



Inside This Issue...

Page 2A

- ♦ Analysis of an Oil Price War

Page 3A

- ♦ EIA Expects 2021 Production and Price Increases, continued from page 1
- ♦ State Laws help utilities halt spread of gas bans, continued from page 1
- ♦ Snapshots
 - Natural Gas Storage Graph
 - Rig Count Graph
 - Seasonal Temperature Map
 - Price Per MMBtu Graph

Page 4A

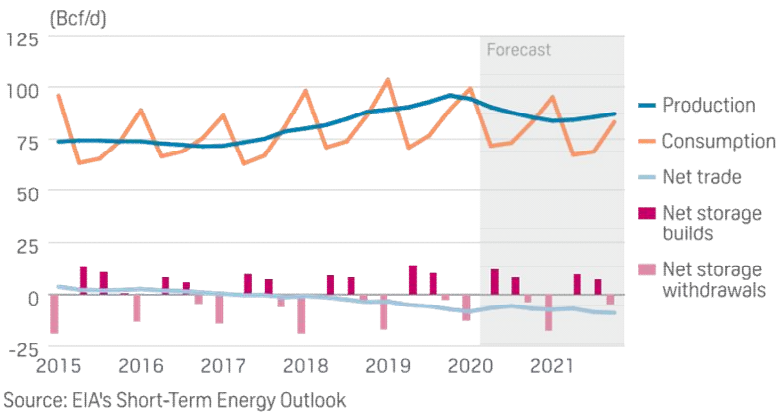
- ♦ Summer 2020 Generation Outlook
- ♦ State Laws help utilities halt spread of gas bans, continued from page 3

Natural Gas TODAY published 2007 by IMGA. No relationship to Gannett Publishing or any other newspaper or publication is expressed or implied.

PRESORTED
STANDARD
U.S. POSTAGE
PAID
SPRINGFIELD IL
PERMIT NO 15

EIA Expects 2021 Production and Price Increases

US NATURAL GAS SUPPLY AND DEMAND



Amid weak gas and power demand, the US Energy Information Administration on June 9 cut its forecast for total US natural gas marketed production for the remainder of the year, even as it expected production to rise beginning in the second quarter of 2021 propelled by higher prices.

EIA, in its June Short-Term Energy Outlook, lowered by 600 MMcf/d, to 97.78 Bcf/d, its gas marketed production estimate in Q2-20 and trimmed by 160 MMcf/d, to 94.98 Bcf/d, the estimate for Q3.

The production forecast for 2020 on average was lowered 280 MMcf/d, to 96.79 Bcf/d, but raised by 460 MMcf/d, to 92.4 Bcf/d, for 2021.

“EIA continues to forecast a decline in US dry gas production from 2019 record levels, as low natural gas demand continues to put downward pressure on prices,” EIA Administrator Linda Capuano said in a statement accompanying the STEO report.

PRICE SHIFTS

EIA cut its forecast for Q2 Henry Hub spot prices by 12 cents to \$1.73/MMBtu and it lowered the Q3 forecast 21 cents to \$1.90/MMBtu.

The agency projected Henry Hub natural gas prices would average \$2.04/MMBtu for full-year 2020 and \$3.08/MMBtu in 2021, in contrast with the May estimates of \$2.14/MMBtu and \$2.89/MMBtu, respectively.

HENRY HUB NATURAL GAS PRICE AND NYMEX CONFIDENCE INTERVALS



The sharpest increases in gas prices are expected this fall and winter, moving from an average of \$2.06/MMBtu in September to \$3.08/MMBtu in January, EIA said. It pointed to rising demand heading into winter, combined with reduced production putting upward pressure on prices, despite a forecast for record storage.

The inventories, starting June at 18% above the five-year average, are expected to reach a record of more than 4.1 Tcf on October 31, according to the report.

GAS GENERATION RECORD

Generally lower gas prices, however, are seen giving a bump to gas-fired generation.

“As a result of low natural gas prices, EIA forecasts that electricity generation from natural gas in the United States will reach 1,505 billion kWh in 2020-a new record,” Capuano said. “Natural gas generation will then decline to 1,335 billion kWh in 2021 as natural gas prices increase.”

“With renewable generation also continuing as the fastest-growing source of new generation, coal is expected to take a hit.

“Coal’s forecast share of electricity generation falls from 24% in 2019 to 17% in 2020 and then increases to 20% in 2021,” according to the report.

