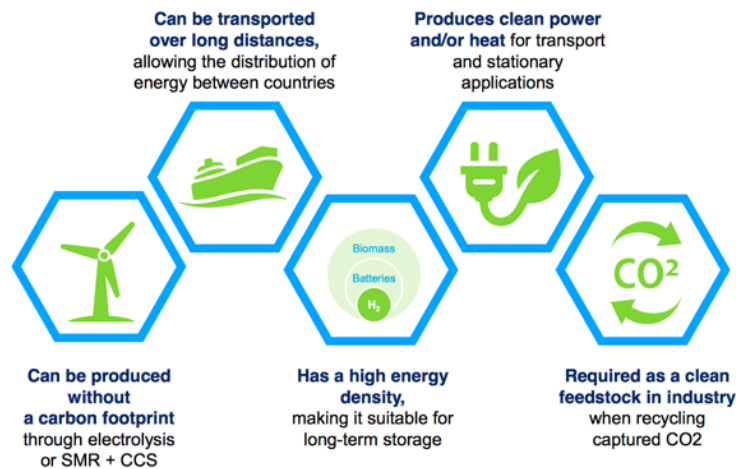


Hydrogen Rising

Hydrogen is a clean, safe and versatile energy carrier



Hydrogen appears, **finally**, to be well along in realizing its enormous potential to substantially decarbonize our energy. I wrote about [The Hydrogen Economy](#) last year and this week I sat in on a compelling webinar, “[Opportunities for Hydrogen in the Northeast](#),” presented by the NECEC. [NECEC](#) includes the Northeast Clean Energy Council and [NECEC Institute](#).

Alistair Pim, NECEC’s VP for Innovation & Partnerships, moderated the session. It led off with a presentation on Europe’s robust series of initiatives on building out a hydrogen economy from Bart Biebuyck, Executive Director of the [Fuel Cells and Hydrogen Joint Undertaking](#) (FCH). The FCH brings together the European Commission, [Hydrogen Europe](#), an industry group, and [Hydrogen Europe: Research](#), a gathering of over 70 research institutions. It was only this past July that the EU adopted its ambitious “[hydrogen strategy](#).” (See also [the video](#).)

Meanwhile, back in the US, there are a great many possibilities. Joseph S. Hezir, Principal of [Energy Futures Initiative](#), laid out some thoughts in his presentation. One of his more intriguing talking points was on the subject of “hydrogen hubs” in which several components work together to produce green power for stationary and mobile purposes. FCH’s Biebuyck had earlier detailed the European concept of “hydrogen valleys.” This is precisely where the Dutch are going. See [this story](#) and [this video](#).

After the two initial presentations, the webinar moved on with four expert panelists. One of these was Matthew Blieske, Global Hydrogen Product Manager at Shell. Shell’s [hydrogen program](#) is extremely advanced. One of their projects is very much along the lines of the “hydrogen hub”/“hydrogen valley” concept: The [Port of Los Angeles](#) is deploying ten heavy duty trucks, two fuel stations, and four zero-emission cargo handling vehicles. It should be said that Shell’s admirable efforts in this and other clean tech spheres, along with some other European-based energy companies like [Equinor](#) and [Ørsted](#), is in stark contrast to the path that US companies like ExxonMobil and Chevron are taking: [business as usual](#).

The other panelists were Roger Kranenburg, VP Energy Strategy & Policy at [Eversource Energy](#); Lydia Li, Investment Professional at [Generate Capital](#); and Katie Dykes, the Commissioner of [Connecticut's Department of Energy and Environmental Protection](#). The four panelists and Pim from NECEC covered a wide range of key issues relative to bringing hydrogen into full flower in the Northeast US including policy priorities, investments, technology, consumer acceptance, and the need for public-private partnerships. The Europeans, as noted above, have made a tremendous commitment to industry, government, and researchers working hand in glove in order to bring hydrogen into the forefront as a key component of our global efforts to avert a full-blown climate catastrophe and to transition to a sustainable world economy. This fine NECEC dialogue gives us a good picture of where we are now, where we're heading, and the enormous potential for hydrogen. (You can and should watch the full webinar [here](#).)

Aside from some of the existing advanced initiatives for [distributed power generation](#) and [fuel cell cars and light-duty trucks](#), there are many other exciting prospects for the future: The [HySeas III initiative](#) has great promise for the maritime sector. The Germans were the first to run a hydrogen-powered train, the [Coradia iLint](#), built by Alstom, with a virtually limitless potential to replace diesel. The Germans are moving fast on this track – pun intended – and the UK, Netherlands, and Poland are all pushing forward as well [according to RailTech.com](#). [Heavy-duty fuel cell trucks](#) are also in the offing from no-less a global powerhouse than Toyota, along with its partner, Hino.

Aviation is arguably the hardest transportation sector to fully decarbonize, but Airbus has a stunning initiative: [ZEROe](#). The future, it appears, is a lot closer than many of us might think.