

"This newsletter includes an editorial roundup of top stories from [www.CHP-Funder.com](http://www.CHP-Funder.com) and the global media, showcasing the latest in Combined Heat and Power (CHP) innovation and the investors that fund it. Please get in touch if you'd like to be a guest contributor, or if you have any feedback or tip."

## **THE LATEST NEWS IN COMBINED HEAT AND POWER**

### **Five steps to energy efficiency with Combined Heat and Power**

Combined Heat and Power (CHP) can be a productive route to energy efficiency and lower energy costs. With CHP, in addition to regular electricity, you get heat output which can be used for hot water, steam or cooling depending on your business needs. The journey to Combined Heat and Power (CHP) offers significant energy cost savings and positive environmental impact and is simple when following these five steps.

<https://www.centricbusinesssolutions.com/us/blogpost/five-steps-energy-efficiency-combined-heat-and-power>

### **\$4M Maryland 2019 CHP Grant Funding**

The Maryland Energy Administration (MEA) is pleased to announce the launch of the FY 19 Combined Heat and Power Grant Program. The program is designed to further encourage Combined Heat and Power (CHP) growth in the State. This \$4 Million first come, first served program will target eligible commercial, industrial, institutional, and critical infrastructure facilities.

<https://energy.maryland.gov/business/Pages/MEACHP.aspx>

### **NY Prize \$40M of incentives for CHP**

The Combined Heat and Power (CHP) Program provides incentives for the installation of grid-connected CHP systems at customer sites that pay the System Benefits Charge (SBC) on their electric bill. The CHP Program supports an accelerated procurement process where customers select from a set of pre-engineered CHP modules supplied by approved CHP vendors (the Catalog Approach) or the more traditional design/build procurement process specifically for larger CHP systems where requirements are not adequately met by the Catalog Approach (the Custom Approach). Under the Catalog Approach, approved CHP vendors act as a single point of responsibility for the entire project and provide a minimum 5-year maintenance/warranty agreement on the CHP system. Under this approach, NYSERDA will only accept applications from, and will only contract with, approved CHP vendors. Under the Custom Approach, NYSERDA will accept applications from the site owner, the CHP System owner, or any member of the project team that is willing and capable of taking responsibility for the proper design, integration, installation, commissioning and maintenance of the CHP System. NYSERDA will contract only with the applicant. The Custom Approach is available for projects 1MW and larger in size.

[CHP Program \(PON 2568\)](#)

### **State Scorecard**

The CHP section of the ACEEE State Score card provides information on CHP incentives, CHP funding and CHP policy by state. The twelfth edition of the ACEEE *State Energy Efficiency Scorecard* gives a progress report on state energy efficiency policies and programs that save energy and produce environmental and economic benefits. The *Scorecard* uses data vetted by state energy officials to rank states in six categories—utility programs, transportation, building energy codes, combined heat and power, state initiatives, and appliance standards. The top states in this year's *Scorecard* were Massachusetts, California, Rhode Island, Vermont, and Connecticut. The most-improved state was New Jersey; other up-and-coming states included Missouri, Colorado, and South Dakota. Energy efficiency is a growing resource in these states and others, with utilities spending more than \$7.9 billion in 2017 for efficiency programs nationwide and saving 27.3 million MWh of electricity.

<https://aceee.org/state-policy/scorecard>

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## Capstone Unveils a New Product and Technology Development Roadmap

Leveraging off the success of the C200S/C600S/C800S/C1000S Signature Series launch and subsequent retrofit of improvements to the fleet, Capstone will now focus attention to integrating similar improvements, features and benefits into the workhorse C65 product line. Historically, Capstone has shipped over 4,500 of the C60/C65 product with the majority still in operation today. In fact, one award-winning installation at Masonic Village in Elizabethtown, Pennsylvania recently exceeded 700,000 total operating hours, with one of the C65 microturbines surpassing over 135,000 hours alone.

<http://www.energyvortex.com/pages/headlinedetails.cfm?id=8663>

## The 10% CHP tax credit has been extended to 2022.

This is great news for anyone that recently installed CHP in the U.S. or is planning to do so. The original CHP tax credit expired on 12/31/16, but it has been extended and effective retroactively, so if you installed a Combined Heat & Power (CHP) System in 2017, you may be eligible for a 10% tax incentive. The 10% Investment Tax Credit (ITC) was part of the Energy Improvement and Extension Act of 2008, and the extension is part of the Bipartisan Budget Act of 2018 that was signed on Friday, February 9, 2018.