The share of gas-fired generation is seen rising to 41% this year, from 37% in 2019, but declining again to 36% in 2021 when gas prices rise.

Continued on page 3.

State laws help utilities halt spread of gas bans

State laws that protect access to utility services are becoming a core part of the natural gas industry’s effort to prevent the spread of building gas bans and electrification codes.

Gas utilities have played a key role in developing state bills that prohibit towns, cities and counties from adopting measures that ban or discourage gas hookups in new construction. Some of those utilities hope to replicate early success in additional states, while industry peers across the nation are taking note of the strategy.

The sudden rise of gas bans and building electrification requirements - first in California and then in Seattle, the Boston area and New York City - left the gas industry searching for a response in 2019.

Now, utilities and their allies are working to build a firewall across the nation’s interior with state laws that prevent local governments from adopting any measure that blocks consumers’ access to utility service based on fuel type. While most of the bills are broadly worded, legislators have called them a pre-emptive response to the gas ban movement.

Arizona, Tennessee and Oklahoma have all signed bills into law. Louisiana is poised to follow suit after bipartisan legislation to protect access to gas utility service sailed through the House of Representatives and Senate without a single “no” vote. Lawmakers in Minnesota, Missouri, Kentucky and Georgia have introduced similar bills.

Their backers include utilities that work across several states, including CenterPoint Energy, ONE Gas, Southern Company and Duke Energy. The legislative push comes as industry leaders have vowed to more actively defend gas’ role in the energy mix, following a surge of anti-gas sentiment and pipeline opposition among a number of environmental groups, Democrats and liberal states.

“We’re very transparent about who we are and what we do,” Scott Doyle, CenterPoint executive vice president for natural gas distribution, said in a recent interview. “We’ve told local leaders we want to have the system that your community wants, but we also want to be at the table to have a

Continued on page 3.

Interstate Municipal Gas Agency
1310 West Jefferson
Auburn, IL 62615

RETURN SERVICE REQUESTED

Analysis of an Oil Price War

Beginning

The seeds of the oil price war were planted 20 years ago in Venezuela by Hugo Chavez, that country’s president (1999-2013) and ardent critic of the United States. He oversaw a country with one of the world’s largest oil supplies, but his socialist policies failed, leaving the economy in ruin, despite the oil revenue. Russian President Vladimir Putin helped rescue the Chavez regime with financial and military aid. Bearing a grudge against his North American neighbor, Chavez worked with Colombia rebels to flood the United States with cocaine. That triggered U.S. economic sanctions intended to induce behavioral changes. Chavez never changed.

Under Nicolas Maduro, Chavez’s handpicked successor, Venezuelan inflation increased, food supplies decreased, and Russian aid continued. In 2018, Maduro rigged the presidential election in order to win. The opposition balked: the Venezuelan National Assembly called a state of emergency, and the assembly’s president, Juan Guaido, declared himself interim president. Many countries, including the United States, recognized Guaido. Maduro cracked down, and conditions in Venezuela worsened. In response, U.S. President Donald Trump issued an executive order stiffening sanctions earlier imposed by President Barack Obama. The order allows the Treasury Department to impose sanctions against all those that do business with Venezuela, except trade for humanitarian supplies. The sanctions are crippling, but the Maduro regime survives with help from Putin.

Provocateur

Rosneft Oil Co. PJSC (Rosneft), Russia’s largest petroleum company, accounting for up to 40 percent of the country’s oil production, is owned in significant part by the Russian state and run by a former KGB agent, Igor Sechen, who is a long-time ally of Putin. Putin has used Rosneft to pester, perturb and provoke the United States. Rosneft invested heavily in oil and natural gas ventures in Venezuela and over the years reportedly loaned billions of dollars to Venezuela’s state-owned oil company, PDVSA, with the loans repaid in crude oil. These cash infusions helped prop up Venezuela’s largest source of revenue.

Putin, seldom confused for a philanthropist, required the Venezuelan oil company to repay its loans. Thus, in 2019, Rosneft affiliates acquired approximately 14 million barrels (mb) of crude from the Venezuelan state-owned oil company. Because those actions violated U.S. sanctions, the Treasury Department (in February 2020) imposed sanctions against Rosneft Trading SA, causing the Venezuelan crude transactions to stop. To skirt the sanctions, Rosneft began to use another affiliate - TNK Trading International SA - to acquire Venezuelan oil. The Treasury Department, in turn, sanctioned TNK Trading. In the face of these U.S. sanctions, Rosneft sold its entire Venezuelan portfolio to another firm owned by the Russian state, which will apparently seek to continue the transactions. So goes the Venezuelan oil sanctions equivalent of “whack a mole.”

