to defend why its cost-increasing policies are more important than taxpayers getting their money's worth. The federal rules attempt to put states on the defensive. States should turn the tables.

0919 Section 230/censorship: California Dems follow Texas GOP into online speech battle | The Hill CA Democrats appear headed for a similar legal battle facing Texas Republicans as the fight over content moderation plays out through state laws. California's transparency law, signed by Gov. (D) last week, has the opposite intent as that of a law backed by Texas Republicans that is set to go into effect after an appellate court ruled Friday in favor of the state. But the industry groups opposing Texas's law are tying the two together, arguing that both content moderation laws are unconstitutional and could set dangerous precedents that lead to more hate speech online. ….. California's law, though, aims to crack down on "hate speech" (an amorphous term that frequently requires subjective analysis) by establishing regulation to promote transparency by compelling tech platforms to publicly post their policies about hate speech and disinformation. It also requires companies to send a report to the state attorney general about current terms of service and data on violations.

0919 Rip and Replace Status updates due October 13.

0919 Unbundling: FCC notice seeking comments on Sonic Telecom's petition for reconsideration of the October 2020 report and order on modernizing the FCC's unbundling and resale requirements was published in the Federal Register on Sept. 19, 2022. **Comments and oppositions are due Oct. 4, 2022; replies are due Oct. 14, 2022.** NECA WW

0918 Mapping: FCC Broadband Mapping Fabric Doug Dawson CCG Consulting going to hear a lot in the next few months about the FCC's mapping fabric. Today's blog is going to describe what that is and describe the challenges of getting a good mapping fabric.

The FCC hired CostQuest to create the new system for reporting broadband usage. The FCC took a lot of criticism about the old mapping system that assumed that an entire Census block was able to buy the fastest broadband speed available anywhere in the Census block. This means that even if only one home is connected to a cable company, the current FCC map shows that everybody in the Census block can buy broadband from the cable company.

To fix this issue, the FCC decided that the new broadband reporting system would eliminate this problem by having an ISP draw polygons around areas where it already serves or could provide service within ten days after a customer request. If done correctly, the new method will precisely define the edge of cable and fiber networks. The creation of the polygons creates a new challenge for the FCC – how to count the passings inside of any polygon an ISP draws. A passing is any home or business that is a potential broadband customer. CostQuest tried to solve this problem by creating a mapping fabric. A simplistic explanation is that they placed a dot on the map for every known residential and business passing. CostQuest has written software that allows them to count the dots of the mapping fabric inside of any possible polygon. That sounds straightforward, but the big challenge was creating the dots with the actual passings. My consulting firm has been helping communities try to count passings for years as part of developing a broadband business plan, and it is never easy. Communities differ in the raw data available to identify passings. Many counties have GIS mapping data that shows the location of every building in a community. But the accuracy and details in the GIS mapping data differ drastically by county. We have often tried to validate GIS data to other sources of data like utility records. We've also validated against 911 databases that show each registered address. Even for communities that have these detailed records, it can be a challenge to identify passings. We've heard that CostQuest used aerial maps to count rooftops as part of creating the FCC mapping fabric.

Why is creating a fabric so hard? Consider residential passings. The challenge becomes apparent as soon as you start thinking about the complexities of the different living arrangements in the world. Even if you have great GIS data and aerial rooftop data, it's hard to account for some of the details that matter.

How do you account for abandoned homes? Permanently abandoned homes are not a candidate for broadband. How do you make the distinction between truly abandoned homes and homes where owners are looking for a tenant?

How do you account for extra buildings on a lot. I know somebody who has four buildings on a large lot that has only a single 911 address. The lot has a primary residence and a second residence built for a family member. There is a large garage and a large workshop building – both of which would look like homes from an aerial perspective. This lot has two potential broadband customers, and it's likely that somebody using GIS data, 911 data, or aerial rooftops won't get this one property right. Multiply that by a million other complicated properties, and you start to understand the challenge.

Farms are even harder to count. It wouldn't be untypical for a farm to have a dozen or more buildings. I was told recently by somebody in a state broadband office that it looks like the CostQuest mapping fabric is counting every building on farms – at least in the sample that was examined. If this is true, then states with a lot of farms are going to get a higher percentage of the BEAD grants than states that don't have a lot of compound properties with lots of buildings.

What's the right way to account for vacation homes, cabins, hunting lodges, etc.? It's really hard with any of the normal data sources to know which ones are occupied full time, which are occupied only a few times per year, which have electricity, and which haven't been used in many years. In some counties, these kinds of buildings are a giant percentage of buildings.

Apartment buildings are really tough. I know from working with local governments that they often don't have a good inventory of the number of apartment units in each building. How is the FCC mapping data going to get this right?

I have no idea how any mapping fabric can account for homes that include an extra living space like an in-law or basement apartment. Such homes might easily represent two passings unless the two tenants decide to share one broadband connection.

And then there is the unusual stuff. I remember being in Marin County, California and seeing that almost every moored boat has a full-time occupant who wants a standalone broadband connection. The real world is full of unique ways that people live.

Counting businesses is even harder, and I'm not going to make the list of the complexities of defining business passings – but I think you can imagine it's not easy.

I'm hearing from folks who are digging into the FCC mapping fabric that there are a lot of problems. ISPs say they can't locate existing customers. They tell me there are a lot of mystery passings shown that they don't think exist.

We can't blame CostQuest if they didn't get this right the first time – Americans are hard to count. I'm not sure this is ever going to be done right. I'm sitting here scratching my head and wondering why the FCC took this approach. I think a call to the U.S. Census would have gotten that advice that this is an impossible goal. The Census spends a fortune every ten years trying to identify where people live. The FCC has given itself the task of creating a 100% census of residences and businesses and updating it every six months.

The first set of broadband map challenges will be about the fabric, and I'm not sure the FCC is ready for the deluge of complaints they are likely to get from every corner of the country. I also have no idea how the FCC will determine if a suggestion to change the fabric is correct because I also don't think communities can count passings perfectly.

This is not the only challenge. There are going to be challenges of the coverage areas claimed by ISPs. The big challenge, if the FCC allows it, will be about the claimed broadband speeds. If the FCC doesn't allow that they are going to get buried in complaints. I think the NTIA was right to let the dust settle on challenges before using the new maps

0919 NECA REG SCAN: Full edition | Past issues

The FCC released data specifications for filing bulk challenges and bulk crowdsource information as part of the Broadband Data Collection. The FCC also established procedures for entities using their own hardware and software to submit on-the-ground speed test data for the mobile BDC.

NTIA updated the frequently asked questions for the BEAD Program.

The FCC authorized Rural Digital Opportunity Fund support for 49 winning bids.

Comments on NECA's 2023 Modification of the Average Schedule Universal Service High Cost Loop Support Formula are due Oct. 14, 2022; replies are due Nov. 1, 2022.

The FCC announced the proposed universal service contribution factor for the fourth quarter of 2022 will be 28.9%, down from 33%.

Rep. Andy Harris (R-Md.) sent a letter to the Department of Commerce expressing concerns with NTIA's irrevocable letter of credit requirement for the middle mile and BEAD programs.

Reply comments were filed on the seventh FNPRM and fifth FNPRM on robocalls.

The report and order adopting a schedule to assess and collect $381,950,000 in regulatory fees for fiscal year 2022 is effective Sept. 14, 2022. Fees are due by Sept. 28, 2022.

0919 BB Funding Guide: NTIA Launches Updated Federal Broadband Funding Guide The National Telecommunications and Information Administration (NTIA) released an update to the Federal Funding site, which serves as a comprehensive, "one-stop shop" of resources for potential applicants seeking federal broadband funding. The site includes broadband funding opportunities and information on more than 80 federal programs across 14 federal agencies. Programs include funding opportunities for high-speed internet-related activities such as planning, infrastructure deployment, and digital inclusion. Program types include direct grants, loans, indirect support, and discounts for industry, state, local, and Tribal governments, schools, libraries, and other community institutions that are interested in expanding and improving broadband access. Notably, the site features many new programs, including those that were funded through the Infrastructure Investment and Jobs Act including the Department of Commerce's Broadband Equity, Access, and Deployment (BEAD), Enabling Middle Mile Broadband Infrastructure, and Digital Equity Act programs. More information can be found here.

0919 BB Programs – LOC: Rep Harris (R-MD) Asks NTIA to Reconsider Letter of Credit Requirements for Infrastructure Investment and Jobs Act Broadband Programs Letter Rep Andy Harris (R-MD) recently sent a letter to US Commerce Secretary Gina Raimondo regarding the National Telecommunications and Information Administration's (NTIA) requirements for its Infrastructure Investment and Jobs Act (IIJA) broadband programs. Specifically, the September 14, 2022 letter expresses concerns about the Letter of Credit (L/C) requirement included in the NTIA's Notices of Funding Opportunity (NOFOs) for the Broadband Equity, Access and Deployment (BEAD) Program and the Enabling Middle Mile (MM) Broadband Infrastructure Program. "Under this requirement," said Harris, "for a broadband provider to be eligible for a grant under the MM and BEAD programs, it must obtain a standby irrevocable L/C from a bank that equals 25% of the grant amount." Harris stated that "this L/C requirement contravenes the IIJA because it prevents the 'distribut[ion of] the funds in an equitable and nondiscriminatory manner' to all broadband providers, both small and big."

0919 Privacy: Sen. Durbin (posted today from 9/13 hearing) : Durbin Delivers Opening Statement During Senate Judiciary Committee Hearing With Twitter Whistleblower Peiter This hearing will focus on Mudge's allegations of data security failures, foreign infiltration, and misrepresentations to regulatory a gencies by Twitter WASHINGTON – U.S. Senate Majority Whip Dick Durbin (D-IL), Chair of the Senate Judiciary Committee, today delivered an opening statement during the Senate Judiciary Committee hearing entitled "Data Security at Risk: Testimony from a Twitter Whistleblower."

Key Quotes:

"Twitter now plays an outsized role in politics, culture, and even democracy itself."

"In July 2020, two teenagers hacked into the accounts of Twitter employees and gained access to a number of high-profile accounts—including now President Biden's and former President Obama's. Those two teenagers then sent a series of tweets from those accounts, and scammed Twitter users out of more than $100,000 in Bitcoin. In response, then-CEO Dorsey turned to a trusted name in the world of cybersecurity to lead an overhaul of Twitter's security practices, and for more than a year, that's what he tried to do until he was terminated by Twitter's new CEO this January."

"Last month, this individual released a whistleblower disclosure detailing a number of alarming allegations about Twitter's security practices. Without objection, his disclosure will be entered into the record. That whistleblower's name is Peiter Zatko—or, as he's more commonly known: Mudge."

"You've alleged a number of security flaws and weaknesses within the company—flaws that may pose a direct threat to the safety and privacy of Twitter's hundreds of millions of users as well as America's national security. And more broadly, you allege that compared to other technology companies, Twitter's security standards remain woefully deficient. You allege that thousands of employees within the company have extraordinary access to the sensitive information of Twitter's users and that there is little oversight over how that information is accessed."

"Twitter doesn't just have access to your tweets and email address, they also have access to all of the data necessary to directly access your device—and even pinpoint your exact location."

"Imagine if a malicious hacker or hostile foreign government broke into the President's Twitter account, and sent out false information claiming that there was a terrorist attack on one of our cities. It could cause widespread panic. The bottom line is this: Twitter is an immensely powerful platform that cannot afford gaping security vulnerabilities. Today, we have a chance to engage in a good faith, bipartisan discussion to ask: What needs to be done?"

Yesterday, Durbin and U.S. Senator Chuck Grassley (R-IA), Ranking Member of the Senate Judiciary Committee, sent a letter to Twitter Chief Executive Officer (CEO) Parag Agrawal seeking information regarding Mr. Zatko's whistleblower report concerning the social media platform. In their letter, Durbin and Grassley outline some of the more serious concerns raised by Mr. Zatko, including the prospect that more than half of the company's full-time employees have privileged access to Twitter's production systems, enabling several thousand employees to access sensitive user data—while, at the same time, Twitter reportedly lacks sufficient capacity to reliably know who has accessed specific systems and data and what they did with it.

Video of Durbin's opening statement is available here.

Audio of Durbin's opening statement is available here.

Footage of Durbin's opening statement is available here for TV Stations.

0919 Spectrum – Interference: UTC News: Utility Trade Associations Call on FCC to Conduct Further Testing in the 6 GHz BandUTC, together with the Edison Electric Institute, the American Public Power Association and the National Rural Electric Cooperative Association (Utility Trade Associations) filed a letter with the Federal Communications Commission (FCC) to emphasize the importance of real-world testing to ensure that the operations of licensed incumbents are adequately protected from harmful interference from unlicensed devices. The Monte Carlo simulations by CableLabs, contracted by proponents for unlicensed operations in the 6 GHz band only make conclusory findings and do not provide the underlying data and algorithms used. In contrast, initial results of real-world testing by other electric companies confirms the Southern Company test report findings regarding a single low power device operating in the path and also indicates that the additional interference caused by operating more than one unlicensed device in the path of an existing 6 GHz fixed service (FS) microwave link presents a significant risk of communications failure.

0919 BB Funding Guide Update – UTC: The National Information and Telecommunications Administration (NTIA) updated its Federal Funding website, which includes broadband funding opportunities and information on more than 80 federal programs across 14 federal agencies. Programs include funding opportunities for high-speed internet-related activities such as planning, infrastructure deployment, and digital inclusion. This is part of NTIA's ongoing work to expand access and increase connectivity across the U.S. through its Internet for All effort by increasing awareness of federal funding available for closing the digital divide.

0916 TDS chases broadband grants in 3 more states after wins in TN, WI *By Diana Goovaerts* In Virginia, it is seeking nearly $4.6 million to reach over 2,800 locations in Craig County.

0916 Consumer Advisory Committee An FCC notice was published in the Federal Register on Sept. 16, 2022, announcing the charter of the Consumer Advisory Committee will be renewed for a two-year period on or before Oct. 13, 2022. The CAC's mission is to make recommendations to the commission on topics that may include: consumer protection and education; implementation of statutes, FCC rules and policies to protect consumers; promoting consumer participation and input into FCC rulemaking proceedings and other decision-making processes; and the impact of new and emerging communications technologies on consumers, including those in underserved populations. NECA WW

0916 Robocalls: PWR Notice: An FCC notice was published in the Federal Register on Sept. 16, 2022, seeking Paperwork Reduction Act comments on a new information collection as it pertains to the May 2022 report

[and order](#) **addressing foreign-originated robocalls.** The order required all gateway providers block calls using a reasonable Do Not Originate list. **PRA comments are due Oct. 17, 2022**. NECA WW

0916 Precision Ag meets Oct 5: FCC [announced](#) the Task Force for Reviewing the Connectivity and Technology Needs of Precision Agriculture in the United States will hold a meeting on Oct. 5, 2022. The task force will cover updates from working groups on their progress and discuss working group reports. The meeting will be held via conference call and available to the public via [live feed](#). NECA WW

0916 FEES: FCC [public notice](#) announces payment methods and procedures for fiscal year 2022 regulatory fees. The FCC also issued fact sheets on [regulatory fee exemptions](#), and on amounts owed from [interstate telecommunications service providers, cable television, IPTV and DBS](#), and [international and satellite services](#). NECA WW

0916 Lifeline: Smith Bagley, Inc. filed a [request](#) for a three-month extension (through Dec. 31, 2022) of the waiver of Lifeline rules relating to certification, recertification, income documentation and general deenrollment, which is currently set to expire on Sept. 30, 2022. SBI also requested clarification that tribal Lifeline subscribers will not be subject to the Affordable Connectivity Program recertification process for the duration of the waiver of the Lifeline recertification rules, and that any tribal Lifeline subscribers who are deenrolled as a result of the ongoing ACP recertification process may reenroll in ACP based on their continued participation in Lifeline. NECA WW

0916 Section 230/censorship: [The Hill: Appeals (5th Circuit) court upholds controversial Texas social media law](#)

0916 Supply Chain: Wireline Competition Bureau [reminded](#) recipients in the Secure and Trusted Communications Networks Reimbursement Program of their obligation to file status updates with the FCC every 90 days, beginning on the date the bureau approved their applications, until the obligation to file expires. The bureau said because recipients' applications were approved on July 15, 2022, all initial status updates are due on Oct. 13, 2022. NECA WW

0916 5G -[Verizon challenges Comcast Xfinity 5G marketing claims](#) *By Monica Alleven* Comcast was told to tone down some of its messaging so that it doesn't give the impression that consumers will save massive amounts of money by switching to Xfinity.

0916 Robocalls: Reply comments were filed on the [seventh FNPRM and fifth FNPRM](#) on protecting consumers from illegal calls, whether they originate domestically or abroad. [NTCA](#) said the FCC must take steps to ensure call authentication is available across networks of all kinds. NTCA asserted given the presence of TDM tandems in many of the call flows for rural America, this can be achieved either by adopting standards for non-IP call authentication or providing a regulatory backstop against which IP interconnection can be promoted and implemented. The [VON Coalition](#) asserted the FCC should reject proposals broadly targeting VoIP providers that will introduce regulatory uncertainty and unnecessary burdens on the entire VoIP industry without any likelihood of reducing illegal robocalls. [Verizon](#) asserted the FCC should utilize the Industry Traceback Group's unique capabilities to identify and take enforcement action against the many service providers currently failing to comply with its existing rules. NECA WW

0915 BB Speeds: Manhattan, Kan., was the college town with the fastest 5G broadband speed in Ookla's Speedtest Intelligence, which ranked 100 towns during the second quarter. Clemson, S.C., led in mobile speed and Grambling, La., in fixed broadband. [Telecompetitor](#)

0915 RDOF: California PUC [letter](#) responds to Cal.net's [petition for waiver](#) of the deadline for each RDOF support applicant to certify it is a designated eligible telecommunications carrier in each of the areas for which it seeks support. The CPUC asserted Cal.net is asking the FCC to disregard the CPUC's determination on Cal.net's ETC status, as well as ignore the FCC's own finding it does not have jurisdiction to decide Cal.net's ETC status in California, and in doing so, makes several mischaracterizations and misrepresentations.

