will be deliverables available for use within the first six months.

Budgets

- Phase One initiative requires a financial commitment of \$250,000
- Phase 2 of the initiative is budgeted at \$750,000. This amount will need to be secured in order for the initiative to continue to grow and set additional goals for the long term strategy

For more information

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