Face Off

OPEC+ was formed in 2016, when the 14 members of the Organization of Petroleum Exporting Countries

(OPEC), led by Saudi Arabia, and 10 other oil-producing countries, led by Russia, agreed to stabilize world oil prices by cutting production. Later, the group extended production cuts through March 2020. In December 2019, OPEC+ met to discuss continued price stabilization efforts involving additional production cuts, with Saudi Arabia and Russia assuming the lion’s share of the cuts.

In January 2020, COVID-19 erupted in China, reducing the Sino-demand for oil, which in turn adversely affected the global economy and reduced further worldwide demand for oil. In February, upset by U.S. sanctions against Rosneft, Putin refused to reduce Russian oil production, thinking that would benefit U.S. shale producers that produced without restraint. Instead, Putin desired to increase production (thereby lowering prices), inflict pain on the U.S. producers and possibly steal market share from Saudi Arabia. The talks broke down, with Saudi Crown Prince Mohammed Bin Salman (MBS) deciding to teach Putin a lesson and entice Russia back to the bargaining table. Saudi Arabia offered steep oil price discounts, triggering a huge drop in worldwide oil prices. Stock markets already wheeling from COVID-19 went even lower. MBS’s gambit failed, Putin demurred, and prices plummeted more.

Statistics

In 2019, the top four oil producers in the world (by barrels and share of world production) were: 1.) United States, 19.51 mb/d, 19 percent; 2.) Saudi Arabia, 11.81 mb/d, 12 percent; 3.) Russia, 11.49 mb/d, 11 percent; and Canada 5.5 mb/d, 5 percent. These four countries account for almost half of the world’s oil production. The price war pitted World No.2

Against World No.3, and each were well equipped for such a fight. Reportedly, the oil extraction costs for Saudi Aramco are \$2.80/barrel and \$4/barrel for Rosneft. U.S. shale production costs are much greater, often requiring more than \$40/barrel to cover costs. That does not mean, however, that the Saudis were immune from the war’s pain. Forbes reported that in 2016 Saudi Aramco struggled to break even when Brent crude averaged about \$45/barrel.

Against this backdrop a group of U.S. Senators, including North Dakota Senators Kevin Cramer and John Hoeven, wrote a letter to the Kingdom of Saudi Arabia, urging it to stop the price war with Russia. Sen. Cramer also called on President Trump to halt crude imports from Saudi Arabia and Russia and introduced legislation to relocate U.S. armed forces protecting Saudi oil assets to another Middle East country. In return, Trump appointed Victoria Coates as special energy envoy to Saudi Arabia and tasked her with finding a solution to the price war. Later, the Negotiator-in-Chief telephoned Putin and MBS, “urging” OPEC+ to cut production by at least 10 mb/d. Indeed, Trump reportedly threatened to impose oil tariffs if the two countries failed to forge an agreement. Putin and MBS listened.

The End?

On April 9, OPEC+ tentatively agreed to reduce production by 10 mb/d during May and June 2020, with smaller reductions through April 2022. Putin and MBS agreed to assume half of the OPEC+ production cuts, but sought commensurate production costs from the United States and Canada. However, price fixing is illegal under U.S. antitrust laws: Competitors cannot agree to raise, lower or stabilize prices. The U.S. government declined to promise government-mandated production cuts. Instead Dan Brouillette, the Secretary of Energy, issued a statement estimating that, by the end of 2010, U.S. production will be reduced between 2mb/d to 3mb/d, representing a 10-15 percent cut (due to market forces and financial reasons), which is commensurate with the Saudi and Russian production cuts.

The G20 energy ministers met on April 10 to ratify the agreement; it garnered support from all except Mexico, which agreed to cut its production by only 100,000b/d or one-fourth of its required cuts. That was not good enough. OPEC+ made the agreement’s effectiveness contingent upon Mexico’s support. At the 11th hour, Trump helped secure the faltering agreement by negotiating a deal with Mexican President Lopez Obrador: the United States would help Mexico meet its production cuts now, and Mexico would repay the United States later. Time will tell whether the agreement will hold, much less whether OPEC+ members will continue to follow their leaders.