0915 USF: National Tribal Telecommunications Association letters to Rosenworcel, Carr, Starks and Simington, and Trent Harkrader, attaches a white paper on examining the need for ongoing broadband support on tribal lands. NTTA said the paper calls for a sustainability funding program that assists tribes with the high cost of operating and maintaining broadband capable networks, especially for those providers not currently assisted under existing federal high-cost support programs. NTTA urged the FCC to consider these issues in its proceeding to determine the reorientation of the High Cost Program. NECA WW

0915 Digital Divide: ""Equity" - Lawmakers Introduce the Digital Equity Foundation Act to Increase Digital Equity, Inclusion, and Literacy - Sen Ben Ray Luján (D-NM), Rep Doris Matsui (D-CA) | Press Release | US Senate Sen Ben Ray Luján (D-NM) and Rep Doris Matsui (D-CA) led Sens Jeff Merkley (D-OR), Martin Heinrich (D-NM), Ed Markey (D-MA), Richard Blumenthal (D-CT), and Amy Klobuchar (D-MN) to introduce the Digital Equity Foundation Act, legislation to establish a nonprofit foundation to leverage public and private investments to make progress closing the divide on digital equity, digital inclusion, and digital literacy. The Foundation will supplement the National Telecommunications and Information Administration (NTIA) and the Federal Communication Commission's work to award grants, support research, provide training and education, engage with stakeholders, collect data, and promote policies to improve digital equity outcomes. The Foundation will be run by a Board of experts specializing in the fields of digital equity, technology, and telecommunications, and will represent diverse communities throughout the US. Congressionally-established nonprofit foundations have had great success in supporting the missions of various government agencies, including NIH, FDA, and NPS, and provide a mechanism to leverage public-private partnerships and support innovation. As the NTIA works to implement the broadband programs in the Infrastructure Investment and Jobs Act (IIJA) and connect our country, the Digital Equity Foundation will be vital to ensuring the most vulnerable communities have the knowledge and skills to take full advantage of these new connections. NECA's TAKE: Rep. Doris Matsui (D-Calif.) and Sens. Ben Ray Luján (D-N.M.), Jeff Merkley (D-Ore.), Martin Heinrich (D-N.M.), Ed Markey (D-Mass.), Richard Blumenthal (D-Conn.) and Amy Klobuchar (D-Minn.) introduced the Digital Equity Foundation Act on Sept. 15, 2022, which establishes a nonprofit foundation to leverage public and private investments to make progress closing the divide on digital equity, inclusion and literacy. They said the foundation will supplement NTIA's and the FCC's work to award grants, support research, provide training and education, engage with stakeholders, collect data and promote policies to improve digital equity outcomes.

0915 BB Grants: Xochitl Torres Small of the USDA said that federal government definitions for "rural" vary widely where broadband programs are concerned. Rep. Jimmy Panetta, D.-Calif., has called for a unified standard. FierceTelecom

0915 Digital Divide - Digital Divide: Tribal Communities Are Undercounted, Underserved Kaitlyn Levinson | nextgov When broadband fails to reach indigenous tribes, the result is not only a lack of connectivity but also a scarcity of data that essentially masks their needs from the government. The digital divide disproportionately affects underserved populations, and for Tribal communities, it is exacerbated by jurisdictional challenges, geographic coverage limitations, and a lack of affordability, said Traci Morris, executive director of the American Indian Policy Institute (AIPI). The absence of technology and even staff on Tribal lands restricts the amount of their information that can be gathered about native communities compared with other areas of the country, creating data divides. When American Indians and Native Alaskans are undercounted by the census, for example, their needs are too, according to the Center for Data Innovation's recent report on the data divide. Despite funding from the National Telecommunications and Information Administration (NTIA) to increase digital access and broadband on indigenous lands, "government officials cannot effectively grasp the scope of the problem," because of inadequate data according to the report. There have been efforts to improve the situation, Morris said. In Temecula (CA) in the summer of 2021, representatives from various tribes met up to learn about broadband installation for the first tribal wireless boot camp. The session focused on building, maintaining, and troubleshooting wireless networks. Tribal broadband boot camps are slated to continue next year as well.

Additionally, the US Department of Commerce announced the Tribal Broadband Connectivity Program (TBCP), which will award nearly $1 billion in funds that would help "deploy broadband infrastructure, establish affordable broadband programs, and support digital inclusion across Indian Country to lessen the digital divide."

0915 ACP - Biden-Harris Administration Makes "Back to School" Drive to Help Students and Families Get Free High-Speed Internet White House As America's kids get back to school and continue to recover from the challenges of the pandemic, ensuring that all families have access to affordable high-speed internet is more important than ever. That's why President Biden and Vice President Harris worked with Democrats, Republicans, and Independents to create the Affordable Connectivity Program (ACP) in the Infrastructure Investment and Jobs Act. The Biden-Harris Administration's "Back to School" enrollment drive includes: Working with local leaders to help families in their community sign up. Providing a "Back to School" toolkit for schools. Raising ACP awareness through the Department of Education's "Back to School" outreach. Reaching out to principals at key schools. Emailing all Pell Grant awardees to notify them of their eligibility a d encourage them to sign up. Conducting outreach to Tribal communities. For more information, visit here.

0915 Mapping: FCC Announces Data Specifications for Bulk Fixed Availability Challenge and Crowdsource Data Federal Communications Commission The Federal Communications Commission announces the release of Data Specifications for Bulk Fixed Availability Challenge and Crowdsource Data, which provides guidance as to the requirements in the FCC's rules and orders for filing bulk challenges, as well as bulk crowdsource information, to the fixed broadband availability data that will be published on the FCC's Broadband Maps as part of the new Broadband Data Collection (BDC). The Data Specifications for Bulk Fixed Availability Challenge and Crowdsource Data, which also explains how to make the required filings in the BDC system, is available here. The bulk fixed availability challenge and crowdsource processes will open after the FCC's Broadband Maps are published. NECA's TAKE: Broadband Data Task Force, together with the Wireline Competition Bureau and Office of Economics and Analytics issued a public notice on Sept. 15, 2022, announcing the release of data specifications that provide guidance on the requirements for filing bulk challenges and bulk crowdsource information to the fixed broadband availability data to be published on the FCC's broadband maps as part of the new Broadband Data Collection. The bulk fixed availability challenge and crowdsource processes will open after the maps are published. DA-22-961A1.docx DA-22-961A1.pdf DA-22-961A1.txt

0915 Mapping/Mobile BB Data Collection: BROADBAND DATA TASK FORCE ESTABLISHES PROCESS FOR ENTITIES TO USE THEIR OWN SOFTWARE AND HARDWARE TO COLLECT ON-THE-GROUND MOBILE SPEED TEST DATA AS PART OF THE BROADBAND DATA COLLECTION. (DA No. 22-962). (Dkt No 19-195). Broadband Data Task Force establishes procedures for wireless providers, governmental entities and third parties that use their own hardware and software to submit on-the-ground speed test data as part of the BDC mobile challenge and verification processes. MB WTB OEA OET. News Media Contact: Anne Veigle, Anne.Veigle@fcc.gov. DA-22-962A1.docx DA-22-962A1.pdf DA-22-962A1.txt - NECA - The Broadband Data Task Force, together with the Wireless Telecommunications Bureau, Office of Economics and Analytics, and Office of Engineering and Technology issued a public notice setting procedures for mobile wireless broadband service providers, governmental entities and other third parties that use their own hardware and software to submit on-the-ground speed test data as part of the mobile challenge and verification processes of the Broadband Data Collection. NECA WW

0915 Precision Ag: Next Precision Ag Connectivity Task Force Meeting October 5 at 3 ET At the meeting, the task force will cover updates from working groups on their progress and discuss working group reports. The meeting will be held via conference call and be available to the public via live feed.

0915 Farm Bill: - The House Agriculture Committee held a hearing on Sept. 15, 2022, entitled "2022 Review of the Farm Bill: Broadband." Witnesses included: Xochitl Torres Small, USDA; B. Lynn Follansbee, USTelecom; Tarryl Clark, Stearns County, Minnesota on behalf of the National Association of Counties; and Garrett Hawkins, Missouri Farm Bureau. NECA WW

0915 FCC Vacancies – OpEd opposing Gigi: The Hill: The FCC is working just fine without Gigi Sohn

0915 Section 230/Censorship: Biden-Harris Administration Hosts United We Stand Summit on Taking Action to Prevent and Address Hate-Motivated Violence White House On September 15, 2022, President Biden hosted the United We Stand Summit to counter the corrosive effects of hate-fueled violence on our democracy and public safety. Announcements from the tech sector at the summit took a step towards recognizing the important role companies play in designing their products and platforms to curb the spread of hate-fueled violence both online and off:

YouTube is expanding its policies to combat violent extremism by removing content glorifying violent acts for the purpose of inspiring others to commit harm, fundraise, or recruit. YouTube will also launch an educational media literacy campaign across its platform.

Twitch will release a new tool that empowers its streamers to help counter hate and harassment. Twitch will also launch new community education initiatives on topics including identifying harmful misinformation and deterring hateful violence.

Microsoft is expanding its application of violence detection and prevention artificial intelligence (AI) and Machine Learning (ML) tools and using gaming to build empathy in young people.

Meta is forging a new research partnership with the Middlebury Institute of International Studies' Center on Terrorism, Extremism, and Counterterrorism. Meta will also partner with Search For Common Ground to equip community-based partners working locally to counter hate-fueled violence.

0915 BB – Company Access to Govt Funds: Altice USA CEO says its quest for broadband grants is gaining steam Diana Goovaerts | Fierce Outgoing Altice USA CEO Dexter Goei revealed the operator has already secured tens of millions in broadband grant awards this year, as it pursues as much as $1 billion in government funding to boost its fiber expansion plan. Goei indicated it has received around $50 million so far this year to help it reach between 40,000 and 45,000 locations. He added it continues to apply for grants "every week" and is hoping to score additional funding over the next 12 to 24 months to help it cover "a couple hundred thousand more" locations. The operator's wins thus far include a $6 million Arizona Broadband Development Grant to cover 7,000 locations in La Paz and Coconino (AZ) counties; a $6 million grant from the state of West Virginia to cover more than 9,000 locations there; and a $4 million award to cover around 1,500 locations in North Carolina. It also scored $15 million from Louisiana's Granting Unserved Municipalities Broadband Opportunities (GUMBO) program to serve more than 9,000 locations and $12.6 million from Arizona's Yavapai County to reach around 8,000 locations. Ultimately, Altice USA continues to ramp up its ongoing fiber overbuild of its cable footprint until 2024 to reach 1.6 to 1.8 million new passings.

0915 Spectrum: Starlink and Wireless Internet Service Providers Battle for 12GHz Spectrum Doug Dawson | Analysis | CCG Consulting A big piece of what the Federal Communications Commission does is to weigh competing claims to use spectrum. One of the latest fights, which is the continuation of a fight going on since 2018, is for the use of the 12 GHz spectrum. The big wrestling match is between Starlink's desire to use the spectrum to communicate with its low-orbit satellites and cellular carriers and wireless internet service providers (WISPs) who want to use the spectrum for rural broadband. Starlink uses this spectrum to connect its ground-based terminals to satellites. Wireless carriers argue that the spectrum should also be shared to enhance rural broadband networks. In the current fight, Starlink wants exclusive use of the spectrum, while wireless carriers say that both sides can share the spectrum without much interference. These are always the hardest fights for the FCC to figure out because most of the facts presented by both sides are largely theoretical. The only true way to find out about interference is in real-world situations – something that is hard to simulate any other way. It seems every spectrum fight has two totally different stories defending why each side should be the one to win use of the spectrum.

0915 NTTA files paper on broadband sustainability funding on Tribal lands Godfrey Enjady National Tribal Telecommunications Association On September 15, 2022, the National Tribal Telecommunications Association (NTTA) sent letters to Federal Communications Commission Chairwoman Jessica Rosenworcel, Commissioners Carr, Starks and Simington, and Chief of the Wireline Competition Bureau Trent Harkrader attaching a white paper on examining the need for ongoing broadband support on Tribal lands. According to NTTA, the paper examines the need for ongoing support to assist in eliminating the digital divide that currently exists between broadband availability on Tribal lands and the rest of the United States. It calls for a "sustainability funding" program that assists Tribes with the high cost of operating and maintaining broadband-capable networks, especially for those providers not currently assisted under existing federal high-cost support programs. The NTTA urged the FCC to consider the issues discussed in the white paper in its upcoming proceeding to determine the "reorientation" of the High Cost Program.

0915 Speed Measurement metrics Needed: The national broadband rollout has a blind spot: Lack of accurate, transparent data about internet access speeds Sascha Meinrath | Op-Ed | The Conversation Unlike other advertisements for goods and services, there are no federally set standards for measuring broadband service speeds. This means there is no clear way to tell whether customers are getting what they pay for. To protect consumers, the FCC will need to invest in building a set of broadband speed measures, maps, and public data repositories that enables researchers to access and analyze what the public actually experiences when people purchase broadband connectivity. The FCC's latest proposal for the creation of a National Broadband Map is already receiving criticism because its measurement process is a "black box," meaning its methodology and data are not transparent to the public. Lack of transparency about these new maps and the methodologies undergirding them could lead to major headaches in disbursing the $42.5 billion in broadband infrastructure grant funding through the Broadband Equity, Access, and Deployment (BEAD) Program. The FCC's methodologies have been greatly inaccurate, which has hampered the nation's ability to address the digital divide. Independent analysis is crowd-sourcing data collection of monthly internet bills from across the country. Efforts like these from consumer groups are crucial to shed more transparency on the problem that official measures differ from consumer experience.

0914 E-Rate - Los Angeles Unified School District letter to all the commissioners urge the FCC to authorize permanent use of E-rate funds for IT security and infrastructure. NECA WW

0914 5G: Building private 5G networks for factories and other large installations represents one of the biggest new 5G business opportunities for Verizon, said CEO Hans Vestberg. The other key trend is mobile access computing, Vestberg said. Telecompetitor

0914 5G: NTIA: Joint Statement on 5G/Open RAN Information Sharing and Telecommunications Resilience and Security Between the United States and the Australian Department of Home Affairs

0914 Bead – LOC requirement: Rep. Andy Harris (R-Md.) letter to Commerce Secretary Raimondo asking for reconsideration of NTIA's standby irrevocable letter of credit requirement for the middle mile and Broadband, Equity, Access and Deployment programs. The LOC requirement requires for a broadband provider to be eligible for a grant, it must obtain a standby irrevocable LOC from a bank that equals 25% of the grant amount. Harris said NTIA should reconsider this LOC requirement, saying it prevents the distribution of the funds in an equitable and nondiscriminatory manner to all broadband providers, both small and big, and imposes an unreasonable financial burden on all applicants. NECA WW

0914 Average Schedules: WIRELINE COMPETITION BUREAU SEEKS COMMENT ON NECA 2023 MODIFICATION OF THE AVERAGE SCHEDULE COMPANY UNIVERSAL SERVICE HIGH COST LOOP SUPPORT FORMULA. (DA No. 22-957). (Dkt No 05-337 10-90). Comments Due: 2022-10-14. Reply Comments Due: 2022-11-01. DA-22-957A1.docx DA-22-957A1.pdf DA-22-957A1.txt

0914 Section 230/Censorship: The Hill: Newsom signs controversial social media bill into California law California Gov. Gavin Newsom (D) has signed into law a social media transparency measure that he says protects residents from hate and disinformation posts spread through social media platforms. A.B. 587 will require social media companies to publicly post their policies regarding hate speech, disinformation, harassment and extremism on their platforms and report data on their enforcement of the policies. The newly signed legislation will also require platforms to file semiannual reports to the state's attorney general's office that will disclose their policies on hate speech, extremism and disinformation. .....The bill has also raised concerns from legal experts, citing the First Amendment and free speech as their main issues. “The bill is likely to be struck down as unconstitutional at substantial taxpayer expense. The censorial consequences should trigger the highest level of constitutional scrutiny, but the undue burdens and lack of consumer benefit ensures it won’t survive even lower levels of scrutiny,” Santa Clara University School of Law professor Eric Goldman wrote in a blog post. “As my blog post mentions, there are several other bases for constitutional challenges.”

0914 Privacy: **Mondaq: US FTC Moves Forward On Privacy Rulemaking With Public Forum** On September 8, 2022, the Federal Trade Commission (FTC) held a virtual public forum on the agency's release last month of an Advance Notice of Proposed Rulemaking (ANPR) to regulate the protection of consumers' privacy and data security, which we covered in a prior Legal Update. In addition to allowing the public the opportunity to share feedback about the ANPR, the hearing also included remarks from FTC leaders as well as two panels with consumer advocacy groups and representatives from industry on the perceived harms stemming from what the FTC characterizes as "commercial surveillance" and whether new rules are needed to protect consumers.

Key topics raised by industry representatives and consumer advocates alike included data minimization and the prevention of secondary uses of data, particularly in the context of behavioral advertising. As discussed further below (see "What Can Companies Do?"), the FTC's focus on behavioral advertising and concerns about the widespread collection of consumers' online activities is part of a broader regulatory emphasis on digital marketing across the globe. We saw this in California in connection with the state attorney general's recent public settlement of an enforcement action for alleged violations of the California Consumer Privacy Act (CCPA) pertaining to cookies; we saw this in Europe, where state regulators such as the French Data Protection Authority (CNIL) have increasingly fined companies for behavioral advertising and cookie practices under the EU General Data Protection Regulation (GDPR); and we saw this when the US Consumer Financial Protection Bureau (CFPB) issued an interpretive rule clarifying that digital marketers are subject to CFPB enforcement as "service providers."

One*particular*point of tension that came up throughout the FTC forum, and especially during the public comment period, related to the FTC's legal authority to engage in a privacy rulemaking. Some participants warned of the FTC interfering with ongoing congressional negotiations over proposed federal privacy legislation, the American Data Privacy and Protection Act (ADPPA), and others alluded to FTC rulemaking authority struggling to clear the hurdle of Supreme Court scrutiny under the "major questions" doctrine.

Regardless of legal procedural concerns, the rulemaking process is fully underway, with the FTC looking to use public feedback in order to move to the next stage of the Mag-Moss rulemaking process: issuing a Notice of Proposed Rulemaking. The agency will take public written comments about the ANPR until October 21, 2022.

Commissioners' Remarks

The three Democratic commissioners—Chair Lina Khan and Commissioners Rebecca Slaughter and Alvaro Bedoya—delivered brief remarks highlighting their individual concerns and areas of focus for privacy rulemaking. Notably, neither of the Republican commissioners, Christine Wilson and Noah Phillips (slated to leave the Commission shortly), shared their views in this forum, though both publicly dissented from the issuance of the ANPR (Wilson's dissent and Phillips' dissent), airing disputes on policy and the agency's authority to promulgate privacy rules.

