

**DOCKETED**

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**Subject:** Hydrogen info for the IEPR Docket

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Dear Commissioner Scott and Commissioner McAllister,

Thank you for your leadership with the IEPR. I'm writing to make sure you have the following items in the IEPR docket so that you and your teams can consider the information for the document.

I believe there are a lot of touch points for the documents and resources below: namely transportation, energy storage, grid resilience, and backup power.

Please let me know if you have any questions or want more information, we are happy to share or talk through any of these or related sources.

1. LADWP's Intermountain Power Project which plans to lean heavily on hydrogen as long term energy storage: <https://www.latimes.com/environment/story/2019-12-10/los-angeles-hydrogen-fueled-intermountain-power-plant>
2. Road Map to a US Hydrogen Economy, Executive Summary: [https://cafcg.org/sites/default/files/Road-map-to-a-US-hydrogen-economy\\_Executive-Summary.pdf](https://cafcg.org/sites/default/files/Road-map-to-a-US-hydrogen-economy_Executive-Summary.pdf).
  - a. Please note, the full version should come out in early 2020 and may help add detail to your analysis.
3. Hydrogen, Scaling UP gives a detailed global look into hydrogen's cross sector potential: <https://hydrogencouncil.com/wp-content/uploads/2017/11/Hydrogen-scaling-up-Hydrogen-Council.pdf>; PowerPoint Summary by Air Liquide: <https://www.airliquide.com/sites/airliquide.com/files/2018/05/29/air-liquide-hydrogen-scaling-up.pdf>
4. Hydrogen Roadmap Europe: A Sustainable Pathway for the European Energy Transition, November 2, 2019. Available at: <https://www.fch.europa.eu/publications/hydrogen-roadmap-europe-sustainable-pathway-european-energy-transition>
5. Bloomberg New Energy Finance's deep dive into renewable hydrogen: <https://www.bloomberg.com/news/terminal/PWKP8T6KLVR6>. This article provides a summary, but the document behind the paywall offer more in-depth insight (<https://www.bloomberg.com/news/articles/2019-08-21/cost-of-hydrogen-from-renewables-to-plummet-next-decade-bnef>). Hydrogen from electrolysis has tremendous opportunity to drive a virtuous cycle of cost reduction for hydrogen, solar and wind.
6. Fuel Cells for Resilience and Decarbonization in California - a helpful overview of how fuel cells can provide robust grid support & Ancillary services, backup power, and islanding for de-energization:

[http://www.casfcc.org/PDF/Fuel\\_Cells\\_For\\_Resilience\\_And\\_Decarbonization\\_In\\_California\\_112519\\_434pm.pdf](http://www.casfcc.org/PDF/Fuel_Cells_For_Resilience_And_Decarbonization_In_California_112519_434pm.pdf)

- a. The attached “Fuel Cells for Decarbonization...” offers policy recommendations to encourage resilience on Slide 13
7. Microgrid Knowledge, The Rise of Fuel Cell Microgrids: Special Report. Available at: <https://microgridknowledge.com/fuel-cell-microgrids-fuelcell-energy/>
8. National Fuel Cell Research Center comments submitted to Connecticut in October 2019 (attached). I include this attachment because the submission has a number of useful publications in the appendices.
9. A Shell Hydrogen overview for how scale can drive cost reduction: <https://cafcp.org/sites/default/files/path-toward-competitive-refueling-infrastructure-for-hydrogen-brochure.pdf>
10. Manufacturing competitiveness analysis for hydrogen refueling stations: <https://www.sciencedirect.com/science/article/abs/pii/S0360319919307505?via%3Dihub>

Thank you again,

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