<https://www.linkedin.com/pulse/10-combined-heat-power-tax-credit-re-instated-eric-burgis/?trackingId=%2BIKzv8AmCkx522c0b0i32g%3D%3D>

## Poland's cabinet approves new cogeneration support system

Poland's cabinet approved a draft bill introducing a new support system for high efficiency cogeneration as of 2019, the government press office said in a press statement following the cabinet sitting. The new system, to be based mainly on auctions, "will support the construction of new generation capacities in cogeneration," the statement read. The support will be granted for 15 years "to assure stability of support and long-term planning of investments," the press office said. In order to qualify for support, cogeneration firms will have to introduce at least 70% of heat produced in high efficiency cogeneration units to heat network. In the case of units introducing less heat to the network, support to be applied will be proportionally reduced.

<http://biznes.pap.pl/en/news/pap/info/2643765,poland-s-cabinet-approves-new-cogeneration-support-system>

## MICRO-GRID AND NATURAL GAS NEWS

### Natural Gas Will Become #1.

DNV GL's latest report, 2018 Energy Transition Outlook, predicts that gas will overtake oil as the world's primary energy source in 2026, and will account for 25 percent of the world's energy by 2050. It also predicts that global oil demand will peak in 2023 while gas demand will continue growing until 2034. "Gas will fuel the energy transition in the lead-up to mid-century. It sets a pathway for the increasing uptake of renewable energy, while safeguarding the secure supply of affordable energy that the world will need during the energy transition," said Liv A. Hovem, CEO, DNV GL, Oil & Gas.

### CHP's Spark Spread Over Competition = Economic No-Brainer

Energy efficiency is on everyone's mind. If you walk into an appliance store, every refrigerator has an ENERGY STAR® rating with detailed information on annual energy consumption and energy cost savings. Similarly, every new car is graded in terms of mileage per gallon – and that makes a big difference to the price at the pump. On a grander scale, government policy is transforming the nation's energy mix. What does this mean in economic terms? According to the EIA's Short Term Energy Outlook

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for Commercial Retail Energy Prices, assuming a cost of 11 cents per kilowatt hour (kWh), grid-based electricity works out to an estimated \$32.36 per mmBTU in 2016. On the other hand, according to the agency, natural gas will average around \$7.91 per mmBTU. In other words, next year the estimated cost of natural gas will be four times cheaper than electricity from the grid.

<https://www.ugi.com/wp-content/uploads/2015/11/CHP2015.pdf>

## Demand Up, Supply Up

Domestic natural gas consumption in the first half of 2018 **increased in all sectors** compared with year-ago levels. In the first half of 2018, U.S. natural gas supply and demand grew significantly compared to the first half of 2017. According to EIA's [Natural Gas Monthly](#), natural gas consumption and exports averaged 93.4 billion cubic feet per day (Bcf/d) during the first half of 2018, or **12% greater than during the first half of 2017**.

<https://naturalgasnow.org/demand-supply-shale-revolution-rapidly-advancing/#more-40313>

## Pennsylvania Awards Alternative Clean Energy Grants

The Alternative and Clean Energy Program (ACE) provides financial assistance in the form of grant and loan funds that will be used by eligible applicants for the utilization, development and construction of clean energy projects in the state, including CHP. The program is administered jointly by the Department of Community and Economic Development (DCED) and the Department of Environmental Protection (DEP), under the direction of the Commonwealth Financing Authority (CFA).

<https://dced.pa.gov/programs/alternative-clean-energy-program-ace/>

## Breakthrough Energy Ventures Unveils Its 5-Part Investment Strategy

Details on the investment focus and talent driving Bill Gates' big energy tech fund. Two years after it was first unveiled, Breakthrough Energy Ventures -- a billion-dollar fund to finance breakthroughs in energy technology -- is finally pulling back curtain a little bit. Speaking at the One Planet Summit in Paris, Bill Gates, the de facto leader of the group, detailed five areas that the team will look to invest in. The sectors are some of the most challenging, and most important, in energy, including energy storage, liquid fuels, off-grid microgrids, low-carbon building materials and geothermal.