Khan highlighted research that asserts that many Americans have limited insight about the information being collected about them and how it is used. Addressing the question of legal authority, Khan noted that the FTC has a long record of using its tools to regulate data privacy and security. But, she added, the goal of this rulemaking process is to determine if business practices today are so "prevalent" that the FTC needs to move beyond case-by-case adjudication and issue market-wide rules. The public forum was an important step to "democratize" this rulemaking process, according to Khan.

Slaughter shared her view that it is important for the FTC to show that the agency is no longer shying away from exercising its rulemaking authority. (Recall that, as the acting chair for the first six months of 2021, she anticipated new rulemakings when she created a rulemaking group within the FTC's Office of General Counsel.) Slaughter also voiced her support for strong federal legislation but noted that, until there is a law on the books, she believes that the FTC must use its tools to regulate the field.

Bedoya commented on the breadth of the ANPR (which we highlighted in our Legal Update), noting his view that the ANPR is intentionally broad, going beyond normal bedrocks of consumer notice and consumer choice/consent. According to Bedoya, privacy rights and harms have gone well beyond the point of initial collection, and the FTC needs to enforce across all of these areas.

Rulemaking Process

A staff attorney, Josephine Liu, from the FTC's Office of General Counsel gave a brief presentation on the rulemaking process the FTC will employ here. As we have explained previously, the FTC's rulemaking process in this context is governed by the Magnusson-Moss Warranty Act of 1975 (referred to as "Mag-Moss") and includes several additional steps beyond normal notice-and-comment rulemaking allowed by the Administrative Procedure Act. The timeline for Mag-Moss rulemaking includes this initial ANPR, followed by the issuance of a proposed rule that also will include the FTC's explanation of why the prohibited practices are sufficiently "prevalent" to warrant rulemaking. After that, interested parties will have an opportunity to cross-examine the FTC's evidence in an investigational hearing. (This part of the process is the least familiar to practitioners and will be subject to new "streamlined" procedures the FTC approved last year.) After this process, if the agency decides that rules are warranted, the FTC would issue final rules, subject to court challenges.

In addition to describing the Mag-Moss rulemaking process and timeline, Liu highlighted three key questions with which the FTC is grappling among the 95 questions raised in the ANPR:

Which of these measures or practices are prevalent? Are some practices more prevalent in some sectors than in others?

How should the Commission identify and evaluate these commercial surveillance harms or potential harms? On which evidence or measures should the Commission rely to substantiate its claims of harm or risk of harm?

Which areas or kinds of harm, if any, has the Commission failed to address through its enforcement actions?

Industry Perspectives

After the staff presentation, the forum turned to perspectives from industry. The four panelists included Jason Kint (chief executive officer, Digital Content Next), Marshall Erwin (chief security officer, Mozilla), Paul Martino (vice president and senior policy counsel, National Retail Foundation), and Rebecca Finlay (chief executive officer, Partnership on AI). Each panelist discussed issues from their own organization's perspective. Below are some highlights from each panelist's statement:

Kint: Collecting data in one context and using it in another (for behavioral advertising) tends to violate consumer expectations. Behavioral advertising fueled by commercial surveillance primarily benefits the dominant market players.

Erwin: Web platforms and browsers play a role in protecting privacy (e.g., features in Firefox), but technical solutions are not enough. He would like to see regulation in the following areas: dark patterns, harmful uses of data after it is collected, and more transparency about systematic harm on the main platforms.

Martino: Martino would like the FTC to follow three key "customer is always right" principles: (1) the customer should be free to make informed choices, (2) businesses can use data to serve customers as they choose to be served, and (3) regulations should be customer-centric and risk-based.

Finlay: Algorithmic decision-making is growing exponentially (cites the Stanford AI index, showing private sector investment in AI as more than double than that of the previous year).

The panelists also discussed "best practices" from their perspectives. Finlay explained that, when AI is deployed—especially in high-risk settings such as healthcare and hiring—companies need well-functioning internal organizational processes from design to deployment. Erwin stated that there are consensus best practices in data security—consistent with FTC's safeguards rule—that are universally accepted but not universally adopted. Kint pointed to best practices coming out of specific companies, naming specific examples such as Apple (app tracking transparency), Firefox, Brave, and Global Privacy Control. And Martino focused on retailers, explaining that certain concepts, such as Global Privacy Control, could frustrate consumers' choices if they previously elected to receive communications or other services from businesses.

Consumer Advocate Perspectives

Next, the forum invited the opinions of four panelists from the consumer protection space: Caitriona Fitzgerald (deputy director, Electronic Privacy Information Center (EPIC)), Harlan Yu (executive director, Upturn), Ambassador Karen Kornbluh (ret.) (director, Digital Innovation and Democracy Initiative, German Marshall Fund of the U.S.), Spencer Overton (president, Joint Center for Political and Economic Studies), and Stacey Gray (senior director for U.S. Policy, Future of Privacy Forum (FPF)). These panelists focused on the perceived harms of commercial surveillance and the need for the FTC to use the tools at its disposal.

Below are some highlights from each panelist's statement:

Fitzgerald: The US is facing a crisis because powerful companies have employed commercial surveillance systems to build profiles of individuals, far beyond what individuals expect. The FTC should thus create a strong data minimization rule.

Yu: The FTC needs to use all available tools to tackle the disparate adverse impacts that leave certain consumers systematically behind and perpetuate discrimination.

Kornbluh: The Supreme Court's *Dobbs* decision revealed the dangers of data collection in our current environment, including sales of personal information about vulnerable people.

Overton: Companies collect data on users and develop algorithms to promote content. These processes can facilitate discrimination, e.g., ads for employment opportunities and housing.

Gray: Rapid development of wearable tech, connected technology, etc. makes this time ripe for the FTC to adopt federal rules.

The panelists also suggested ways for the FTC to implement data minimization and transparency in practice as well as debated whether notice and consent remains an appropriate framework. Fitzgerald and Overton stressed that the burden should move away from individual users, with structural rules assigning compliance obligations to companies. Yu highlighted that the FTC should require companies to make good faith efforts to stop discrimination in their data processing and to "show their work." Gray encouraged the FTC to codify past enforcement actions related to inadequate disclosures being an unfair practice. All four panelists disapproved of the notice and consent framework, highlighting the need to consider power imbalances.

What Can Companies Do?

The FTC rulemaking process will take time, with several additional opportunities for companies and industry groups to share their thoughts and concerns and to describe beneficial uses of data that may be negatively impacted by a rulemaking. Crafting any rule will be difficult for the FTC given the hurdles of showing that the practices are prevalent, not negatively impacting data collection and use practices that benefit consumers, and developing a rule sufficiently narrow to avoid vacatur under the major questions doctrine.

But the FTC is not the only regulator looking at these issues. If, as a company, you are actively using digital marketing or cookies to track users online across websites and apps, then you should consider yourself formally on notice that you are engaging in the kind of so-called "commercial surveillance" that is generating regulatory and public angst around the globe.

The first step for companies involved in this space is to understand how you are using digital marketing. Of course, digital marketing is not in itself anti-consumer—many companies rely on this advertising to find and cultivate their business and to provide meaningful choices and opportunities to consumers. But it is important to recognize when you are gathering behavioral data about users interacting with your website and then tracking those users across different websites and apps. This latter type of third-party tracking and profile building is the kind of activity that is concerning to regulators and, to a certain degree, consumers. Visit us at mayerbrown.com

0914 How state-level subsidies might refill cable's broadband subscriber tank LightReading With US cable broadband subscriber growth remaining flat or going negative, operators are hard-pressed to find a remedy that will rekindle growth in a service category now considered central to the overall business. Analysts at

MoffettNathanson are attributing cable's recent broadband subscriber woes to market saturation and market share loss to fiber and fixed wireless access (FWA). To remedy the broadband subscriber issue, analysts expect US cable operators to accelerate buildout through voluntary edge-outs and participation in programs that subsidize network expansions into underserved or unserved areas, which are largely rural. While Charter was already a big winner in phase I of the Rural Digital Opportunity Fund (RDOF), analysts point out that both Charter and Comcast are now securing a "steady stream of state-level grants for network expansion with state-level subsidies." Cable's more aggressive involvement in state-level broadband subsidy programs signals a major change, as telcos have tended to be the largest participants in such programs. Though the reported state-level amounts won by cable have been relatively small or modest, they are "just a warm-up" for the much larger subsidies on tap for next year and beyond that will be appropriated under the Infrastructure Investment and Jobs Act (IIJA).

0914 ETC Abandonment: FCC Seeks Comment on Two Petitions for Relinquishment of Eligible Telecommunications Carrier Designation From T-Mobile Federal Communications Commission The Federal Communications Commission's Wireline Competition Bureau seeks comment on two petitions for relinquishment of Eligible Telecommunications Carrier (ETC) Designation filed by T-Mobile. T-Mobile seeks to relinquish its ETC designation for which it is eligible to receive high cost and Lifeline support in Florida and its Lifeline-only ETC designation in Virginia. Interested parties may file comments on or before September 27, 2022; reply comments are due October 12, 2022. [WC Docket No. 09-197]

0914 BEAD: Are BEAD Grants Large Enough? Doug Dawson, CCG Consultingof the biggest questions associated with the $42.5 billion BEAD grant program is if that is enough money to solve the national rural digital divide. The funding will be allocated to states in a three-step process. First, States will get an automatic $100 million. Next, $4.2 billion will be directly allocated to States using the relative percentage of locations in each state defined as unserved. This will rely on the new FCC maps, and the NTIA may still refine the definition of high-cost areas. The remaining $38.1 million will also be allocated to States using the new FCC maps, and will also use the relative number of unserved locations in each State.

The funding works out to be around $850 million per state, but the funding will vary significantly by state. Preliminary estimates have a number of states only getting $100 million – Connecticut, Delaware, District of Columbia, Hawaii, Maine, New Hampshire, North Dakota, Rhode Island, and Vermont. The largest estimated allocations are estimated to go to Texas at $4.2 billion and California at $2.8 billion.

States have been doing the math to see if they think the BEAD grant funding will be enough to reach every rural household with good broadband. I've only been able to find one article that cites an estimate of the effectiveness of the BEAD grants, but this one example raises some good questions.

The State of Minnesota is estimated to receive about $650 million in BEAD grant funding. In March of this year, the State Legislature approved $110 million for the existing Border-to-Border grant program, with most of the funding coming from federal ARPA funding given to the state. At that time, the State broadband office estimated that the state will need around $1.3 billion in total grant funding to reach everybody in the state. If that is a good estimate, then even after BEAD grants and the $110 million State grants, the state will be $540 million short.

This raises a lot of questions. First, inflation has hit the broadband industry hard, and I've seen a lot of estimates that the cost to build broadband networks is between 15% to 25% higher than just two years ago. That means that the $42.5 billion in BEAD funding is not going to stretch nearly as far as was estimated when Congress established the BEAD grants. This also raises the question of how much inflation will further increase costs over the years it's going to take to build BEAD-funded networks. It's not hard to imagine BEAD networks still being constructed in 2026 and beyond.

I've also seen estimates that the rules established by Congress and the NTIA for the BEAD grants could add as much as another 15% to the cost of building broadband networks compared to somebody not using grant funding. These extra costs come from a variety of factors, including the requirement to pay prevailing wages, expensive environmental studies that are not undertaken for non-grant projects, the requirement of getting a certified letter of credit, etc. The extra grant-related costs and the general inflation in the industry might mean that BEAD projects could cost 30% or more than building the same networks two years ago without grant funding.

This also raises an interesting question about how states allocated ARPA funding to broadband. Minnesota's allocation of $110 million to broadband from ARPA is smaller than what many other states have done. As an example, my state of North Carolina allocated nearly $1 billion of the state's ARPA money to broadband, and there are many states that have allocated $300 million or more to broadband. Part of the blame for a state like Minnesota not having enough money to reach everybody could be placed on the Legislature for not allocating much ARPA funding for broadband.

Another interesting question to be addressed is how State broadband offices will deal with areas where a 75% grant is not enough for an ISP to make a business case. From the feasibility work I've been doing this year, I think there are a lot more areas that fit the high-cost category than might be expected. The NTIA says that it might allow exceptions for grants up to 100% of the cost of assets - but asking for extra funding will probably open up the possibility for a State to instead fund less costly technologies. It might turn out that finding solutions for the many high-cost areas might be the unpredictable wild card in the BEAD grant process.

Finally, there are going to be areas where a State doesn't make a BEAD grant award. It's not hard to imagine a situation where only one ISP asks to serve an area, and a State broadband office decides that the ISP is unqualified to receive funding.

If the Minnesota estimate is even roughly accurate, it's likely that Minnesota won't be the only state that doesn't receive enough BEAD money to get broadband to everybody. We're not going to know this for sure until ISPs start applying for grants, but it won't be a surprise if the BEAD grants are not large enough.

0914 BB: Phoenix Center Paper: *Overstating Broadband Availability: An Assessment of the "All-In" Assumption for FCC 477 Data,* As many of you might know, collection of the Federal Communications Commission's Form 477 data assumes that if a single location in a census block has broadband, then *all* locations in that block have broadband (the "all-in" assumption). As a consequence, the Form 477 data presumably overstate broadband availability, and the data have been heavily criticized for doing so. In a new analysis released today entitled ***Overstating Broadband Availability: An Assessment of the "All-In" Assumption for FCC 477 Data,*** Phoenix Center Chief Economist Dr. George S. Ford again attempts to quantify how much these data overstate broadband availability. Consistent with past research, George finds that when the Form 477 data are analyzed at the state level, the Form 477's overstatement is small—less than four percentage points. Criticisms of these high-level statistics, therefore, are somewhat overblown. That said, George also finds that if one wants to know the exact locations without broadband service availability, then the consequences of the Form 477's "all-in" assumption can be severe. In blocks that cover many square miles, the overstatement of availability can be very large. Thus, for subsidy allocation purposes, the Form 477 data are unreliable—at least for partially-served census blocks. Fortunately, several states and the federal government have begun collecting much more detailed data, and new broadband maps from the FCC are expected soon—both of which should improve subsidy allocation. **For those interested, a full copy of Phoenix Center Policy Perspective No. 22-04, *Overstating Broadband Availability: An Assessment of the "All-In" Assumption for FCC 477 Data,* may be downloaded free from the Phoenix Center's web page by clicking here.**

0914 Suicide Hotline: More Americans are reaching out to the national 988 Suicide and Crisis Lifeline more than a month after the new three-digit hotline number went live. The 988 lifeline received 413,425 contacts during the month of August, through phone calls, online chat messages and text messages. That's a 45 percent increase in overall volume compared to August 2021 and about a 2 percent increase from July 2022, according to the Department of Health and Human Services (HHS). Calls and text messages in August exceeded July metrics, except for online chats, which were at about 75,000 in July 2022.

0914 RDOF - FCC WCB & Rural Broadband Auctions Task Force partially grant Point Broadband's petition requesting a waiver of Connect America Fund Phase II auction and Rural Digital Opportunity Fund auction requirements that auction recipients obtain letters of credit from banks that maintain a Weiss bank safety rating of B- or better. The bureau allowed Point Broadband to maintain letters of credit with its current bank until June 15, 2023. DA-22-951A1.docx DA-22-951A1.pdf DA-22-951A1.txt

0914 BB: AT&T wins challenge of Charter's "20X faster" internet speed claim Fierce Telecom: The clash is the latest in a series of advertising battles between AT&T and Charter that the National Advertising Division has ruled on this year

0914 Regulatory Fees: FCC report and order adopts a schedule to assess and collect $381,950,000 in regulatory fees for fiscal year 2022 in the Federal Register on Sept. 14, 2022. The order is effective Sept. 14, 2022, and fees are due by Sept. 28, 2022. FCC also announced procedures for filing requests for waiver, reduction, deferral and installment payment of regulatory fees due to the pandemic AND issued a fact sheet on amounts owed from commercial wireless services. NECA WW

0914 BEAD Program: AEI – Shane Tews: The National Telecommunications and Information Administration Steps Beyond Congress's Purview in Broadband Deployment Plans https://www.aei.org/technology-and-innovation/the-national-telecommunications-and-information-administration-steps-beyond-congress-purview-in-broadband-deployment-plans/

The National Telecommunications and Information Administration (NTIA) is the distributor of grant funds from the Infrastructure Investment and Jobs Act (IIJA), which the Biden administration calls a "once-in-a-generation investment in our nation's infrastructure and competitiveness." The $42.45 billion Broadband Equity, Access, and Deployment (BEAD) program is the NTIA's largest mechanism for distributing grant funds; through a combination of grant formulas, states will receive and pass along funding for broadband coverage in unserved or underserved populations down to cities, towns, and municipalities. Each state that applies for BEAD grants is eligible to receive a minimum allocation of $100 million and can request $5 million for "Initial Planning Funds" to prepare a grant application.

The BEAD program is complemented by several additional federal government programs, including $2 billion for state digital equity grants, $2 billion for tribal broadband connectivity, $1 billion for middle-mile network grants, $2 billion for broadband grants and loans distributed by the Department of Agriculture's Rural Utilities Service, and $600 million in Private Activity Bonds for qualified broadband projects.

NTIA unveiled BEAD this past summer alongside the new Office of Internet Connectivity and Growth. The BEAD Notice of Funding Opportunity (NOFO) has been at the center of attention ever since; 13 senators sent a letter to NTIA in August asking for clarification around the NOFO's guidance to states regarding funding applications, since NTIA stepped beyond Congress's intent by issuing specific guidance to meet new environmental, labor-related, and social goals created by the administration, not the IIJA. The letter applauds the intense effort needed to accomplish the goal of universal broadband access across America, but it calls for NTIA to roll back these additional requirements and administrative burdens that are not in the legislation passed by Congress and are not consistent with its intent.

The introduction of rate regulation for broadband prices topped the senators' list of concerns. They noted that the IIJA established the Affordable Connectivity Plan at the Federal Communications Commission, eliminating any alleged need for rate regulation by letting eligible households apply for a $30 per month benefit that can be applied to any internet service offering. "The bipartisan negotiators were also deliberate to prohibit the NTIA, or any other federal agency, from regulating rates of broadband service," they added, noting that the IIJA clearly states: "Nothing in this title may be construed to authorize the Assistant Secretary or the National Telecommunications and Information Administration to regulate the rates charged for broadband service."

