

In this Month's Newsletter:

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- Learn about Hydrogen power in our Renewable Energy Classroom
- New Feature: In the News
- New Partner Spotlight: Grow Our Food Landscaping

Pennsylvania Hydrogen Hubs: Friend or Foe?

Last month, <u>President Joe Biden came to Philadelphia</u> to announce a historic investment of \$7 billion in seven regional hydrogen power hubs across 16 states, two of which will be placed in Pennsylvania, with one right here in Philadelphia. The hubs will aim to produce and process hydrogen fuel as an emission free alternative to fossil fuels, and the projects in Pennsylvania will receive substantial funding of up to \$1.7 billion from the federal government. These hubs are reportedly a pivotal part of the Biden administration's goal of net-zero carbon emissions by 2050, and Governor Josh Shapiro has stated that he expects the Commonwealth's Hydrogen Hubs to <u>create 20,000 union jobs</u>.

Amidst the celebration, <u>concerns have been raised</u> regarding the efficiency of hydrogen hubs as a solution to climate change. Critics argue that the impact of producing hydrogen is underestimated, diverting attention from more effective measures such as wind, solar, and energy efficiency. State Rep. Danielle Friel Otten has <u>expressed reservations</u> about potential corporate influence and called for improved regulatory frameworks to oversee the hubs, emphasizing the risk of greenwashing without adequate oversight. There are also concerns that hydrogen presents a transit public safety risk, can cause air pollution as a part of its processing, and could even further Pennsylvania's reliance on the fossil fuel industry.

Taken at face value, these hydrogen hubs could represent an important step towards cleaner energy in Pennsylvania, as hydrogen is a net-zero fuel source. Nevertheless, it's crucial to remain vigilant, ensure rigorous oversight, regulation, and community involvement when it comes to any new clean energy investment. Whether hydrogen power is merely a transitional step to building a clean energy future or here to stay for the long term, let's stay informed and engaged as these developments unfold, and ensure our collective voice shapes the future of clean energy in our region.

Renewable Energy Classroom

Welcome back to our Renewable Energy Classroom, where we highlight different aspects of the generation, purchase, delivery, or use of renewable energy with a new video or article each month. Inspired by Philadelphia's new Hydrogen Hub, in this month's Renewable Energy Classroom, let's discuss hydrogen as a clean energy source to inform opinions on the project among our membership community.

Hydrogen power has emerged as a promising solution in the pursuit of net-zero emissions. Though it is the most abundant element in the universe, hydrogen is scarce on Earth, and is generally obtained by splitting water molecules, a process that requires a significant amount of electricity. When mixed with oxygen in fuel cells, hydrogen becomes a clean energy source, with the only emission being water vapor. Widely applied in vehicles and heavy industries, it has proven to be particularly beneficial for sectors with high energy demands.

Historically reliant on nonrenewable energy sources for production, recent strides in renewable energy have made hydrogen more environmentally viable, though it is not without its critics. Barriers persist, including the high cost of hydrogen production, challenges in storage, and its current electricity-intensive manufacturing process which is often reliant on brown power. Despite these hurdles, hydrogen has found applications in heavy industry and long-distance transport and could play a valuable role in the global transition to renewable energy. Ongoing technological advancements are driving down costs, signaling a more affordable and accessible future for hydrogen power. With more investment from the federal government as we are seeing here in Philadelphia, hydrogen could play a key role in reaching net zero emissions.

To learn more, let's take a look at this great video from <u>The Economist</u> on hydrogen power.



The Energy Co-op News Series

Welcome to the first edition of The Energy Co-op's <u>In the News</u> series! In this new feature, our team will take important pieces of renewable energy news and summarize them to keep our members up to date and informed on the dynamic energy evolution.

In this inaugural feature, Energy Co-op Membership Coordinator Eric Miller walks us through the Regional Greenhouse Gas Initiative, or RGGI for short. RGGI is a multi-state cap-and-trade program that is one of the most consequential pieces of climate action that Pennsylvania has seen in years. Its controversial implementation currently hangs in the balance in the Pennsylvania Supreme Court, so <u>let's take a closer look</u> at what RGGI is and how its implementation would impact Pennsylvania as we await a decision.



Grow Our Food Landscaping

The Energy Co-op is excited to announce our partnership with <u>Grow Our Food Landscaping</u>, a sustainable, southeastern Pennsylvania-based business that seeks to transform backyards into biodiversity hubs, complete with native and pollinator plants, food production, and maximized sustainability.



From now until December 15, customers at

Grow Our Food Landscaping who mention The Energy Co-op will be eligible for their first hour of landscaping free! To learn more about Grow Our Food Landscaping and support our new partnership, <u>visit their website</u> to check out the many services on offer and boost your backyard's sustainability.

Events

Fall Market Update

Wednesday, November 15, 1:00 – 2:00pm Virtual Event | Zoom

Join The Energy Co-op staff for this energy market update and discussion about how we can continue to accelerate the region's transition to a cleaner and more sustainable future.

Register Here | Link provided upon registration

Member to Member Webinar with The Schuylkill Center for Environmental Education

Thursday, December 7, 6:00 – 7:00pm Virtual Event | Zoom

Join us for our next Member-to-Member Webinar with The Schuylkill Center for Environmental Education. Tune in for a great discussion on localized fungal ecology!

Register Here | Link provided upon registration

What We're Reading

<u>Shapiro isn't sold on a key climate program, and his working group isn't either.</u> <u>What's next for RGGI?</u>

As the fate of RGGI hangs in the balance, Governor Shapiro wouldn't commit to program, citing concerns about job loss and higher energy prices. *Kate Huangpu, Spotlight PA*

Chart: The world is approaching a peak in electricity emissions

Electricity production is the biggest source of CO₂ emissions in the world, but a new report suggests the grid's dirtiest days will soon be behind it. *Dan McCarthy, Canary Media*

Report shows that Pa. needs to boost renewable energy production, lawmakers, advocates say

Since 2013, Pennsylvania has ranked 2nd last among all 50 states in percentage growth of solar, wind and geothermal power.

Cassie Miller, Pennsylvania Capital Star

Blog Posts

<u>Cooperative Finance: Using the Cooperative Advantage to Build a Clean Energy</u> <u>Future</u> By Gabe Hochenberger

<u>Spotlight on Renewable Energy Technology: Offshore Wind Power</u> By Eric Miller

<u>Faces of The Energy Co-op: Lauren Keller</u> By Colin Teague



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