

2016 Annual Report of The Hydrogen and Fuel Cell Technical Advisory Committee

*Thursday, May 4, 2017
Washington, D.C.*

Presented by Morry Markowitz
HTAC Report Subcommittee Chair



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Key Findings:

- Making in-roads in a variety of applications.
- Where not yet economical, fuel cells can offer more value streams than competitors.
- Progress on H2@Scale.
- Path to lower cost (<\$2/kg) electrolysis.
- ITC and FCEV tax credit expiration a significant risk to continued market development.

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Conclusions:

- 2018 budget blueprint stresses basic science and limited, early applied energy R&D activities.
- There is a critical need to continue efforts in material and process integration and technology acceleration in order to meet EPACT 2020 goals and to maintain U.S. competitiveness.

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Conclusions:

- U.S. still not on track to meet the 2020 FCEV/ fueling infrastructure goals.
- An explicit plan including measurable milestones should be provided in 2017–2018 for how the 2020 EPACT Title VIII goals will be achieved, with commensurate funding commitments including those identified in the 2015 FAST Act.

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Questions:

- Should company-specific information be included (e.g. press releases) in the Commercialization section?
- Should HTAC establish a formal template for future annual reports?

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2016 Cover Letter – Include 2015 Findings?

- HTAC finds the updated Hydrogen and Fuel Cells Program Plan to be comprehensive.
- Annual Report recognizes significant progress in advancing hydrogen/fuel cell system utilization.
- Annual Report also cautions that major challenges remain to achieving Title VIII goals.

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2016 Cover Letter – Include 2015 Observations and Recommendations?

- 1. DOE support is critical to ensuring positive retail hydrogen fueling experience.**
- 2. Rapid learning cycles and manufacturing scale economies are essential prerequisites to overcome unfavorable cost structures.**

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2016 Cover Letter – Include 2015 Observations and Recommendations?

- 3. Securing industry commitments to high volume manufacturing requires clear and stable policy.**
- 4. Extending the federal FCEV tax credit is an essential enabler for promoting fuel cell commercialization and achieving Title VIII goals.**

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2016 Cover Letter – Include 2015 Observations and Recommendations?

- 5. Additional funding is required to achieve 2020 Title VIII goals.**
- 6. Clean Cities program emphasis must actively promote and educate consumers on FCEV technology.**

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2016 Cover Letter – Use Quotes?:

“Hydrogen and fuel cell technologies provide solutions to our most pressing energy challenges. They are clean, renewable, and contribute to the strength of our manufacturing sector by employing highly skilled workers. The United States has always been at the forefront of this industry.”

– John Larson (D-CT), Co-Chair of the House Hydrogen and Fuel Cell Caucus

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“With the expansion of production facilities, increase in fuel cell manufacturing, and extension of the natural gas infrastructure, there are growing opportunities for the deployment of fuel cells, both on the grid and behind the meter. It’s critically important that we maintain the momentum of deploying new sources of clean energy. Technologies like fuel cells not only serve to improve the reliability of the system but also help create jobs and economic growth in our communities.”

– Bryan Garcia, President and CEO of the Connecticut Green Bank

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2016 Cover Letter –

- Other observations or recommendations?

Thank You!

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