Yet the BEAD NOFO is specific about a "middle-class affordability plan" that includes rate regulation as a criterion for states' grant eligibility. But again, rate regulation does not appear in the IIJA; in other words, Congress did not direct NTIA to take on this task, yet NTIA is moving forward with it as part of its grant program.

The NOFO also demonstrates preference for symmetrical upstream and downstream internet speeds of one gigabit per second and requires that any participating internet service provider offer speeds of at least 100 megabits per second (Mbps) for downloads and 20 Mbps for uploads. Again, the senators point out that this requirement was added by the administration—not stipulated in the IIJA.

The NOFO explicitly prioritizes fiber over other technologies with a strong track record of serving hard-to-reach communities such as fixed wireless and satellite. Like the above-mentioned provisions, this preference for fiber is not established by the IIJA. While fiber is at times a preferred way to deliver end-to-end service to consumers, there are many areas of the country where the cost of fiber is exceptionally high due to geographic challenges. Other technologies are capable of more immediately connecting unserved areas that can scale up over time, enhancing speeds as technology advances.

At a recent AEI event I hosted, Duke University's Michelle Connolly noted four objectives in the NOFO that have nothing to do with broadband deployment: "Buy American," which exacerbates supply chain issues; union labor and workforce requirements, which add to the cost and greater challenge of labor shortages; the aforementioned middle-class affordability program created by NTIA, not Congress; and waiving existing state laws that restrict government provisions of certain services—namely, municipal internet. These obligations reduce the actual dollars available to deploy broadband connectivity to citizens.

These extraneous requirements will likely cause delays in broadband deployment with little benefit to the intended recipients. Once broadband is in place, many communities may wish to pursue the guidance NTIA has added to increase local involvement and provide information about the comprehensive capabilities an internet connection can bring to work, play, and communication. But slowing deployment and encumbering programs with expensive priorities that follow the administration's political goals should not be part of the states' BEAD planning or connectivity programs.

See also: Can Billions of Dollars in Federal Grants Solve Broadband Access and Availability Throughout the US? Highlights from FCC Commissioner Brendan Carr and an Expert Panel Discussion | The Challenge of Putting Federal Broadband Funds to Good Use: Highlights from My Conversation with Mark Jamison | Government Accountability Office Report Criticizes Broadband Deployment Efforts | 5 Questions on How States Can Put Federal Broadband Funds to Use with Sen. Deb Fischer and an Expert Panel

0914 NANC - FCC CANCELLS OCT. 4 MEETING OF THE NORTH AMERICAN NUMBERING COUNCIL. DA-22-950A1.docx DA-22-950A1.pdf DA-22-950A1.txt

0913 Robocalls - SIP Codes: USTelecom spoke with Wireline Competition Bureau staff about the release of the new robocall call blocking notification standard, ATIS-1000099 by ATIS and the SIP Forum. USTelecom asserted this standard, known as SIP Code 603+, represents the best, most reasonable and most efficient approach forward to meet callers' demands for blocking notification. USTelecom also recommended the FCC revise its rules to require SIP Code 603+ as the uniform method to notify callers their calls have been blocked. NECA WW

0913 Spectrum Interference- 5G - Ligado Networks scrubbed plans to introduce 5G service in portions of Virginia after a government report showed the L-band spectrum it planned to use would create problems for Department of Defense operations using satellite and GPS technology. Light Reading

0913 Lifeline/ACP: CBO Scores H.R. 4275, Ensuring Phone and Internet Access Through Lifeline and Affordable Connectivity Program Act of 2022 David Hughes, Rachel Austin Congressional Budget Office The Ensuring Phone and Internet Access Through Lifeline and Affordable Connectivity Program Act (H.R. 4275) would require the Federal Communications Commission to report to Congress annually on enrollment in its Lifeline program and its Affordable Connectivity Program, disaggregated by how applicants qualify for support. For example, Lifeline applicants may qualify based on prior enrollment in Medicaid, the Supplemental Nutrition Assistance Program, or the Supplemental Security Income program. Affordable Connectivity Program qualifications are similar. In addition, the bill would require the Government Accountability Office, within one year of enactment, to report on efforts to promote participation and enrollment in both programs. CBO estimates the report would cost less than $500,000; any additional spending would be subject to the availability of appropriated funds. The FCC, through the Universal Service Administrative Company, already collects this infrmation and publishes it online. CBO estimates that any additional costs to report to the Congress would not be significant. Moreover, because the FCC is authorized to collect fees each year sufficient to offset the appropriated costs of its regulatory activities, CBO estimates that the net cost to the FCC would be negligible, assuming appropriation actions consistent with that authority. If the FCC increased fees to offset the costs associated with implementing the act, H.R. 4275 would increase the cost of an existing mandate on private entities required to pay those fees. CBO estimates that the incremental cost of that mandate would be small and fall below the annual threshold established in the Unfunded Mandates Reform Act (UMRA) ($184 million in 2022, adjusted annually for inflation).

0913 Satellite Cell Service [CCG Consulting] **T**-Mobile and Starlink made a joint announcement recently about an arrangement where Starlink will enable voice and texting capabilities to T-Mobile cellphones by the end of 2023. Elon Musk touted this as being able to reach people lost in the wilderness, but the much bigger use will be to fill in cellular coverage in rural areas for T-Mobile. While the two companies made a big splashy announcement about the arrangement, they are late to the game as other industry players already have similar plans underway. Companies such as AST SpaceMobile, Lynx, and Globalstar have already been working to deploy cellular satellites. All of these plans raise a lot of questions that we won't get answered until somebody has a working satellite product. For example, could somebody inside a vehicle connect to a satellite? This is a much-needed service for a lot of people—specifically those in rural areas where 30% or more rural homes have no cellular coverage and the many parts of the world where modern cellular towers are a rarity.

0913 USF – White paper - AEI – THE FUTURE OF UNIVERSAL SERVICE: Thomas M. Johnson Jr. https://platforms.aei.org/the-future-of-universal-service/ [1] The United States' current regime for providing communications services to all Americans fails to account for the new communications technologies that have transformed the way Americans work and communicate, especially in the wake of COVID-19. [2] The Federal Communications Commission's Universal Service Fund works to deliver broadband to underserved Americans but lacks proper funding and may face threats to its constitutionality. [3] Congress should appropriate the money to fund this program and pass substantive changes to the Communications Act to ensure the Universal Service Fund can serve its purpose in the future.

Executive Summary For decades, Congress has made it the United States's policy to make modern communications services available to all Americans. This policy recognizes that in certain rural areas and economically depressed communities, the fixed costs associated with broadband deployment would make providing service prohibitive absent government subsidies. The principal means by which Congress has authorized the Federal Communications Commission (FCC) to achieve universal service, however, no longer makes sense in today's technological environment. Currently, through the Universal Service Fund, the FCC subsidizes broadband deployment with fees collected from providers (and ultimately users) of legacy communications services like voice tele- phony. That system is unfair, as it unduly and regressively taxes the disproportionately lower-income Americans who continue to use legacy voice services. It is also unsustainable, as the FCC will soon be unable to collect sufficient revenue from the dwindling number of legacy-service users to fund modern broadband deployment. Recent congressional actions suggest a potential path out of this dilemma. During the COVID-19 pandemic, Congress directly appropriated billions of dollars to subsidize broadband deployment and enable lower-income Americans to stay connected. Congress could choose to make such appropriations permanent and tailored to areas of genuine need, rather than continue to support the existing archaic universal-service funding mechanism. Absent direct appropriations, there will be increasing calls to reform the Universal Service Fund to expand its contribution base to keep it solvent. For example, FCC commissioners from both parties and some internet service providers have proposed requiring internet platforms to contribute to the fund because they benefit from the user traffic that rides over modern broadband networks.

TEXT: Nearly 90 years after Congress first declared it the policy of the United States that all Americans should have access to "rapid, efficient, Nation-wide, and world-wide" communications services,1 and decades since it determined that modern internet- access services "should be provided in all regions of the Nation," including to "low-income consumers and those in rural, insular, and high cost areas,"2 the federal government's role in promoting universal service faces an existential crisis. On one hand, the reality of widespread access to communications services has surpassed the wildest dreams of the New Deal–era reformers who enacted the Communications Act. The goal of universal service originated in a belief that all Americans should have access to essential emergency services like 911 on the old landline telephone network. Today, mil- lions of Americans rely on high-speed, low-latency internet access for remote work, remote learning, telemedicine, and connectivity with friends and family.

During the height of the COVID-19 pandemic, the strength and resiliency of America's broadband networks were on full display. Despite increased demand on retail broadband occasioned by the shift from office and school to home, our networks performed admirably, demonstrating the capacity for real-time virtual

meetings that would have been unreliable
even 10 years earlier. In response to the crisis, Congress allocated billions of dollars in subsidies to keep Americans connected and spur new broadband adoption, and the Federal Communications Commission (FCC) did an admirable job administering those programs and
providing additional regulatory relief. Even before the pandemic, the FCC used its existing statutory authority over the Universal Service Fund to conduct reverse auctions that distributed billions of additional dollars for broadband deployment, connecting millions of additional households. Real challenges remain, however, in ensuring that Americans in rural and other high-cost areas have access to modern communications services. According to one recent estimate, over 19 million Americans still lack access to high-speed broadband services.3

Meanwhile, the FCC's Universal Service Fund— the principal policy tool that the federal government historically has used to promote universal service—faces unprecedented legal, economic, and practical challenges.

Congress has not materially updated the universal service statute since 1996. As a result, the fund relies on an antiquated funding mechanism, and the FCC lacks clear congressional guidance to adapt to the times. Specifically, while the fund now primarily supports modern broadband service (and by extension the countless apps and websites that ride over the networks), the fund receives its revenue primarily from fees assessed on providers (and ultimately customers) of "plain old-fashioned" telephone service. As fewer and fewer Americans own landlines, this contribution base has dwindled, putting the fund on a collision course with insolvency. In addition, frontal assaults on the constitutionality of the fund are currently pending in the federal courts of appeals for the Fifth and Sixth Circuits.

Those lawsuits question whether Congress put in place intelligible standards to guide the FCC's discretion in distributing universal-service support and whether the FCC impermissibly delegated that same work to the Universal Service Administrative Company, a private entity that administers the fund.

This past term, the Supreme Court demonstrated its willingness to aggressively curb federal agencies' power when it declared unlawful the Environmental Protection Agency's assertions of authority to achieve decarbonization through policies like the Obama-era Clean Power Plan. And the Fifth Circuit recently invalidated the Securities and Exchange Commission's long-standing practice of bringing cases seeking civil penalties before the agency's in-house administrative law judges. In sum, it is now imaginable that courts could send Congress back
to the drawing board on universal service, forcing a political confrontation on the best path forward.

Adding insult to injury, the Government Account- ability Office (GAO) recently released a report sound-ng an alarm that "U.S. broadband efforts are not guided by a national strategy" and that "federal broadband efforts are fragmented and overlapping, with more than 100 programs administered by 15 agencies." The result, as FCC Commissioner Brendan Carr recently highlighted, is a lack of "adequate tracking, measurement, and accountability standards," which risks wasteful overbuilding and "adds to the inflationary pressures that are already hitting Americans in their pocketbooks."4

Federal policymakers must now grapple with how the fund and its various programs intersect with this bewildering array of other sources of federal funding and develop a coordination strategy to eliminate duplicative spending and minimize potential abuse. Now that Congress has demonstrated its ability and willingness to directly appropriate billions of federal dollars to broadband deployment and low-income connectivity, does the Universal Service Fund have a role in the future? If it does, how should it be funded, and where should its limited pool of money be spent? And with billions of federal dollars already flooding the market, how much more is needed to achieve optimal results?

In short, the challenges confronting the FCC's Universal Service Fund are daunting. But the competing dynamics now at play—a more connected America and an aging, unsustainable federal funding mechanism—could set the stage for a fundamental rethinking of our approach to universal service. The time is ripe for policymakers to ask fundamental questions about what purpose (if any) the fund should serve in the future, where its limited resources should be directed, and whether there are other, better ways for Congress and the FCC to keep Americans connected.

The Need for Congressional Action In the Infrastructure Investment and Jobs Act, which allocated hundreds of billions of dollars to broadband
connectivity as a COVID-19 relief measure, Congress recognized that the FCC's incumbent approach to universal

service required a root-and-branch reexamination. Accordingly, Congress asked the FCC to provide a report that would "make recommendations for Congress on further actions the Commission and Congress could take to improve the ability of the Commission to achieve the universal service goals for broadband."5 On August 12, 2022, the FCC released a report that included various proposals to reform the fund's aging contribution mechanism and suggested more reliance on appropriations as a means to advance universal service.6 While universal service has its origins in the progressive policies of the Franklin D. Roosevelt era, it has rightly become a conservative commitment as well. Conservatives have long understood that public policy has a limited but vital role to play in promoting and protecting the bedrock institutions of a healthy society, from families to churches to civic organizations to workplaces. In recent years, this commitment has included renewed attention on those blue-collar and rural communities that have been disrupted by technological evolution and globalization. For example, former FCC Chairman Ajit Pai (whom I served as the FCC's general counsel) made it his top priority on day one of his tenure to close the "digital divide" between communities that had access to broadband and those that did not. During his administration, the federal government committed tens of billions of dollars to rural deployment, reaching millions of previously unserved homes and businesses. Sound universal-service policies can empower rural communities and lower-income Americans to achieve better outcomes in health, educational achievement, employment, and family cohesion. Improving connectivity through the American heartland also facilitates the essential work done by the farmers who prepare our food, the coal miners and other energy producers who power our grids, and the teachers who educate our children. Moving forward, however, doing this will require Congress to update the anachronistic way that the Universal Service Fund attempts to subsidize broadband deployment and affordability. Historically, Congress has required providers that participate in the fund to pay a percentage of their interstate consumer revenue (called the "contribution factor") into the fund. While the fund's assets increasingly subsidize modern broadband services, the fees collected for the fund are assessed only on "telecommunications services," which currently are interpreted to include traditional landline telephone service and interconnected Voice over Internet Protocol. As a practical matter, providers pass that tax on to consumers in the form of a regulatory fee on their telephone bills. The resulting system is doubly regressive. First, it imposes taxes primarily on consumers of legacy tele communications services (like landline telephone), who are disproportionately likely to be lower-income Americans. Second, because the contributions are revenue based, they do not account for the relative burden placed on consumers based on income. Worse, because legacy services constitute a dwindling fraction of the nation's consumption of communications services, the FCC has had to increase the contribution factor dramatically to keep up with the changing technological landscape.Over the past 10 years, the Universal Service Fund contribution base declined from $65.9 billion to $41.4 billion—more than a 35 percent reduction.7 To account for the shrinking base, the FCC has increased the contribution factor nearly fivefold from 6 percent in 2001 to 29.1 percent in 2021.8 This trend is poised to continue, as more American companies and individuals opt out of legacy landline communications services and use internet-based platforms to host meetings and connect with others. Fund administration also plays a role in taxing consumers. By placing the burden on providers to contribute to the fund and offer low-income Americans access to communications devices (under the long-standing Lifeline program), Congress has created an inefficient scheme whereby providers act as middlemen to collect taxes and distribute benefits. This results in increased costs for providers, which inevitably means higher prices for consumers. There is a simple and practical solution to these problems. As noted, in response to the COVID-19 pandemic, Congress appropriated tens of billions of dollars for broadband deployment and adoption, telehealth, educational connectivity, and other purposes, through the Infrastructure Investment and Jobs Act and other programs. These subsidy programs, in one form or another, address all the four major areas presently targeted by Universal Service Fund dollars—high-cost support for rural areas, low-income consumers (the Lifeline program), schools and libraries, and rural health care. Pandemic-era subsidies point the way to a potential long-term solution to the fund's insolvency:

[] Congress could make direct appropriations permanent and sufficient to meet the fund's needs. Appropriations represent a fairer approach that would distribute costs more equitably, recognizing that all or nearly all American consumers and businesses benefit from broadband connectivity. Indeed, the reduction in provider costs and elimination of regulatory fees would likely result in a net gain for many consumers. Direct appropriations also ensure that individual beneficiaries of services receive those benefits directly, without any need to coordinate with intermediaries and with reduced potential for waste, fraud, and abuse.

[] Congress could further alleviate the burden on taxpayers by adopting a proposal advanced by Chairman Pai and others to use a portion of net proceeds from the FCC's spectrum auctions to fund universal service. Under current law, the FCC has the authority to auction off public airwaves used for wireless broadband and cellular voice service, among other things. For example, the late 2020–early 2021 auction of spectrum for the "C-Band"—a swath of spectrum with significant potential for next-generation 5G wireless services—yielded a record-breaking $80 billion in proceeds.9 By statute, the proceeds for those auctions must be deposited in the US Treasury, where they are used for general appropriations. Dedicating even a small amount of such proceeds to universal service would help alleviate the burden on the fund and consumers.

[] If Congress elects to keep the existing Universal Service Fund in some form, it should confront and resolve challenging questions about its future and trajectory. There is currently a mismatch between the fund's contribution base, which is focused on legacy communications services, and the fund's principal use today to facilitate widespread internet access. In response to this, FCC commissioners from both political parties and some commenters in the FCC's open universal-service proceeding have proposed expanding the existing contribution base to include large internet platforms that benefit from the user traffic facilitated by robust networks.

[] Another potential reform would involve limiting fund eligibility to those providers that would have challenges relying on annual appropriations because they require a dedicated funding mechanism to secure financing for network builds. Congress could also consider reforming the Lifeline program to focus primarily on voice services, given the success of COVID-era subsidies (under the Affordable Connectivity Program and the Emergency Broadband Benefit program) in providing broadband to low-income households. Should Congress decide not to switch to a pure appropriations model, it should weigh alternative proposals that could steer the fund to a more sustainable course.

Further Work at the FCC Meanwhile, the FCC should continue to identify ways to reduce or eliminate regulatory barriers to broadband deployment, which could slow down or even stop the provision of services to high-cost or low-income areas.

PREEMPTION? In recent years, while some states adopted progrowth policies that facilitated and encouraged 5G deployment, other states and localities used their powers as local zoning authorities to create bottlenecks to slow down deployment and exact rents from carriers that needed access to local rights-of-way. In 2018, the FCC released a series of orders designed to ensure that states and localities make speedy decisions on deployments and charge only fees that bear a reasonable relationship to the costs they incur maintaining the rights of way. These reforms helped lower the cost and accelerate the timing of 5G deployment. Consistent with these reforms, the FCC should continue to consider ways in which streamlining state and local regulations can play a part in promoting universal service.