<https://www.greentechmedia.com/articles/read/breakthrough-energy-ventures-investment-strategy#gs.cYINors>

## From Enmax, energy for low emissions district heating

The Enmax district heating plant serves numerous homes, commercial and institutional buildings in the city of Calgary (Canada), including City Hall, the National Music Center and the New Central Library. Since 2018 a 3.3 MW cogeneration plant has been integrated that will allow Enmax to prevent the emission of approximately 14,000 tons of greenhouse gases per year and to bring the efficiency of the heating plant to 90%. It is precisely because the theme of environmental impact is central to Enmax' values that the company offers tours to local residents, so that they can understand how energy can be produced efficiently.

[https://www.cogenerationchannel.com/en/video/category/teleriscaldamento/740/da-enmax-energia-il-teleriscaldamento-basse-emissi/?utm\\_source=Contatti+EN&utm\\_campaign=d5c55f4848-EMAIL\\_CAMPAIGN\\_2018\\_10\\_EN&utm\\_medium=email&utm\\_term=0\\_1692a9b9a4-d5c55f4848-424079185](https://www.cogenerationchannel.com/en/video/category/teleriscaldamento/740/da-enmax-energia-il-teleriscaldamento-basse-emissi/?utm_source=Contatti+EN&utm_campaign=d5c55f4848-EMAIL_CAMPAIGN_2018_10_EN&utm_medium=email&utm_term=0_1692a9b9a4-d5c55f4848-424079185)

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## **A New Resource for Capitalizing on the Shale Revolution**

A new website designed to match up developers of combined heat and power projects (CHP) with financing to bring these energy advancements to fruition.

<http://naturalgasnow.org/chp-funder-new-resource-capitalizing-shale-revolution/>

## **Building Blocks of a Community Microgrid**

This is the first part of a new series on how microgrids are being used to transform the electric grid.

<https://www.cleanenergyfinanceforum.com/2018/11/07/building-blocks-of-community-microgrid>

## **Micro CHP Market size to exceed \$13bn by 2024**

Key participants across micro combined heat and power market include. Yanmar, BDR Thermea, 2G Energy, VISSMANN, General Electric, Siemens, Veolia, Vaillant, Marathon Engine System, Micro Turbine Technology, Ballard Power System, ENER-G Rudox, AISIN SEIKI, TEDOM, Samad Power.

<https://www.gminsights.com/pressrelease/micro-combined-heat-and-ower-market>

## **Using Marcellus gas in area becomes a priority**

PIOGA hosted "Marcellus to Manufacturing," a day-long program in Pittsburgh which brought current and potential natural gas-related companies together to hear how firms are and can capitalize on gas, and how Pennsylvania's state government can help make investment a reality.

<https://www.kallanishenergy.com/2018/11/11/using-marcellus-gas-in-area-becomes-a-priority/>

## **U.S. LNG Exports to Double by 2019.**

U.S. liquefied natural gas (LNG) export capacity will reach 8.9 billion cubic feet per day (Bcf/d) by the end of 2019, making it the third largest in the world behind Australia and Qatar, the Energy Information Administration projects. Currently, U.S. LNG export capacity stands at 3.6 Bcf/d, and it's expected to end the year at 4.9 Bcf/d as two new liquefaction units (trains) become operational. The U.S. began exporting LNG from the Lower 48 U.S. states in February 2016, when Cheniere Energy's Sabine Pass liquefaction terminal in western Louisiana shipped its first cargo. Another two LNG export facilities: Cameron LNG in Louisiana and Freeport LNG in Texas, are currently being commissioned, Kallanish Energy reports.

## **The Role of Community Microgrid Champions**

Community microgrids can be initiated by a wide range of individuals or organizations. They include mayors and utilities. They also may include "anchor" off-takers like hospital management, development companies, or community organizations. But to succeed, they require that at least one person really take the lead and energize the project.

<https://cleanenergyfinanceforum.com/2018/12/18/the-role-of-community-microgrid-champions>

## **Website Connects Lenders/Borrowers for Natural Gas CHP Projects**

There are a dozen hospitals across PA that also use CHP. The *cool* thing? Much (most?) of the time the primary fuel used in CHP installations is natural gas. We spotted an article on MDN's sister site *Natural Gas Now* about a new website called CHP-Funder ([www.CHP-Funder.com](http://www.CHP-Funder.com)). The site matches those who want to build CHP plants with those willing to fund them.

<https://marcellusdrilling.com/2018/01/website-connects-lenders-borrowers-for-combined-heat-power-projects/>