MOVING AMERICA’S ENERGY, ONE MILE AT A TIME

Every day our more than 86,000 miles of pipeline deliver the energy that makes your day possible.



**ENERGY
TRANSFER**

energytransfer.com



EIA Expects 2021 Production and Price Increases
Continued from page 1.

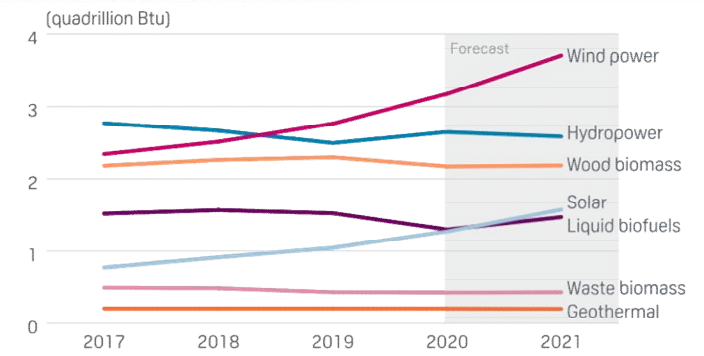
RENEWABLES OUTSHINING COAL

Renewables, by contrast, are seen charting a steady rise from 17% of the generating mix in 2019 to 21% in 2020 and to 23% in 2021.

“If realized, 2020 would mark the first year on record that renewable electricity generation surpasses coal,” Capuano said.

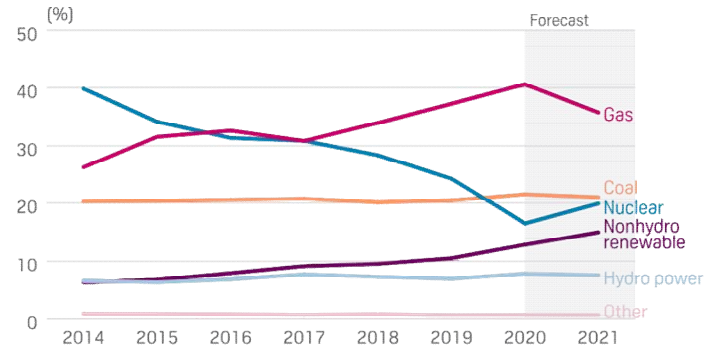
Forecasts of 23.2 GW of new wind capacity and 12.6 GW of new solar are described as “subject to a high degree of uncertainty,” however.

US RENEWABLE ENERGY SUPPLY



Source: EIA's Short-Term Energy Outlook

US ELECTRICITY GENERATION BY FUEL SOURCE



Source: EIA's Short-Term Energy Outlook

State laws help utilities halt spread of gas bans
Continued from page 1.

discussion because there’s a cost associated with those decisions that you make.”

Legislative effort

CenterPoint was part of the legislative push in Oklahoma and Louisiana, two oil and gas producing states where legislators understand the industry’s contribution to its economy, Doyle said. CenterPoint and its industry peers are considering similar legislation in Texas when the state legislature convenes in early 2021, he added.

While no cities in CenterPoint’s service territory have proposed gas bans, the company serves part of Austin and other college towns in Central Texas where the policy could garner support, Doyle said.

The Oklahoma gas distributors and utilities elsewhere indicated they have followed a model supported by the American Gas Association and developed under the chairmanship of former CenterPoint CEO Scott Pro-

chazka, working alongside a diverse group of stakeholders to make the case for gas.

CONSUMPTION

On the demand side, overall natural gas consumption is expected to average 81.87 Bcf/d in 2020, down 3.6% from the 2019 level of 84.97% Bcf/d. Industrial gas consumption is forecast to decline 8.7%, compared with 7.1% in the May STEO, driven by lower levels of assumed economic activity.

Even so, EIA raised its Q2 gas consumption estimates by 180 MMcf/d, to 71.78 Bcf/d, and by 320 MMcf/d, to 73.24 Bcf/d, for Q3. Average 2020 gas demand estimates were raised 180 MMcf.d, to 81.87 Bcf/d, while 2021 estimates were lowered 510 MMcf/d to 78.66 Bcf/d.

US electricity consumption is also forecast to be 5.7% lower in 2020 than in 2019, with the commercial sector seeing the largest declines in retail sales, of 9.1%. Retail electricity sales were pulled lower, down 5.5% from 2019 levels, versus 4.5% in May, on updated macroeconomic projections for larger GDP declines.