The FCC also plays an important role in ensuring that universal-service dollars accomplish their intended purpose and are neither distributed inefficiently nor diverted to unscrupulous actors. The FCC, for example, has made profitable use of the "reverse auction" procedure to encourage applicants to request only the amount they need to complete a project, ensuring that the most efficient provider is selected. Federal dollars and spectrum licenses should also continue to be tied closely to specific build-out requirements, reducing the risk that arbitrageurs squat on valuable public resources. The FCC and other federal and state enforcement agencies should also continue to use their authority to identify and prosecute genuine cases of fraud.

Beyond these measures, the FCC will have to develop a coordination strategy with other government agencies to ensure that the multiplying number of federal and state broadband subsidy programs does not result in waste or fraud. The federal government has already dedicated tens of billions of dollars to broadband deployment and should not simply assume that this amount of money must be allocated annually in perpetuity. The GAO and Commissioner Carr have already sounded the alarm that a coordinated federal strategy is needed to determine where genuine pockets of need still exist and direct targeted federal dollars to those areas.

Conclusion

Resolving the legal, economic, and practical problems with our current universal-service policies will not be easy. But while inflection points like the current moment can be disorienting, they often provide the seedbed for bold, creative, and decisive action. Congress and the FCC should not let this moment pass. They should identify clear goals for the future of universal service and update the Communications Act to account for today's increasingly dynamic and evolving internet environment.

About the Author Thomas M. Johnson Jr. is the former general counsel of the Federal Communications Commission under Chairman Ajit Pai. He is currently an attorney in private practice in Washington, DC. The views expressed herein are his own and do not reflect the views of his former or current employers or clients.

Notes

1. 47 U.S.C. §151.
2. 47 U.S.C. § 254(b)(2), (3).
3. See Federal Communications Commission, Inquiry Concerning Deployment of Advanced Telecommunications Capability to All
Americans in a Reasonable and Timely Fashion, January 19, 2021, Figure 3b, https://www.fcc.gov/document/fcc-annual-broadband-
report-shows-digital-divide-rapidly-closing.
4. See Federal Communications Commission, "New GAO Watchdog Report Underscores Carr's Concerns About the Absence of
a National Strategy Coordinating Billions in Broadband Infrastructure Spending," press release, June 10, 2022, https://docs.fcc.gov/
public/attachments/DOC-384164A1.pdf.
5. Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 60104(c)(2).
6. See Federal Communications Commission, Report on the Future of the Universal Service Fund, August 15, 2022, https://www.fcc.
gov/document/fcc-reports-congress-future-universal-service-fund.
7. See Federal-State Joint Board on Universal Service, Universal Service Monitoring Report, 2021, Table 1.5, https://www.fcc.gov/
general/federal-state-joint-board-monitoring-reports.
8. Federal Communications Commission, Report on the Future of the Universal Service Fund, December 15, 2021, https://www.fcc.
gov/document/fcc-initiates-proceeding-future-universal-service.
9. Marguerite Reardon, "Verizon, AT&T and T-Mobile Dominate $81 Billion 5G Spectrum Auction," CNET, February 24, 2021,
https://www.cnet.com/tech/mobile/verizon-at-t-t-mobile-dominate-81-billion-5g-spectrum-auction; and Bret Swanson, "Record
$80.9 Billion Spectrum Auction Points to Promise of 5G," AEIdeas, February 8, 2021, https://www.aei.org/technology-and
-innovation/record-80-9-billion-spectrum-auction-points-to-promise-of-5g.

0913 Spectrum: **NTIA: The NTIA-FCC MOU: What A New Era of Spectrum Coordination Will Look Like** by Charles Cooper, Associate Administrator, Office of Spectrum Management The recent update of the Memorandum of Understanding (MOU) between the Federal Communications Commission (FCC) and NTIA memorializes a shared commitment between the two agencies to renew a partnership critical to jointly managing the nation's spectrum resources. Now the work begins to translate this agreement into consistent, meaningful practice. Given the scope of the document, there is quite a lot for the FCC and NTIA to do to fulfill the potential of the MOU. The agreement reflects the need for the two national spectrum managers to share information and communicate frequently and effectively. The agreement's major provisions echo and anchor the goals of the Spectrum Coordination Initiative announced this past February. The MOU promotes: Evidence-based policy-making; More frequent and more effective communication; Long-range planning and sharing of information to coordinate proposals well in advance; and Development of a common approach for assessment and technical analysis of potential radio frequency interference issues. The MOU will increase the frequency of meetings between the agencies. The leadership will meet at least quarterly, and the staffs will meet monthly. The more frequent engagement will bring increased attention and consistency to interagency coordination. The meetings will provide avenues for each agency to bring forward and communicate their plans and strategies up to 12 months in advance. Agencies can clarify and align their goals, helping to mitigate last-minute disagreements over proposals and technical data. Increasing the MOU's advance notification provision from 15 to 20 business days for consideration of proposals that might result in interference will help all parties. This allows for a more coordinated response among the federal agencies within the Executive Branch to FCC proposals – and vice-versa. Ultimately, this increase in time should help the FCC as well because a well-reasoned federal response is always preferable to too little time for meaningful evaluation. The updated MOU also places a high priority on dispute resolution. The MOU sets the expectation that staff-level disagreements between the two agencies will be promptly raised to senior leadership at NTIA and the FCC. The increased communication and planning should help thwart disputes before they reach a critical stage. NEXT WEEK: On Sept. 19, NTIA will host its fifth annual Spectrum Policy Symposium at the National Press Club, under the theme ***A New Era for U.S. Spectrum Management & Coordination*** Separate from the MOU but consistent with one of its key objectives, NTIA is also working to file more public comments with the FCC. Submitting comments, letters, technical information and other materials in FCC proceedings allow s NTIA to establish and transparently communicate the considered views of the Executive Branch for public inspection and reaction. This can help stakeholders identify potential issues early in the rulemaking process and work to resolve them as a proceeding moves along. One recent NTIA filing, for example, offered comments on the FCC's Notice of Inquiry on offshore spectrum needs and uses. NTIA expressed support for FCC efforts to ensure sufficient spectrum for offshore operations — particularly offshore windfarms — while cautioning that many critical federal systems operate in the ocean or near coastal areas. NTIA also filed comments on a Notice of Inquiry on receiver performance. Our comments included detailed descriptions of many of the existing standards and requirements for receivers under federal control. Although the updated MOU was the product of a joint FCC-NTIA task force, many stakeholders contributed to its success – including Congress and the Government Accountability Office. The Commerce Spectrum Management Advisory Committee also provided valuable guidance. As a result, NTIA and the FCC have an opportunity to begin a new, sustainable era in our partnership as stewards of the nation's spectrum resources.

0913 Fiber v Cable/coax- Frontier Communications' recent record growth in fiber-based broadband subscribers is coming largely at the expense of cable, CEO Nick Jeffery said. "Fiber is a fundamentally better product than cable. It's 50 times faster at the 2 gig level on the upload, it's eleven times faster on the download, it's two-and-a-half times better latency," Jeffery added. Telecompetitor

0913 USF Contribution Factor: FCC announces the proposed universal service contribution factor for the fourth quarter of 2022 will be 28.9%, down from the previous quarter's 33%. NECA WW

0913 Fiber v Cable/coax - Verizon Business CEO Sampath Sowmyanarayan says inconsistency of cable broadband has helped Verizon grow its fixed wireless access business. There was nearly a 50/50 split with the company's FWA business and consumer subscribers as of the second quarter. FierceWireless

0913 Lifeline: FCC - September 12-16 Is Lifeline Awareness Week - Release announces fcc is partnering with NARUC and NASUCA to raise awareness of the Lifeline Program and the Affordable Connectivity Program during Lifeline Awareness Week, Sept. 12-16, 2022.

0913 Fiber Backhaul: Verizon will reach its goal of connecting 50% of its cell sites with fiber by the end of the year. Fiber will boost Verizon's ability to increase capacity, control upgrades, speed repairs and make its network more reliable and secure, the telecom said. Telecompetitor

0913 RDOF: FCC authorizes authorizes Rural Digital Opportunity Fund support for 49 winning bids identified in Attachment A of the public notice. They said a state-level summary will soon be posted under the results tab on the Auction 904 webpage and provide for each long-form applicant the: total support amount over 10 years and total number of locations the applicant is being authorized for in each state; locations to which the authorized support recipient must offer the required voice and broadband services; and eligible census blocks included in the winning bids being authorized in each state. Additionally, they provided a summary of the various obligations of authorized Auction 904 support recipients and important deadlines. DA-22-944A1.docx DA-22-944A1.pdf DA-22-944A1.txt DA-22-944A2.pdf DA-22-944A2.txt

0912 ACP Fraud: CARR STATEMENT ON YET ANOTHER INSPECTOR GENERAL REPORT OF FRAUD IN THE FCC'S MULTI-BILLION-DOLLAR BROADBAND FUNDING INITIATIVE. DOC-387072A1.docx DOC-387072A1.pdf DOC-387072A1.txt The latest Inspector General report focuses on the FCC's $14.2 billion Affordable Connectivity Program ("ACP"), which is designed to help qualifying low-income households afford a broadband connection and was funded through the 2021 Infrastructure Investment and Jobs Act ("IIJA"). The FCC's Inspector General previously released a fraud report on the FCC's predecessor program, known as the Emergency Broadband Benefit Program, which Carr addressed here. "For nearly two years now, I have been sounding the alarm on the potential for massive levels of fraud in the federal government's broadband funding programs. And I have been pushing for additional oversight and safeguards to ensure that we not only prevent bad actors from illegally lining their pockets with federal dollars but that these funds reach the families that Congress intended to benefit. I have not been alone in expressing concern. Last year, the FCC's Inspector General uncovered an outrageous scheme in which broadband providers or sales agents appeared to be defrauding the program on a near nationwide scale. At the time, I expressed my concern that the fraud uncovered by the Inspector General represented just the tip of the iceberg. That is why I continued to push for more safeguards. Now, the Inspector General has issued yet another report that details a new wave of outrageous abuse of the FCC's broadband funding program. In just one egregious example, the Inspector General's analysis shows that one or more actors signed up more than 1,000 households for free or discounted Internet service by using the identity of the same four-year-old child. Whatever we are doing to deter this type of fraud is not working. More action is needed to safeguard these federal dollars and ensure that they deliver on the goals Congress has set out." ###

0908 USF – Future of…. Chairwoman Rosenworcel sent letters responding to Congressional letters on the future of the Universal Service Fund. Rosenworcel said the recently released report on the future of the USF included the costs of data transportation and impact on rural providers, recommended the FCC initiate a proceeding to consider the future support needs of networks serving high-cost areas, and assess what continuing support is needed to develop, maintain and improve broadband operations in those locations. NECA WW

0908 ACP - The American Library Association spoke with Commissioner Starks' staff about "the central role for libraries to connect with and strengthen the ACP outreach grant" and FCC's outreach into hard-to-reach communities, as well as a variety of opportunities for libraries to be included in the funding and ensuring equity in access and inclusion. NECA WW

APPENDIX D – WATER SECTOR

[1] WATER CLIPS

0920 US – Cyber: **Dark Reading: Water Sector Will Benefit From Call for Cyber Hardening of Critical Infrastructure**
0920 PR – Supply: **Puerto Rico has lost more than power. The vast majority of people have no clean water** *Vanessa Romo, NPR News* The vast majority of Puerto Rican homes have been plunged into darkness after Hurricane Fiona wiped out the power grid, but people on the island are facing another evastating emergency: How to access clean water?
0920 WUS – Supply: **Wildfires are burning away the West's snow** *Kylie Mohr, High Country News* A new study finds wildfires are burning more high elevation areas and dramatically impacting the West's snowpack as a result.
0919 NY – Polio: Reuters reports that New York Governor Kathy Hochul declared a disaster emergency last week in a bid to accelerate efforts to vaccinate residents against polio after the virus was detected in wastewater samples taken in four counties.

0919 WUS – Supply: E&E Colorado River Water Conservation District General Manager Andy Mueller warned Colorado River Basin states Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming — on Friday that the system's federal reservoirs could effectively empty in a few short years barring aggressive reductions to water demands. "If we continue in the way we're operating now, if we don't reduce our demands, we're going to really see those reservoirs really hit a crisis," Mueller said. "I'm not talking about in 20 years, I'm talking about in the next three or four years. We have a period of time here to change our use."

0919 NY - PFAS: Politico: Albany looks to crack down on 'forever chemicals' contamination **Sen. Rachel May (D-Syracuse) and Assemblymember Carrie Woerner** (D-Saratoga County) will unveil their "PFAS Surface Water Discharge Disclosure Act,"

0919 HA – Infrastructure: EPA grants Hawai'i $31M for clean drinking water

0919 CO – Infrastructure: Sen. Bennet, Hickenlooper Welcome $121 Million in Bipartisan Infrastructure Law Funds for Clean Water Across Colorado

0919 MD – Infrastructure: Water World: MD Board of Public Works approves $10M for wastewater, stormwater infrastructure

0919 CA – MISC: EPA orders two Coachella Valley mobile home parks to provide safe drinking water

0919 NY – PFAS: NY state urged to strengthen drinking water standards on toxic chemicals

0919 IL – Infrastructure: Normal approves $3.9 million project to upkeep water quality

0919 CA – Drought: Millions in LA County Can Resume Outdoor Watering With Pipeline Repairs Complete

0919 MS- MISC: Lawsuit seeks repairs to troubled Mississippi water system **Residents of Jackson, Mississippi, have filed a** class action **lawsuit against the city, current and past officials, and two engineering companies over failures and neglect that left them without safe drinking water.**

0918 VT – Infrastructure: Vermont Bus: EPA delivers over $63 million in historic water infrastructure funding to Vermont

0917 Texas – Infrastructure: Leander residents required to conserve water as pipeline needs repair

0917 OH – Rates: Hamilton considering water, wastewater rate increases

0916 US - Biden-Harris Administration and EPA Announce Delivery of Historic Water Infrastructure Funding from the Bipartisan Infrastructure Law to 18 States

0916 UT – Infrastructure: EPA announces $63 million in federal funding for Utah's drinking water

0916 AL – Infrastructure: County receives funding for water, sewer projects

0916 US – MISC: USDA-Forest Srvc: Quantifying the Role of National Forest System and Other Forested Lands in Providing Surface Drinking Water

0916 US – Treatment: Status of Rail Transport, Including Transport of Water Treatment Chemicals - Recent collective bargaining negotiations between U.S. rail carriers and unions representing 115,000 railroad workers began in 2020. On September 12, 2022, rail carriers began to issue embargoes on the transport of hazardous materials, which has restricted shipments of chlorine products needed for water and wastewater treatment. The rail carriers and unions reached a tentative agreement on September 15, potentially avoiding a stoppage of rail carrier service at the end of a negotiation cooling off period on September 16. This agreement may result in the lifting of embargoes on the transport of hazardous materials, allowing for production and transport of chlorine products to begin to return to normal levels. EPA recognizes the importance of fully restoring railcar delivery of specific chemicals and other commodities that are essential to water sector operations and, by extension, to public health and the environment. Therefore, EPA is working with other key partners at the federal level, particularly the Department of Transportation, to identify specific supply chain disruptions of relevance to the water sector which have resulted from the embargoes, so that we can work to restore deliveries of essential chemicals and commodities as soon as possible. If you have any information of supply chain disruptions of critical treatment commodities resulting from the railcar embargoes, including particular geographies or facilities facing particularly acute shortages, please contact EPA at SupplyChainSupport@epa.gov. For additional updates on this issue, please visit Railroad Transportation Update, and visit Supply Chain Resilience for additional information and resources.

0916 US – Infrastructure EPA Delives of Historic Water Infrastructure Funding from the Bipartisan Infrastructure law to 18 States — Today, the U.S. Environmental Protection Agency (EPA) awarded Bipartisan Infrastructure Law funding to the first 18 states across the country for water infrastructure improvements. President Biden's Bipartisan Infrastructure Law allocates more than $50 billion to EPA toward repairing the nation's essential water infrastructure, which helps communities access clean, safe and reliable drinking water, increase resilience, collect and treat wastewater to protect public health, clean up pollution, and safeguard vital waterways. More than $1.1 billion in capitalization grants from the Bipartisan Infrastructure Law have been issued to 18 states through the State Revolving Funds (SRFs), with additional capitalization grants forthcoming. The grants mark the first significant distribution of water infrastructure funds thanks to the Bipartisan Infrastructure Law. State allocations were previously announced. EPA's SRFs are part of President Biden's Justice40 initiative, which aims to deliver at least 40% of the benefits from certain federal programs to underserved communities. Furthermore, nearly half the funding available through the SRFs thanks to the Bipartisan Infrastructure Law must be grants or principal forgiveness loans that remove barriers to investing in essential water infrastructure in underserved communities across rural America and in urban centers. EPA awarded SRF capitalization grants to 18 states, including: Arizona, Colorado, Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Montana, New Hampshire, New Mexico, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, Washington and West Virginia. Funding announced today represents FY22 awards for states that have submitted and obtained EPA's approval of their plans for use of the funding. Capitalization grants will continue to be awarded, on a rolling, state-by-state basis, as more states receive approval throughout FY22; states will also receive awards over the course of the next four years. Once grants are awarded, state programs will begin to deliver the funds as grants and loans to communities across their state. The Bipartisan Infrastructure Law presents the largest-ever funding opportunity for investing in water infrastructure. Find out more about Bipartisan Infrastructure Law programs and other programs that help communities manage their water resources on EPA's Bipartisan Infrastructure Law page.

0916 AZ- Infrastructure: **EPA Awards Over $57 Million in Historic Funding to Arizona to Improve Water Quality**

0916 NV – Supply: **Nevada looks to conservation as the Colorado River dwindles**

0916 ID – Supply: **Legislature can intervene in Idaho-US water rights fight** Idaho Legislature can intervene in a lawsuit filed against Idaho by the U.S. DOJ challenging recently-passed state water laws, but a federal judge has yet to rule on whether ranchers/Idaho Farm Bureau Federation can take part.

0916 CO- Supply: **State of unease: Colorado basin tribes without water rights Garnett** Querta slips on his work gloves as he shifts the big rig he's driving into park. Within seconds, he unrolls a fire hose and opens a hydrant, sending water flowing into one of the plastic tanks on the truck's flat bed.

0915 CA – Waterworld: **Assessment highlights water issues across Calif.'s Bay Area**

0915 MS – E-Coli: **Governor: Mississippi capital's water is again safe to drink**, where a boil water advisory had been in place since July. Recent flooding of the Pearl River damaged the city's water system, leading to a loss of water pressure that exacerbated the water crisis. (Axios)

0915 IN – Infrastructure : **Chesterfield discusses extensive water system project**

0915 CO- Infrastructure: **State water plan on tap for $11.4 million from gaming revenue**

0915 MS – Infrastructure: **City uses ARPA funds to match state grant for water and sewer**

0915 NV – Infrastructure: **5.2 Million for Walker River Paiute Tribe water infrastructure announced**

0914 NM – Supply: **Increasing pressures on Colorado River water in New Mexico**

0914 WV – Infrastructure: **State To Receive $26 Million In EPA Grants For Drinking Water**

0914 PA – Drought: **Drought watch remains in effect for 36 counties in Pennsylvania**

0914 US – NAWC Chief (& Ex-NARUC President) OpEd **Our water infrastructure: Extolling low rates only increases inequities | The Hill** We are seeing firsthand in Jackson, Miss., the true costs of **not investing in water infrastructure.** In an anthem often repeated in communities across America, low rates are championed as the benchmark against which water systems are judged. What we **don't see or hear about** is the rapidly aging infrastructure under our feet, malfunctioning pumps at the water treatment plants and the significant price tags associated with providing safe, reliable water and wastewater service. If there is an overarching lesson to be learned from the **water tragedies** of Flint, Newark, **Baltimore** and **Jackson**, it is that — as a country — we must place as much **emphasis on infrastructure investment** and water quality as we do on rates. Ending the mindset that cheapest is best would allow communities, no matter the zip code, to have water that is safe to drink and toilets that can be flushed without polluting the environment. Water that is unsafe to drink is unjust at any cost. Water providers, elected officials and activists cannot continue to buy into the rhetoric that low rates are paramount to any other consideration. If people insist on looking solely at rates, then the true cost to ratepayers of systems' failures, such as the need to buy bottled drinking water or having no service at all, must be included in these calculations. Efforts to keep rates artificially low means that some water and wastewater providers do not have the resources needed to properly maintain infrastructure. Low rates directly translate into deferring the work needed to protect public health and our environment. Perpetuating the cycle of underinvestment has resulted in failing infrastructure and poor water quality that disproportionately impacts communities of color and rural communities. Water equity must be the driver. Water equity means that water systems must abide by the basic principles of meeting water quality standards, addressing fundamental flaws in our water grid and investing in infrastructure, while offering customer assistance to protect our most vulnerable citizens. This is the way that we move all Americans closer to making certain that everyone has access to safe, reliable water at affordable rates — no matter where you live. By way of comparison, our country expects, and often mandates, electric generators to invest in new technologies, like wind and solar, to protect the environment even though those technologies often increase the price of electricity. In doing so, we as a society are signaling that having clean air is a priority over artificially low rates. The same must be true for water and wastewater. To better appreciate the hesitancy to spend money to improve water and wastewater infrastructure, one must understand that the nation's water and wastewater service providers are highly fragmented. About 50,000 systems operate throughout the United States — compared to just 3,300 electric utilities. Government-run systems serve about 88 percent of the population. Time and again we see local elected officials, or those who are appointed by them, struggle to balance investing in the system with politically unpopular rate increases required to make those improvements. Contrast that with the America's water companies, which understand the importance of maintaining water quality while still focusing on affordability. The 10 largest private water utilities alone invest $3.9 billion annually in their systems to ensure their customers have safe, reliable and affordable service. The result of this investment is clear. These water companies also have the superior compliance rates with EPA safe drinking water standards. The reality that is playing out across the United States is that putting off infrastructure upgrades to avoid increasing water rates does more harm over time than incremental investment. Over time, the price of doing nothing only continues to build. It's an extraordinary bill that aways comes due. The now $1 billion price tag to address the issues in Jackson, Miss., is a prime example of this. Yes, increased infrastructure investment will inevitably put upward pressure on rates, which is why we must do more to protect our neighbors in need. Congress must provide permanent funding for a low-income water assistance program. States must change antiquated laws that prevent water utilities from implementing customer assistance programs. Not doing anything to fix broken systems in the name of protecting our poorest citizens jeopardizes everyone's health and access to safe, reliable water service. It is far beyond the time to prioritize providing high-quality service, while at the same time designing rate structures and assistance programs to help ensure continuity of service for those who need it. The federal government made a valiant attempt to assist with the issue in passing the 2021 Bipartisan Infrastructure Law. Unfortunately, given the state of water infrastructure in the United States the $50 billion is merely a drop in the bucket. The American Society of Civil Engineers estimates the investment gap in water and wastewater infrastructure will grow to $434 billion by 2029. Continuing down this path of elevating the importance of low rates above all else means water and wastewater infrastructure in our cities and towns will continue fall into disrepair, resulting in water unsafe to drink, unreliable service, boil water notices, raw sewage discharges into streams and other environmental harms that hurt our communities and our economy. There is a better path, and now is the time to start following it.

0913 KS – Lead: **EPA: EPA to Begin Free Lead Testing at Cherokee County, Kansas, Superfund Site**

0913 CA – Infrastructure: **EPA Announces $225 Million WIFIA Loan to the City of San Diego to Protect Water Quality and Reduce Flood Risks**

0913 CA – Infrastructure: **EPA Announces $18 Million WIFIA Loan to Helix Water District for Drinking Water Resiliency in San Diego County**

0913 MS – Infrastructure: **EPA inspector general probes Mississippi capital water woes**

0913 TX – Infrastructure: **Sunrise Beach gets $301K for water system upgrades**

0913 CA – Drought: **New water rules in effect for Santa Clara County**

0913 NV – Drought: **Temporary solutions keep Las Vegas water crisis from worsening**

0813 GA – Outage: **Summerville city council takes next steps in wastewater treatment plan amid ongoing crisis**

0812 MD - **EPA Highlights Water Quality Improvements in Chesapeake Bay to Celebrate the Clean Water Act's 50th Anniversary**

0812 CA – Desalination: **Calif. DWR offering $6M to support desalination pilot projects**

0812 VA – E-Coli: [Mayor: Boil water advisory in Dungannon]
0812 NJ – Drought: [Water Restrictions In Long Valley Extended Through October]

[2] WATER NEWSLETTERS

0919 Water & Wastewater Report

Reliability-Centered Design Using reliability-centered design and maintenance helps a wastewater treatment facility reduce its total cost of ownership and improve maintainability.

Journey to a Performance Management Program Performance management programs can be essential for water management efficiency. What does implementing one of these programs look like? What performance indicators are important? What challenges should a utility expect? Robert Ervin, senior professional engineer for the City of Minneapolis Public Works - Water, explains the city's journey to a successful...

Biden-Harris Administration, EPA announce delivery of historic water infrastructure funding to 18 states Bipartisan Infrastructure Law funding is being distributed across the country for water infrastructure improvements.

Rural Water responds to Jackson's water crisis Mississippi Rural Water Association helps Jackson, Miss. with its recovery efforts after heavy rain caused pump failures for the city's O.B. Curtis Water Plant.

Sewage treatment plant in Japan to test biogas purification system The City of Kurashiki has agreed to evaluate and demonstrate the performance of Asahi Kasei's biogas purification system, which uses a new adsorbent to recover both methane and carbon dioxide separately.

WEF, partners explore option to destroy PFAS with heat The Water Environment Federation's $500,000 study with Brown and Caldwell, Western University, and North Carolina State University will explore the use of pyrolysis to potentially destroy PFAS while producing biochar and offgas.

0916 ASDWA Weekly

[] **First Round of BIL Funding Awarded to 18 States** On Friday, 9/16, EPA awarded Bipartisan Infrastructure Law (BIL) funding to the first 18 states across the country for water infrastructure improvements. The BIL allocates more than $50 billion over five years toward repairing the nation's water infrastructure. More than $1.1 billion in BIL capitalization grants have been issued to 18 states through the State Revolving Funds (SRFs), with additional capitalization grants forthcoming. The grants mark the first significant distribution of BIL water infrastructure funds. State allocations were previously announced. EPA awarded SRF capitalization grants to 18 states, including: Arizona, Colorado, Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Montana, New Hampshire, New Mexico, Pennsylvania, Rhode Island, Utah, Vermont, Virginia, Washington and West Virginia. The Federal funding announced on 9/16 represents 2022 Fiscal Year (FY22) awards for states that have submitted and obtained EPA's approval of their plans for use of the funding. Capitalization grants will continue to be awarded, on a rolling, state-by-state basis, as more states receive approval throughout FY22. States will also receive additional awards over the next four years. Once grants are awarded, state programs will begin to deliver the funds as grants and loans to communities across their state. More information on EPA's infrastructure funding efforts can be found here.

[] **Railway Strike Averted** This week, EPA posted information detailing collective bargaining negotiations between U.S. rail carriers and union-represented workers and potential impacts to the chemical supply chain. After the recent issuance of a report in August that included recommendations for ending the stalemate in negotiations, the rail carriers and unions reached a tentative agreement on September 15, potentially avoiding a stoppage of rail carrier service at the end of a negotiation cooling off period on September 16. This agreement may result in the lifting of embargoes on the transport of hazardous materials, allowing for production and transport of chlorine products to begin to return to normal levels. On September 12, rail carriers began to issue embargoes on the transport of hazardous materials, which include chlorine products needed for water and wastewater treatment. The purpose of the embargoes is to avoid the potential for safety-sensitive and hazardous materials being left unsecured and unprotected in the event of a work stoppage.

[] Source Water Protection Week is September 25 – October 1! AWWA invites water utilities, sections, states, and other partners to join the Association in recognizing Source Water Protection Week from September 25 – October 1, 2022. Throughout the week, advocates will be raising awareness about the importance of caring for the nation's drinking water sources. Keeping our rivers, lakes and underground wells free from pollution makes it easier and less expensive to keep drinking water safe and healthy. Source Water Protection Week materials are now available, and many additional resources will be added soon. For more information about how to spread the word and celebrate, visit the AWWA website.

[] AAAS Webinar on Advances in PFAS Destruction n Tuesday, October 4, 2022, from 2:00pm – 4:00pm (eastern time), the American Association for the Advancement of Science's Center for Scientific Evidence in Public Issues (AAAS EPI Center) will hold a webinar on "Advances in PFAS Destruction." During the webinar, expert panelists will share the scientific evidence related to current and emerging technologies on PFAS destruction to support decision-makers in their state or community. There will be a question-and-answer session following expert presentations from the webinar panelists. The panelists and presentations are:

Max Krause, U.S. EPA – PFAS destruction methods including super critical water oxidation and electrochemical oxidation

Paul Lemieux, U.S. EPA – PFAS destruction of solid matter including incineration, pyrolytic processes, and other thermal treatments

Michelle Crimi, Clarkson University– Emerging approaches to PFAS destruction including through plasma treatment

For more information and to register for the webinar, visit the website here.

0915 PFAS and your business: Identifying and investigating PFAS impacts Bryan Cave Leighton Paisner LLP
Read OnlineI **Summary**

Most businesses understand the need to conduct environmental due diligence when buying or selling real estate, but many businesses may not have a good understanding of how to investigate and mitigate the potential risk posed by the presence of PFAS compounds. EPA is expected to add certain PFAS compounds to the list of "Hazardous Substances" under CERCLA later this year, and there are state and federal investigations into PFAS impacts at sites going on across the country, so businesses should begin to evaluate their potential interaction with these chemicals.

The following presents a discussion of some methods and concepts that, if applied correctly, can reduce the risk that future PFAS regulation will undermine the work that organizations are executing in response to the items described in EPA's PFAS Strategic Roadmap. We also provide information regarding the necessary background regarding due diligence procedures for PFAS substances.

I. Due Diligence Considerations

Presently, an evaluation of potential PFAS impacts is not required in order to satisfy the All Appropriate Inquiries Standard ("AAI") under CERCLA and state equivalents.

However, once EPA has listed PFOA, PFOS, and any other PFAS compounds as "Hazardous Substances" under CERCLA, those compounds are within scope of AAI and must be considered going forward. In anticipation of these changes, PFOA and PFOS (at a minimum) should be evaluated as part of a company's due diligence when purchasing property.

II. Conceptual Site Model Development

Once a site is classified as "impacted" by PFAS, developing a robust conceptual site model ("CSM") is a critical next step. This CSM provides a strategic framework to guide future decisions regarding the management of the site, support stakeholder interactions, and inform the design of future remedial actions if required at a later date. Given the importance of the CSM to the overall response process and the propensity for PFAS to migrate in the environment, the CSM should identify the following:

Historical uses of the site that may have resulted in PFAS releases;
Detailed evaluation and interpretation of site hydrogeology and hydrology influencing PFAS migration;
Historical remedial efforts performed in the vicinity of the PFAS plume;
Available PFAS data from the site and any adjacent sites;
Potential and identified regional sources of PFAS to the environment;
Ecological and human health receptors; and

Nearby property ownership and use.

In today's data-rich environment, much of the information needed to create a CSM is available through previous environmental investigations conducted at or near the site, regional databases, and other sources. Leveraging this existing data by conducting desktop reviews using advanced interpretation methods at the beginning of an investigation planning effort provides opportunities to target the investigation, thereby reducing cost and generating data that supports a well-informed strategy designed to achieve the most favorable outcome possible.

As EPA implements the TSCA data gathering rule, the volume of PFAS-related information available to support CSM development, investigation and response action planning will increase exponentially. For additional information regarding the TSCA data gathering rule, please refer to BCLP's previous Client Alert.

When used to its full potential, this data will help organizations chart a course toward compliance and risk mitigation prior to generating new data. For example, a clear presentation of regional PFAS impacts and potential sources to the environment can be valuable in planning site-specific data collection efforts and communicating risks to internal stakeholders. This information will also be valuable in evaluating historic and ongoing PFAS impacts during the due diligence process.

Summarizing and converting the information described above into a consumable format may seem like a daunting task; however, new technologies are being employed to evolve from conventional "written" or "static" CSMs to dynamic CSMs hosted on a digital platform. This allows for the efficient use of existing and new datasets as projects are implemented.

III. Digital Site Management Tool

Burns & McDonnell has developed a Digital Site Management Tool ("DSMT") to develop CSMs to support some of the nation's most complex PFAS sites. This web-based tool allows users to seamlessly view disparate PFAS datasets and hydrogeologic data across space and time to make real-time interpretations, identify trends that are indicative of PFAS sources and transport routes, understand the specific processes affecting PFAS fate and transport in the environment, and determine potential exposure scenarios.

For example, Burns & McDonnell's team of stratigraphers has identified specific hydrostratigraphic units at complex PFAS sites that function as barriers and conduits to groundwater migration and therefore guide the transport of PFAS in the environment. Once identified, these units became the focus of data collection and their orientation informed the placement of the monitoring well network.

By relying heavily on the subsurface lithology, the results of the site investigation and the foundation of the CSM provide interpretations about contaminant fate and transport that can be easily repurposed to make interpretations or predictions about the distribution of additional PFAS should they become regulated at future date. This interpretation is captured within the DSMT and becomes part of the living CSM that evolves along with an organization's response to PFAS. The DSMT serves as a data management system with maps and dashboard reporting capabilities that can be used to support technical discussions and decision making as well as stakeholder interactions regarding this complex subject.

IV. Conclusion

Once potential PFAS impacts have been identified, investigating and characterizing those impacts is essential. Organizing and managing that information in a real-time, digital format provides greater flexibility and the ability to more effectively manage future discussions with regulatory agencies, investors, insurance providers, and other key stakeholders. Businesses should evaluate and implement a site modeling plan and dynamic platform that will adapt with their long-term business needs. Thomas S. Lee and John R. Kindschuh

0914 National Rural Water Ass'n: Special Report: Potential Railroad Strike Could Impact Water Sector Talks between freight-rail companies and unions continue under U.S. Labor Secretary Marty Walsh's leadership as the deadline to avert a strike that would disrupt US transport services nears. About 125,000 workers could walk off the job if a deal is not reached by Friday's deadline. Water and wastewater utilities may begin experiencing supply chain disruptions resulting from this potential railroad strike that could start later this week. Items affected by the disruptions could include chlorine and other essential water treatment chemicals and products, some of which have already been impacted. These events call for utilities to assess the status of their suppliers and consider mitigation actions **Read Full Report Here**

0914 EPA WaterSense Articles of Interest Wednesday, September 14, 2022

Social Media Spotlight It's not too late to start saving water this year! Join Fort Worth (Texas) Water in conserving water by taking the WaterSense "I'm for Water" pledge and find examples of simple water-saving actions to take throughout the year. twitter.com/FWWater/status/1565324089253830656

WaterSense

"World Water Week: Why The Home Depot Is for Water Conservation" Northampton, Massachusetts—Even though World Water Week has passed, you can still conserve water with WaterSense. One of the biggest culprits of water waste is leaky toilets. To check your toilet for leaks, add a few drops of food coloring to the tank and wait 10 minutes. If dye appears in the bowl, your toilet likely has a leak. You can also install WaterSense labeled faucet aerators to save water. Swap out your showerhead for a WaterSense labeled model, which uses less gallons of water per minute while maintaining performance. finance.yahoo.com/news/world-water-week-why-home-134512208.html

Conservation

"Bay Area Among Leaders in Statewide Water Conservation" CALIFORNIA—With ongoing drought conditions, California state officials have asked residents to cut back on water use to conserve water. A recent report from the State Water Resources Control Board shows that Californians cut back on water use by 10.4 percent in July 2022 compared to July 2020. The Water Board indicated that 14 counties reached or surpassed the governor's request for a voluntary reduction of 15 percent. To help consumers save water, many water utilities are offering rebates for water-efficient products and landscaping. For example, the Santa Clara Valley Water District provides rebates of up to $3,000 for residential customers and up to $100,000 for commercial and multifamily customers through its Landscape Rebate Program. danvillesanramon.com/news/2022/09/11/bay-area-among-leaders-in-statewide-water-conservation

"Sports Plays Key Role in Southern Nevada Water Conservation" Las Vegas, NEVADA—As water conservation continues to be an important topic, many organizations are rethinking how they approach water use and conservation education. Among those trying to reduce water use are sports organizations. Anthem Country Club in Nevada has closed its golf course in order to implement stronger water conservation methods. The environmental division of the NFL is working to improve the organization's water conservation efforts. At Allegiant Stadium, home stadium of the Las Vegas Raiders, uses Bermuda grass, which is drought-tolerant and requires less frequent irrigation. The area's hockey facilities use reclaimed water. Southern Nevada Water Authority also facilitated the conversion of 29 high school football fields from grass to turf. www.reviewjournal.com/sports/sports-plays-key-role-in-southern-nevada-water-conservation-2637526/

"Utility Company Recommends Water Conservation in Face of Drought" CONNECTICUT—New England has been facing its most severe drought in the past two years, and nearly half the state of Connecticut is classified as experiencing severe drought. To alleviate water shortages, Connecticut Water is asking residents to voluntarily reduce water use. The water utility recommends checking toilets and other plumbing fixtures for leaks, covering swimming pools to prevent evaporation, adding mulch around plants to retain moisture, and only irrigating landscapes in the mornings or evenings. www.ctinsider.com/weather/article/Utility-company-recommends-water-conservation-in-17431578.php

"Severe Drought Makes Free Waterwise Resources More Crucial Than Ever" Fontana, CALIFORNIA—As you take action to reduce your daily water use, consider revamping your landscape to make it more water-efficient. Chino Basin Water Conservation District offers a free landscape template to help customers transform their yards into a California-friendly landscape. The Conservation District recommends replacing turfgrass with native and drought-tolerant plants and adding a pollinator garden. Residents can also request free sprinkler check-ups to ensure their irrigation systems are functioning properly and not wasting water. www.fontanaheraldnews.com/opinion/severe-drought-makes-free-waterwise-resources-more-crucial-than-ever/article_1e369fba-3073-11ed-a217-77bcf0e21b5a.html

"Want to Enjoy Your Swimming Pool While Still Conserving Water? Expert Shares Tips" Los Angeles—While pools are a great way to beat the summer heat, they can also use a lot of water. When left uncovered, up to 70 percent of pool water can be lost due to evaporation. A simple fix is investing in a pool cover. Pool covers prevent debris from falling into pools and limit evaporation when pools are not in use. You can also install barriers around the pool to prevent too much water from splashing out. If you do need to refill your pool, do it at the end of the day when the water is less like to evaporate. abc7.com/california-water-crisis-summer-heat-pool-conservation-guard-la/12209940/

0912 Water & Wastewater Report

Something in the Wastewater Wastewater is a rich source of information for community health, providing dense biological and chemical information on a community with fewer biases than many other types of public health surveillance.