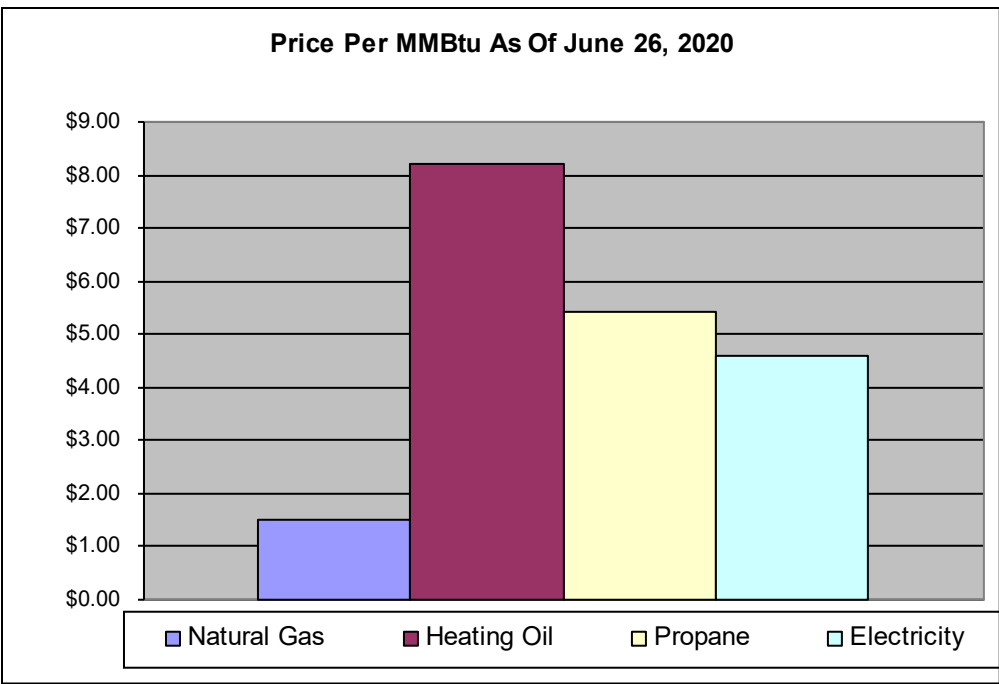
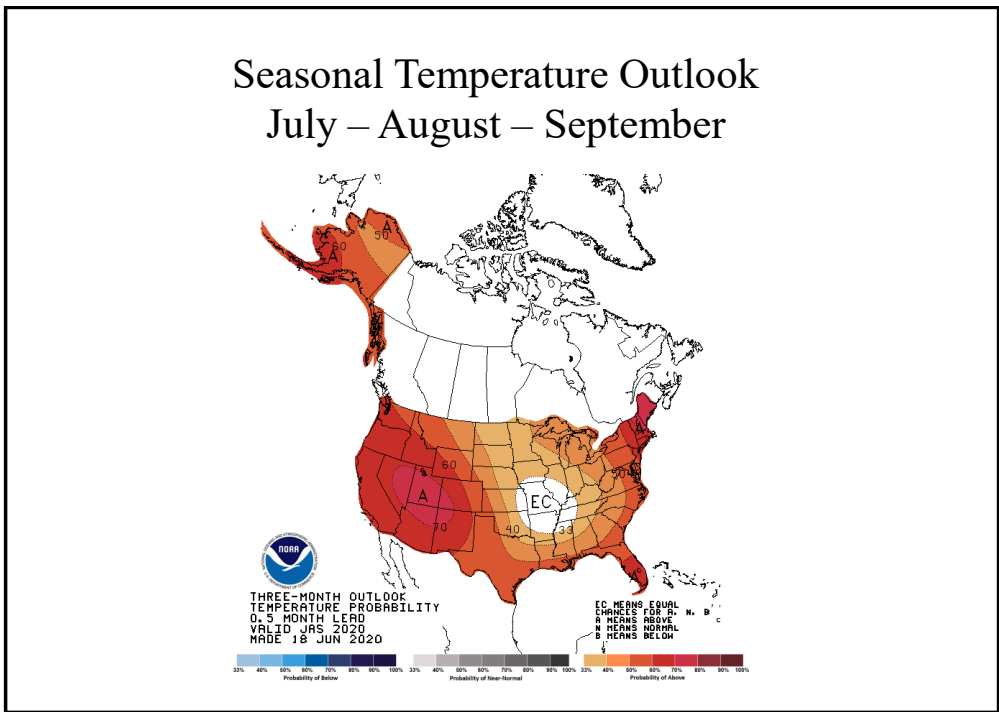
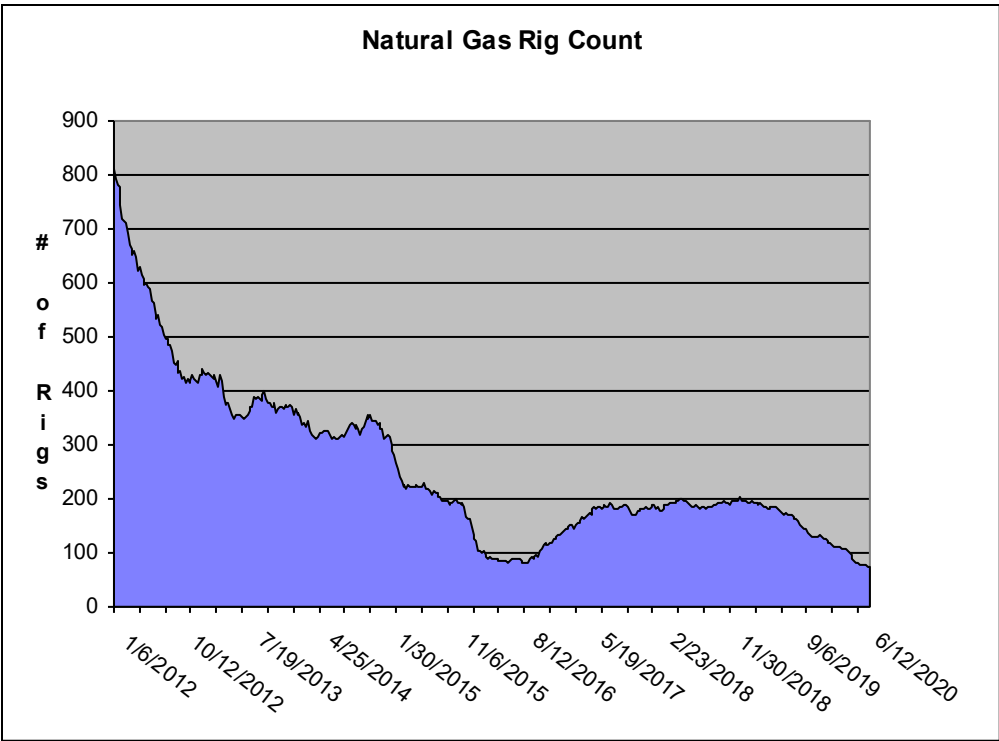
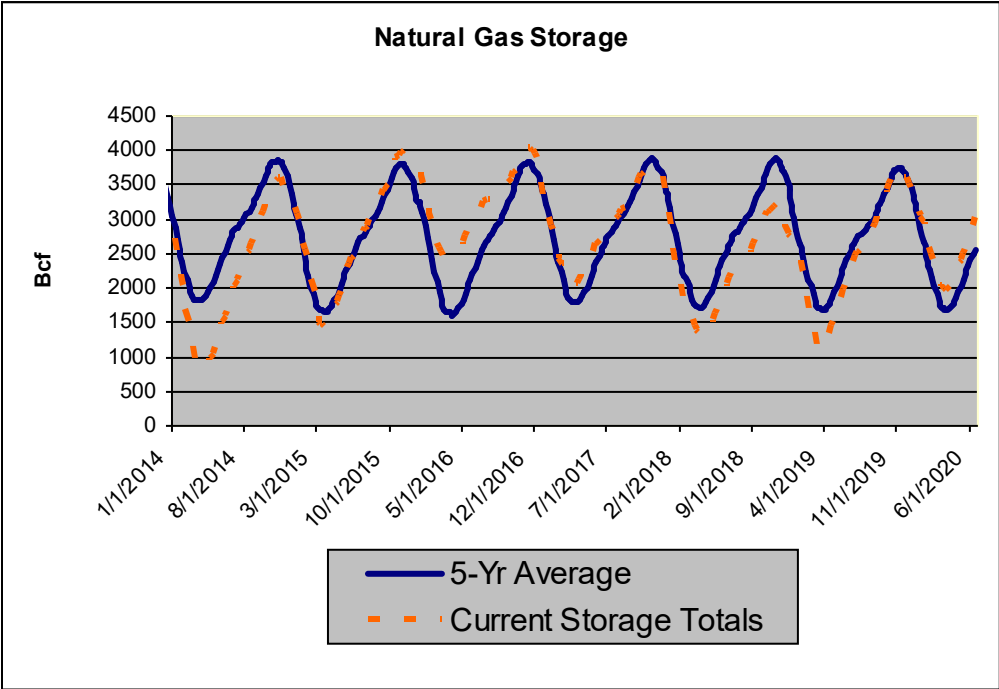
In Tennessee, that included associations representing homebuilders, manufacturers and propane companies, as well as the state’s chamber of commerce and the restaurant and hospitality industry, according to Eddie Davidson, director of government affairs in Tennessee for Duke subsidiary Piedmont Natural Gas.