Water Crisis in Jackson: WEF Responds Water Environment Federation leadership speaks on what we can do now to make sure that our nation's water systems remain functional; ensuring equity and access for all.

Swedish study verifies advantages of wastewater surveillance New research from Sweden affirms the predictive advantages of wastewater epidemiology, and the research hopes to expand surveillance to include other diseases as well.

Ariz. announces $3M public water sampling plan for PFAS Going beyond EPA's requirements for water system sampling, Arizona's PFAS sampling plan will include all 1,500 of its public water systems.

Calif. approves world's first microplastics testing requirements for drinking water The State Water Resources Control Board has approved a policy handbook that details quarterly microplastics testing methods for up to 30 of the state's water providers, set to begin in the fall of 2023.

VODA.ai wins top award at Smart Water Summit The award-winning company's AI solution helps identify pipes at high risk of failure, probable wastewater incidents, and likely lead service lines.

Texas provides $13M to water, wastewater, stormwater infrastructure The state provided financial assistance to a drinking water supply project in the City of Alice, a wastewater treatment plant project in the City of China, and a stormwater drainage project in the City of Kingsville.

Appendix E - BIPARTISAN INFRASTRUCTURE ACT CLIPS

0920 SUPPLY CHAIN: FCC Expands Covered List (of equipment that USF cannot be used to support) to Include China Unicom and PacNet/ComNet

0920 WEATHER: Hurricane Fiona has caused "catastrophic" damage, says Puerto Rico Gov. Pedro Pierluisi. At least two related deaths occurred on the island and **prompted evacuations of hundreds of residents** as it knocked out power and sparked landslides and massive floods. Fiona has since been upgraded to a Category 3 storm with maximum sustained winds of nearly 115 mph as it continues on to the Dominican Republic, where at least one more person has died.

0920 CYBER: Ransomware task force outlines threat response // Susan Miller The Joint Ransomware Task Force is designed to unify efforts and identify ways to leverage the federal government's unique authorities and capabilities to disrupt ransomware.

0920 CYBER: Baker Hostetler: FTC's Latest Staff Report On Dark Patterns: A Warning For Marketing Teams And UX Designers he Federal Trade Commission issued a detailed [staff report] on September 15 addressing Dark Patterns (or what some more descriptively call "manipulative design," but Dark Patterns seems to be sticking).

Regulators are focusing increased attention on these manipulative designs and it's critical for marketing, user experience and design teams to understand this topic.

The staff report brings together two types of dark patterns you'll see in use. The first manipulates consumers into purchasing, subscribing to or not canceling products or services. The item you think is a one-time purchase, but subscribes you to a recurring monthly purchase. The maze you're sent through to cancel a subscription. The slight intentional delay added to a page to make it just a bit more unlikely that you'll finish the unsubscribe process. The false statement on an order page that there's only “One item left!” (isn't it amazing how often that happens?). The variations are endless.

The second manipulates consumers into “agreeing” or “consenting” to give up information they might not otherwise agree to. The familiar “Accept” button with no equal option to reject (which those operating in Europe will recognize from cookie-banner enforcement actions under the e-Privacy Directive and GDPR). Again, many variations on the theme.

It can sometimes be difficult to decide (and there's room for debate about) when an activity has crossed the line from clever marketing to impermissible manipulative design (and, therefore, from acceptable influence to impermissible manipulation). But state, federal and international regulators are wise to the game. Companies would be wise to cut out activities that cross the line, and guide relevant teams on how to avoid the most problematic examples.

And it's not just scam artists that must take note. Although some of the staff report's examples are associated with clear scams, it would be a mistake to assume that the issue is limited to those scams. Manipulative designs are everywhere, which is part of the problem. Manipulative designs are so prevalent that marketing teams and UX designers might believe it's the right way to do things, or that they aren't being “creative” enough if they aren't using them. The staff report provides a good collection of examples and visual aids for discussions with these teams about where the line is, what's clearly on either side of it and what might be in that gray middle.

0920 CYBER: **DHS unwraps $1B state and local cybersecurity grant program** // Susan Miller Each states will each receive a minimum of $2 million for FY 22 for a planning committee and a cybersecurity plan that details how it will reduce their cybersecurity risks.

0920 CYBER:: **Cyber criminals increasingly relying on ransomware-as-a-service, report says** // Chris Riotta A new report reveals threat actors are using the same ransomware as in previous years – but relying on new malware-free intrusion methods and ransomware-as-a-service offerings to evade popular mitigation techniques.

0919 WEATHER: Greenwire: Puerto Rico faces 'man-made disaster' in Fiona's wake - Millions of people in Puerto Rico are living without electricity on an island where infrastructure has remained hobbled since Hurricane Maria in 2017. Elsewhere, typhoons hit both coastal Alaska and Japan, causing flooding . . . Privately owned LUMA Energy, the company that operates power transmission and distribution, said winds of 80 mph had disrupted transmission lines, leading to the islandwide power outage.

0919 WEATHER: Alaska is reeling from the worst storm in a half century after Typhoon Merbok hit the western part of the state on Saturday, causing widespread flooding and damage across 1,000 miles of the Alaskan coastline. (The Associated Press)

0919 WEATHER: More than 1.3 million customers in Puerto Rico are without power after Hurricane Fiona slammed into the island over the weekend as a Category 1 storm, bringing heavy rains and flooding that led to evacuations and rescues. (The New York Times)

0919 WEATHER: Homes, power lines, roads and at least one bridge were knocked out as Hurricane Fiona swept Puerto Rico over the weekend. Gov. Pierluisi described the damage as catastrophic, including an islandwide blackout and road-blocking landslides. Miami Herald (tiered subscription model)

0919 DRONES: **DoE: NETL Drone Program Aims to Enhance America’s Energy Infrastructure**

0919 CYBER: Natl Sci Fnd: Thinking like a cyber-attacker to protect user dataA component of computer processors that connects different parts of the chip can be exploited by malicious agents who seek to steal secret information from programs running on the computer, MIT researchers have found. Modern computer processors contain many computing units, called cores, which share the same hardware resources. The on-chip interconnect is the component that enables these cores to communicate with each other. But when programs on multiple cores run simultaneously, there is a chance they can delay one another when they use the interconnect to send data across the chip at the same time. By monitoring and measuring these delays, a malicious agent could conduct what is known as a "side-channel attack" and reconstruct secret information that is stored in a program, such as a cryptographic key or password. Senior author Mengjia Yan explains, "An intuitive way to understand interconnect side-channel attacks is to think of the mesh interconnect as roads carrying cars from multiple directions. The cars [interconnect packets] can enter and exit the interconnect at different crossings. When traffic flows overlap, they may slow each other down and cause contention, which can be used to infer the victim's traffic status and then the victim's secret." In work funded in part by the U.S. National Science Foundation, MIT researchers reverse-engineered the on-chip interconnect to study how this kind of attack would be possible. Drawing on their discoveries, they built an analytical model of how traffic flows between the cores on a processor, which they used to design and launch surprisingly effective side-channel attacks. Then they developed two mitigation strategies that enable a user to improve security without making any physical changes to the computer chip. . . . . .

0918 Communications Infrastructure : FCC: Hurricane Fiona Communications Status Report - September 18, 2022

0916 Resilience: Electric Power Research Institute uses 35 acres in Lenox, Mass., to stress-test poles, cables, towers and other equipment for power transmission and distribution. The nonprofit uses about $60 million annually from energy sector clients to conduct tests, which recently have focused on clean energy technology and resilience during extreme weather. E&E News

0916 WEATHER: Tropical Storm Fiona forms, soon to lash Lesser Antilles, Puerto Rico *Matthe Cappucci, The Washington Post* The storm could eventually be one to watch for Bermuda or even the U.S. East Coast.

0914 FIRE – DOI: Interior Dept: Biden-Harris Wildland Fire Mitigation and Management Commission Charts Path Forward UT — Today, members of the Biden-Harris administration's Wildland Fire Mitigation and Management Commission met for the first time in Salt Lake City, Utah, to begin crafting federal policy recommendations and strategies on ways to better prevent, manage, suppress and recover from record wildfires across the West. Established by President Biden's Bipartisan Infrastructure Law, and announced in December 2021, the commission is composed of representatives from federal agencies, state, local and Tribal governments, and representatives from the private sector. The commission is tasked with preparing a report with policy recommendations and submitting them to Congress within a year of its first in-person meeting. The commission's work will build on existing interagency federal efforts such as the Wildland Fire Leadership Council and the White House Wildfire Resilience Interagency Working Group and will continue to pursue a whole-of-government approach to wildfire risk reduction and resilience. Its creation comes at an important time as shifting development patterns, land and fire management decisions, and climate change have turned fire "seasons" into fire "years" in which increasingly destructive fires are exceeding available federal firefighting resources. Future commission meetings will be monthly and take place virtually. In addition to establishing the commission, the Bipartisan Infrastructure Law provides historic funding for a suite of programs aimed at reducing wildfire risks, detecting wildfires, instituting firefighter workforce reforms and building more resilient infrastructure. This year, the Departments of the Interior and Agriculture have allocated an initial $234 million in Bipartisan Infrastructure Law investments for wildfire resilience efforts and established a new joint mental wellness program to equip federal wildland firefighters with post-traumatic stress disorder care and address environmental hazards to minimize on-the-job exposure. These investments support the implementation of the Department of the Interior's "Five-Year Monitoring, Maintenance, and Treatment Plan," which provides a roadmap for addressing wildfire risk on Department of the Interior and Tribal lands. They also support the USDA

Forest Service's "Confronting the Wildfire Crisis" strategy, which aims to treat 20 million acres of national forests and grasslands and 30 million acres of state, local, Tribal and private lands over the next 10 years to reduce wildfire risk where it matters most. These plans help facilitate the collaborative work between the two Departments. The Bipartisan Infrastructure Law also supports landmark pay increases for federal wildland firefighters, announced on June 21, which aim to bring federal firefighter pay in alignment with their state and local counterparts, while aiding in recruitment and retention of a more permanent and stable wildland firefighting force across the federal government. For more information visit the commission website or email wildlandfirecommission@usda.gov.

0916 CYBER: Homeland Security Today: New CISA Strategic Plan Focuses on Cyber Threats, Risk Reduction, Collaboration with Partners (09/16) https://www.hstoday.us/federal-pages/dhs/new-cisa-strategic-plan-focuses-on-cyber-threats-risk-reduction-collaboration-with-partners/ *Director Easterly was quoted in an article about the focus of CISA's Strategic Plan 2023-2025.* At the beginning of the document, CISA Director Jen Easterly wrote that the plan "represents a forward-leaning, unified approach to achieving our vision of ensuring secure and resilient critical infrastructure for the American people." "The risks we face are complex, geographically dispersed, and affect a diverse array of our stakeholders, including federal civilian government agencies, private sector companies, state, local, tribal, and territorial (SLTT) governments, and ultimately the American people," Easterly wrote. "It is our duty to work with our stakeholders to mitigate these risks to preserve our national security, economic stability, and the health and safety of all our citizens." The plan builds on and aligns with the Department of Homeland Security Strategic Plan for Fiscal Years 2020–2024, with a focus on promoting "unity of effort across the agency and our partners" and defining "success for CISA as an agency."

0916 WEATHER – FCC ISSUES PROCEDURES TO PROVIDE EMERGENCY COMMUNICATIONS IN AREAS AFFECTED BY TROPICAL STORM FIONA. (DA No. 22-973). OMR PSHSB. DA-22-973A1.docx DA-22-973A1.pdf DA-22-973A1.txt

0916 OUTAGE REPORTING: FCC ACTIVATES DISASTER INFORMATION REPORTING SYSTEM FOR COMMUNICATIONS IMPACTED BY TROPICAL STORM FIONA IN PUERTO RICO AND THE U.S. VIRGIN ISLANDS. (DA No. 22-971). OMR PSHSB. DA-22-971A1.docx DA-22-971A1.pdf DA-22-971A1.txt

0914 CYBER – IRAN: The Hill: Iranians indicted in hacking scheme

0914 FIRE: California's Mosquito Fire prompts more evacuations as it races toward mountain communities, burning homes and cars in its path The Mosquito Fire burning in Northern California flared up Tuesday afternoon, charging toward a mountain community and torching more homes as it burned dangerously close to a high school.

0914 CYBER - IRAN: *INTENDED FOR WIDEST DISTRIBUTION* Dear Partners, The Cybersecurity and Infrastructure Security Agency (CISA), the Federal Bureau of Investigation (FBI), the National Security Agency (NSA), U.S. Cyber Command - Cyber National Mission Force (CNMF), the Department of the Treasury (Treasury), the Australian Cyber Security Centre (ACSC), the Canadian Centre for Cyber Security (CCCS), and the United Kingdom's National Cyber Security Centre (NCSC) released a joint Cybersecurity Advisory (CSA) with technical details on cyber activity by advanced persistent threat (APT) actors assessed to be affiliated with the Iranian Government's Islamic Revolutionary Guard Corps (IRGC). This advisory is an update to our 2021 joint CSA on Iranian government-sponsored APT actors exploiting Microsoft Exchange and Fortinet vulnerabilities.

As recently as February 2022, these APT actors has been observed exploiting VMware Horizon® Log4j vulnerabilities for initial access. This is in addition to their exploit of known Fortinet® and Microsoft Exchange® vulnerabilities that were reported in our 2021 CSA and in the FBI Liaison Alert System (FLASH) report APT Actors Exploiting Fortinet Vulnerabilities to Gain Access for Malicious Activity from May 2021. Also, this CSA provides additional malicious and legitimate tools being used by these actors as well as additional indicators of compromise (IOCs) observed as recently as March 2022 that can help organizations detect this activity.

The agencies assess that multiple critical infrastructure sectors and organizations in the U.S., as well as in the United Kingdom, Australia, and Canada, are being actively targeted. The IRGC-affiliated APT actors have been observed scanning for and/or exploiting the known vulnerabilities on unprotected networks rather than specific entities or sectors. After gaining access to a network, the APT actors likely determine a course of action based on their perceived value of the data, which could lead them to encrypting data for ransom and/or exfiltrating data.

In addition to enforcing multifactor authentication, making offline backups of your data, securing remote desktop protocol (RDP), and other recommended mitigations, the agencies encourage organizations to immediately patch software affected by vulnerabilities identified in the latest advisory. Those specific common vulnerabilities and exposures (CVE) to patch are:

Microsoft Exchange ProxyShell	VMware Horizon / Log4j	Fortinet FortiOS	Microsoft Exchange
CVE-2021-34473	CVE-2021-44228	CVE-2018-13379	CVE-2021-31196
CVE-2021-34523	CVE-2021-45046	CVE-2020-12812	CVE, 2021-31206
CVE-2021-31207	CVE-2021-45105	CVE-2019-5591	CVE-2021-33768
			CVE-2021-33766
			CVE-2021-34470

Also, organizations are recommended to validate or test their existing security controls to assess how they perform against the adversarial behavior (i.e., MITRE ATT&CK techniques) described in this advisory. In this new CSA, the Iranian APT exploit activity reported in our 2021 CSA is now assessed to be by APT actors affiliated with the IRGC, an Iranian Government agency tasked with defending the Iranian Regime from perceived internal and external threats. All organizations are encouraged to review the CSA for complete details on this ongoing threat and recommended mitigations. Organizations are reminded that in September 2021 Treasury issued an advisory highlighting the sanctions risk associated with ransomware payments and providing steps that can be taken by companies to mitigate risk being a victim of ransomware. Your support to amplify this CSA through your communications and social media channels is appreciated. And as always, thank you for your continued collaboration. Cybersecurity and Infrastructure Security Agency Cybersecurity and Infrastructure Security Agency Communications Sector SRMA CommunicationsSector@cisa.dhs.gov

0912 **Utility Dive: Congress should require FERC, NERC to monitor gas pipeline capacity to ensure reliability, manufacturers say**

James Bradford Ramsay
General Counsel
National Association of Regulatory Utility Commissioners
1101 Vermont Avenue, N.W. Suite 200
Washington, D.C. 20005
General: 202.898.2200
Directline: 202.898.2207
Mobile: 202.257.0568
E-Mail: jramsay@naruc.org
Website: www.naruc.org Staff page: http://www.naruc.org/about.cfm?c=staff

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From: Utility Dive
To: Scripps, Daniel (LARA)
Subject: Nov. 21 - DOE conditionally gives Diablo Canyon nuclear plant $1.1B | Is a repeal of the Inflation Reduction Act likely?
Date: Monday, November 21, 2022 12:05:47 PM

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DAILY DIVE

Nov. 21, 2022 | Today's news and insights for utility leaders

DOE conditionally awards PG&E's Diablo Canyon nuclear plant $1.1B to forestall shutdown

Holtec said Friday that its application to DOE's Civil Nuclear Credit Program for funds to reopen the Palisades nuclear plant was rejected.