“In this particular case, the message that we delivered - the various stakeholders delivered - was the importance of being able to preserve customer choice and being able to preserve the ability for each of the businesses to decide how they want to meet their energy needs,” Davidson said.

According to Davidson, the idea that state lawmakers should develop a comprehensive utility policy - rather than allowing “piecemeal” decisions at the local level - also resonated in Tennessee General Assembly. The legislation ultimately drew broad support from Democrats and Republicans alike.

Continued on page 4.

Snapshots



Summer 2020 Generation Outlook

Consistent with the expected decline in electricity demand, EIA forecasts that there will be 6.2% less generation by the U.S. electric power sector during June, July, and August 2020 compared with last summer. Forecast summer electricity generation by utility-scale power generators in the industrial and commercial sectors is 12% lower than last summer.

The mix of energy sources used in the United States to produce electricity has been undergoing large shifts during the past decade. One of the most evident trends is the steady decline in the amount of electricity generation from coal-fired power plants since at least 2010, while natural gas generation has generally been rising, albeit with some intermittent declines.

Natural gas-fired power generators have benefited in recent years from consistently low natural gas prices. Between 2015 and 2019, the cost of natural gas delivered to electric generators averaged \$3.18 per million British thermal units (Btu), which is equivalent to about \$25 per megawatt-hour (MWh). Natural gas costs in recent years have been relatively competitive with coal costs, which have averaged about \$22/MWh since 2015, and were much lower than the average natural gas cost between 2005 and 2014 of about \$48/MWh.

The relative costs of different fuel sources have had both short-term effects on the utilization (or dispatch) of existing capacity and longer-term effects on investment and retirement decisions. Historically, coal-fired power plants were generally used to meet the consistent baseload electricity demand that occurred in predictable patterns each day, while natural gas was more often used as an intermediate-load or peaking fuel to meet variable hourly electricity consumption, especially when cooling demands are high during the day. However, in recent years, natural gas prices have often been low enough to enable the economic dispatch of natural gas-fired generators to satisfy electricity demand for longer periods of the day, including during baseload hours.

Over the long run, the sustained low prices of natural gas have led the in-

dustry to retire a significant amount of coal-fired generating capacity and to add more natural gas-fired generating capacity. Many of these new natural gas generating units use modern combined-cycle technology, which is much more efficient than the technology used at older natural gas-fired power plants. The electricity industry has also made significant investments in new generating capacity from renewable energy sources as a result of declining capital costs and policies to encourage development of those technologies.

These trends in fuel costs and generating capacity additions are reflected in the mix of fuels used for generating electricity during the summer months. Coal-fired power plants in the electric power sector generated 518 billion kilowatthours (kWh) of electricity between June and August 2010, equivalent to 45% of total U.S. generation. In the summer of 2019, coal generation had fallen to 272 billion kWh in 2010 to 460 billion kWh in 2019, representing an increase in generation share from 26% to 41%. Similarly, summer generation from renewable energy sources has grown from 107 billion kWh in 2010 (a 9% generation share) to 171 billion kWh in 2019 (a 15% generation share).

The mix of energy sources for generating electricity will likely follow similar trends this summer. EIA expects the forecast decline in overall electricity demand will be primarily reflected in reduced coal generation. EIA forecasts 178 billion kWh of coal generation this summer, which represents a generation share falling to 17% from a share of 24% last summer. Natural gas prices will remain low in 2020; the forecast cost of natural gas delivered to electric generators is expected to average \$2.17 per million Btu (\$17/MWh) this year compared with a forecast average cost of \$1.98 per million Btu (\$21/MWh) for delivered coal. Since natural gas fuel costs remain very competitive with coal, EIA forecasts the U.S. electric power sector will generate 467 billion kWh this summer. The forecast natural gas generation share rises from 41% last summer 44% this summer.

EIA also expects renewable energy sources will generate more electricity this summer than last summer. The growth in generation from renewables is primarily a result of newly installed utility-scale wind and solar

photovoltaic generating capacity. Because renewable energy sources such as wind and solar generally have lower operating costs than fossil fuel-fired power plants, they are dispatched to supply electricity when the resources are available. EIA expects electric power sector renewable energy sources, other than hydropower, will provide 113 billion kWh of generation this summer, which represents 11% of total U.S. generation, up from 9% last summer.

The changing patterns of generation vary among different regions of the country. EIA expects coal generation will decline in all areas of the country because natural gas prices have approached near-record lows and some coal-fired generating capacity has been retired in some areas of the country. The largest declines are forecast to occur in the Mid-Atlantic (PJM), Midwest (MISO), and Southeast/Florida regions. In the MISO area and in the Southeast/Florida, most of the forecast decline in coal generation is a result of the expected decline in overall electricity demand in that area. In the PJM region, the decline in coal generation is offset somewhat by a forecast increase in natural gas generation as a result of more favorable fuel costs. The forecast decline in U.S. coal generation also reflects 9.8 gigawatts (GW) of coal-fired generating capacity (about 4% of existing capacity) that has retired since last summer.

Although EIA expects there to be more natural gas generation this summer than last summer across the entire United States, some regions will see increases while others experience decreases. The forecast low natural gas fuel costs stimulate increased generation from natural gas-fired power plants in the East Coast. The retirement of reactors at the Three Mile Island nuclear plant in Pennsylvania and the Indian Point plant in New York is also likely to stimulate increases in regional natural gas generation. Areas of the country with sizable increases in renewable generation will generally experience offsetting declines in natural gas generation. EIA forecasts there will be 41% more conventional hydroelectric generation in the Northwest between June and August 2020 compared with last summer, which leads to a similar expected decline in generation by the region’s natural gas-fired power plants.

State laws help utilities halt spread of gas bans

Continued from page 3.

Attention from the coasts

The strategy could spread beyond the US heartland, although many utilities serving the East and West Coasts are still focusing primarily on outreach.

Northwest Natural Holding has held preliminary discussions in Oregon regarding “consumer energy choice legislation” similar to the Tennessee bill, according to Kathryn Williams, the company’s vice president of public affairs.

Northwest Natural has already made substantial inroads with policymakers, regulators and other stakeholders in Oregon in recent years. Recognizing a groundswell of opposition to gas, the company began a project in 2017 to study the energy system and gas’ role during peak demand. It has since had hundreds of conversations about the role of gas distribution in Oregon based on its findings.

“We were finding a narrative out there that really just didn’t include facts and figures about, “How do you handle a heating season in the Northwest?” Northwest Natural CEO David Anderson said in an interview. “We were having people indicate that it would be fairly simple to electrify that load, and it was really clear to us that people just didn’t understand the value of a gas distribution system and the power that it brings in terms of those coldest days.”

New England utility Eversource Energy has been engaged in similar outreach since gas bans gathered momentum, including in its Cambridge, Massachusetts, territory, according to Bill Akley, president of gas distribution. “We are working with the other companies, the other (local distribution companies) in the state, collaboratively on how do we tell the story? How do we provide the right data? How do we engage with all the stakeholders, including environmentalists, around sharing and getting them aligned with a path here?” Akley said in an interview.

Akley said the company is not certain there is appetite in Massachusetts and Connecticut for legislation to preempt gas bans, but executives are monitoring the progress in other states. He noted that Boston-area gas bans are likely to face court challenges.

Stay Informed With The IMGA Evening Report

The IMGA Evening Report is an excellent way to stay up to date on NY-MEX prices, weather, gas storage, and industry news. Each issue includes the days closing market prices for natural gas futures and crude oil, as well as a short commentary on market movement and industry related news. The IMGA Evening Report is distributed electronically daily and is

complimentary to all of our members. If you are not an IMGA member, but would like to receive the IMGA Evening Report, please contact Jeanna Martin at jmartin@imga.org or 217-438-4642. The IMGA Evening Report fee for non-members is \$150 per year, or become a member today for a one time fee of \$250.



Interstate Municipal Gas Agency
Created BY Municipals FOR Municipals
1310 West Jefferson, Auburn, Illinois 62615
217-438-4642 www.imga.org