DEEP DIVE

Republicans will soon control the House. Is a repeal of the Inflation Reduction Act likely?

The change of power in the House could spur a new wave of political attacks against the landmark law, legal and political experts say, but it's not clear whether they'll result in policy change.

DOE opens $13B funding opportunity for transmission expansion, smart grid integration projects

The first round of funding for the Grid Resilience and Innovation Partnership program includes $3.8 billion for fiscal years 2022 and 2023.

AEP's Public Service Co. of Oklahoma proposes buying 995 MW of wind, solar from Invenergy for $2.5B

PSO expects the renewable energy facilities will produce $1 billion in tax credits and increase rates by 2.1%.

California moves to accelerate fossil-free energy and vehicles to further cut climate gases and other pollution

An updated greenhouse gas reduction plan from the state's Air Resources Board incorporates new clean energy laws and directives and includes the potential use of carbon capture to curb emissions at fossil-fueled power plants.

OPINION

Second-life EV batteries can bolster the energy storage market — if major challenges can be overcome

With 80% of a battery's capacity left at the end of its useful life in a vehicle and current constraints on supply chains for new batteries, repurposing electric vehicle batteries seems like a no-brainer.

Building out nationwide EV charging is taking longer than consumers think, Fuels Institute says

Permit approvals, government funding and knowing where to deploy charging stations are some of the many hurdles EV stakeholders face.

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Soaring West Virginia Electricity Prices Trigger Standoff Over the State’s Devotion to Coal Power

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SPECTRUM NEWS

Will North Carolina get offshore wind farms? Right now it’s up to one state commission

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UPCOMING EVENT

08
DEC

WEBINAR | 2 P.M. ET

How V2X Charging is Shaping the Future

Presented by studioID and Kaluza

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Generation	Load Management	Distributed Energy
T&D	Renewables	Regulation & Policy
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Electrification		

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From:	Katrina@theNWSC.org
To:	katrina@cciforum.com
Subject:	NRC to Hold Decommissioning Plan Public Meeting for Palisades Nuclear Power Plant in Michigan
Date:	Friday, September 9, 2022 4:50:28 PM
Attachments:	~WRD0004.jpg 22-037.pdf

Especially given recent news concerning Palisades, this is interesting. . . .

Nuclear Regulatory Commission - News Release

No: 22-037 September 9, 2022

CONTACT: David McIntyre, 301-415-8200

NRC to Hold Decommissioning Plan Public Meeting for Palisades Nuclear Power Plant in Michigan

The Nuclear Regulatory Commission will hold a public meeting Sept. 22 in South Haven, Michigan, to discuss and receive public comment on Holtec Decommissioning International's plans for decommissioning the Palisades nuclear power plant.

The meeting will be held from 6-8 p.m. Eastern time, at the South Haven campus of Lake Michigan College, located at 125 Veterans Blvd., in South Haven. This will be a hybrid meeting, also available online. Information for accessing the meeting online will be posted on the NRC's public meeting webpage at least 10 calendar days before the meeting.

The NRC staff will accept public comments on Holtec's plan, called the Post-Shutdown Decommissioning Activities Report, through Dec. 27. Details on how to submit comments were published Aug. 26 in the Federal Register. The report includes a site-specific decommissioning cost estimate and an overview of Holtec's planned activities, schedule, projected costs, and environmental impacts for decommissioning the Palisades plant.

The Palisades Nuclear Plant is a single pressurized water reactor, located in Covert, Michigan. It operated from Dec. 31, 1971, to May 20, 2022. The plant operator, Entergy Nuclear Operations Inc., sold the plant to Holtec, effective June 28, for the purposes of decommissioning.

October 27, 2022 | 19:55 ET~

CMS Energy

BMO Capital Markets

CMS-NYSE	Rating	Price: Oct-27	Target ↑	Total Rtn
	Outperform	$56.60	$63.00	15%

Let The Derisking Rotation Dance Begin

Bottom Line:

We view today's 3Q call positively as the company's initial 2023 guidance, pricing of its 2022 equity needs at over 20% above its current stock price, and the reiteration of the top end of the 6-8% growth rate, address three of the primary overhangs in the story. With expectations extremely low as witnessed by the stock's 5%+ underperformance over the last month, we see today's announcements as derisking a sector-leading growth story. **We reiterate our Outperform rating and raise our target price to $63 as we MTM our peer multiples.**

Key Points

Management raised the bottom of its 2022 guidance to $2.87-2.89 bringing the midpoint to $2.88. They also provided an "initial" 2023 outlook of $3.05-$3.11 suggesting 6-8% growth over revised 2022 midpoint. Management continues to see the year ahead of plan and per its normal practice of rebasing its outlook off actual results we would expect the company to update its 2023 range on the 4Q22 call. We would also expect the company to roll into its $14.3bn 5-year capital plan the impact of its approved 2021 IRP including the addition of the $815mm acquisition of the Covert facility. **Although the acquisition is still expected to contribute ~4-6c to earnings on a runrate basis, given several headwinds discussed in our 3Q preview our forecast now assumes the purchase helps solidify the company achieving EPS growth towards the top end of its 6-8% LT objective.**

Management also announced that using its ATM program in August, it had sold ~ $438mm through an equity forward structure priced at ~$68/share to fund the May 2023 closing of the Covert acquisition. **We see this announcement as another positive as it locks in the financing cost of the transaction at a price that is ~22% higher than where the stock closed yesterday but removes any equity overhang into 2023.**

No Variable Rate Debt, Minimal HoldCo Maturities & 2025 RFP add Visibility/ Upside to Outlook. In 2023 the holding company has no variable rate debt, no current maturities and only ~$250mm in 2024. Maturities in 2023/2024 are primarily utility-related and higher interest expense should be recoverable through the company's annual rate case cycle/forward projected test year. Finally, the company could have some additional upside in 2025-2026 related to DIG should it be chosen as part of the September 700MW RFP or given the current outlook for power/capacity prices.

Key Changes		
Target	Estimates	Q4 / 22E
$63.00↑	EPS	$0.59
$62.00	*Previous*	*$0.65*

For disclosure statements, including the Analyst Certification, please refer to page(s) 6 to 9.

IN Fact

Utilities, Power & Renewables

James M. Thalacker — Analyst
james.thalacker@bmo.com (212) 885-4007

Edward M DeArias, CFA — Associate
edward.dearias@bmo.com (212) 702-1200

Tanmay Pandit — Associate
tanmay.pandit@bmo.com (929) 837-9154

Legal Entity: BMO Capital Markets Corp.

Company Data			in $
Dividend	$1.84	Shares O/S (mm)	290.2
Yield	3.3%	Market Cap (mm)	$16,425
P/BV	2.3x	Net Debt (mm)	$11,952

BMO Estimates				in $
(FY-Dec.)	2020A	2021A	2022E	2023E
EPS	$2.67	$2.65	$2.88	$3.11
DPS	$1.63	$1.74	$1.84	$1.98
EBIT	$1,459	$1,348	$1,452	$1,589
EBITDA	$2,507	$2,462	$2,621	$2,831

Consensus Estimates	2020A	2021A	2022E	2023E
EPS			$2.88	$3.12

Valuation	2020A	2021A	2022E	2023E
P/E	21.2x	21.4x	19.7x	18.2x
Div. Yield (%)	2.9%	3.1%	3.2%	3.5%

QTR. EPS	Q1	Q2	Q3	Q4
2020A	$0.86	$0.49	$0.77	$0.56
2021A	$1.09	$0.55	$0.54	$0.47
2022E	$1.20a	$0.53a	$0.56a	$0.59
2023E	$1.20	$0.53	$0.56	$0.59

Our Thesis

Our positive outlook reflects the company's above-average EPS and DPS growth rates, long-dated visible capital program, consistent execution, and supportive regulatory environment, which can now be owned at a discount to its historical relative valuation.

CMS Energy - Block Summary Model

Income Statement	2020A	2021A	2022E	2023E
Consumers Energy	1,221	1,175	1,281	1,415
Enterprises, EnerBank, & Parent	141	(29)	(31)	(33)
Consolidated EBIT	1,362	1,146	1,251	1,382
Depreciation & Amortization	1,048	1,114	1,168	1,242
EBITDA	2,507	2,462	2,621	2,831
Interest Expense	552	500	528	581
Income Tax	148	102	113	124
Income from continuing operations	764	767	835	901
Weighted Average Shares Outstanding	286	290	290	290
Diluted Operating EPS	$2.67	$2.65	$2.88	$3.11
Dividends per Share	$1.63	$1.74	$1.84	$1.98
Cash Flow Statement	**2020A**	**2021A**	**2022E**	**2023E**
Operating Cash Flow	1,276	1,819	2,084	2,256
Investing Cash Flow	(2,867)	(1,233)	(2,605)	(3,723)
Financing Cash Flow	1,619	(295)	267	1,000
Net Change in Cash Flow	28	291	(254)	(467)
EOP Cash on Balance Sheet	185	476	222	(245)
Common stock (net)	253	26	0	0
Net debt issued/(repaid)	1,495	100	800	1,575
Dividends paid	(467)	(509)	(533)	(575)
Balance Sheet	**2020A**	**2021A**	**2022E**	**2023E**
Common Equity	5,496	6,407	6,691	7,008
Preferred Equity	0	0	0	0
Total Debt	15,140	12,428	13,216	14,791
Enterprise Value	$32,549	$30,775	$31,817	$33,859
Common equity %	28.6%	36.0%	35.5%	33.9%
Total Debt %	71.4%	64.0%	64.5%	66.1%
Book Value per Share	$21.23	$24.18	$25.02	$26.11

Source: BMO Capital Markets, Company Reports

Scenarios

Valuation

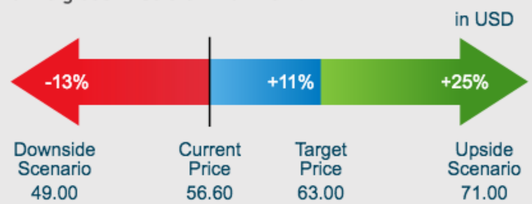
Our target price is arrived at using a sum-of-the-parts methodology. Our framework begins with the relevant sector average P/E multiple using 2024E EPS as a base, which we then adjust (premium, discount, or no change) to reflect the relative fundamentals of that segment.

Upside Scenario $71.00

Our upside scenario reflects continued multiple expansion associated with the company's premium, visible, above-average earnings growth, as well as higher capacity pricing at DIG.

Downside Scenario $49.00

Our downside scenario reflects tightening monetary policy, a deceleration of the company's rate base growth, and risks to the global macro environment.



Key Catalysts

Incremental announcements of renewable capital investments at the utility, conclusion of its pending rate cases, and COVID-19-related headwinds.

Company Description

CMS Energy's principal subsidiary is Consumers Energy, an integrated electric/gas utility serving about 6.6 million customers in Michigan. The Enterprises segment engages in independent power production, marketing of independent power production, and the development and operation of renewable generation.

CMS-NYSE Research

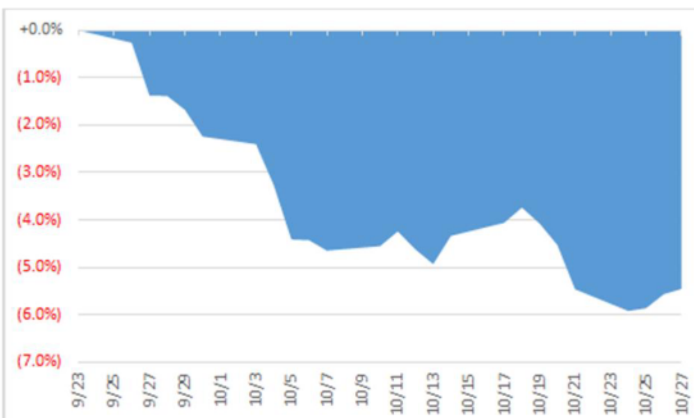
Glossary

Company Models

2023 Initial Outlook Helps Derisk Sector-Leading Growth Story – 2022 Equity Overhang Removed at Attractive Price

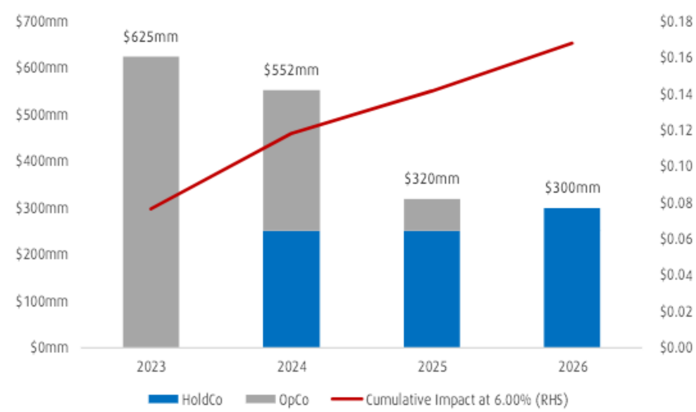
Bottom Line: We view today's 3Q call positively as the company's initial 2023 guidance, pricing of its 2022 equity needs at over 20% above its current stock price, and the reiteration of the top end of the 6-8% growth rate addressing three of the primary overhangs in the story. With expectations extremely low as witnessed by the stock's 5%+ underperformance over the last month (Exhibit 1), we see today's announcements as derisking a sector-leading growth story. Moreover, we would highlight other positive attributes to the story including no parent-level maturities or variable rate debt exposure in 2023 and annual rate case cycles in one of the most favorable regulatory jurisdictions which allows the true-up of higher interest costs for upcoming maturities at its utilities (Exhibit 2). Our 2022-2026 estimates of $2.88, $3.11, $3.37, $3.63 and $3.88 are in line with the top end of the company's 6-8% growth rate using the current midpoint of its 2022 guidance range ($2.88/share). With today's clarity on the company's forward earnings outlook, we see the company's 5% premium to group as one of the most attractive relative value opportunities in the sector given its sector-leading growth rate and quality profile. We reiterate our Outperform rating and are raising our target price to $63 to reflect the MTM of our peer electric and gas group multiples.

Exhibit 1: CMS vs. XLU Relative Performance



Source: BMO Capital Markets, Bloomberg

Exhibit 2: Holding Company & Opco-Level Maturity Profile



Source: BMO Capital Markets, FactSet

CMS reported 3Q22 EPS of $0.56 which was above our own $0.50 and the streets $0.52. Management raised the bottom end of its 2022 guidance range to $2.87-2.89 from $2.85-2.89 bringing the midpoint for 2022 to $2.88. CMS provided its "initial" 2023 outlook of $3.05-$3.11 which using the revised 2022 midpoint represents 6-8% growth YOY. Management continues to see the year ahead of plan and per its normal practice of rebasing its outlook off actual results we would expect the company to update its 2023 range on the upcoming 4Q22 call. At the same time, we would expect the company to roll into its $14.3bn 5-year capital plan the impact of its approved 2021 IRP including the addition of the $815mm acquisition of the Covert natural gas facility. Although the acquisition is still expected to contribute ~4-6c to earnings on a run rate basis, given several headwinds including the lower 9% ROE associated with the regulatory asset recovery of its remaining coal plants embedded in the April IRP settlement, our revised forecast now assumes this addition strengthens management's confidence in achieving EPS growth towards the top end of its 6-8% LT growth objective.

Equity Overhang & Price Risk Removed

Management also announced that using its ATM program in August it had sold ~$438mm through an equity forward structure which was priced at ~$68/share to fund the May 2023 closing of its acquisition of the Covert gas plant. We see this announcement as another positive as it locks in the financing cost of the transaction at a price that is ~22% higher than where the stock closed yesterday but removes any equity overhang into 2023 (~2-2.5% of market cap). We also believe this demonstrates once again management's commitment and foresight to derisking the story and adding visibility to the consistent compounding growth investors have come to expect from the company.

No Variable Rate Debt, Minimal HoldCo Debt Maturities & 2025 RFP add Visibility and Upside to Outlook

Despite our more tempered outlook, we continue to see the CMS' story as compelling and an anchor on our updated BMO Barbell framework as one of the best relative value opportunities in the sector. In addition to the company's long track record of meeting or exceeding its financial objectives and operating in one of the most favorable regulatory jurisdictions in the U.S., we see the company as better positioned to weather the current macro headwinds. Specifically, as we look into 2023, the holding company has no variable rate debt and no current maturities and only ~$250mm in 2024 (Exhibit 2). The primary maturities in 2023 and 2024 are at the utility opco and any increases in interest expense associated with those refinancings should be recoverable through the company's annual rate case cycle which utilizes a forward projected test year. Moreover, the company could have some additional upside through its September RFP. As a reminder, this 2025 RFP is for 700MW including 200MW of clean energy and 500MWs is for dispatchable resources which given the geographic requirements we see the company's DIG facility as well positioned in the 3rd party process. While the state of Michigan has partnered with Holtec to reopen the 800MW Palisades nuclear plant and could bid into the this RFP, CMS would still be eligible to earn a return on any PPA under the state's Financial Compensation Mechanism (FCM) that compensates the company for utilizing its balance sheet at their after-tax WACC. Proposals for the RFP are expected in December and will be evaluated thorough the 3rd party process through the end of February. The company would expect to have some additional clarity on the results of the RFP in the May timeframe and could update investors on its 2Q23 conference call. Even if DIG is unsuccessful in the RFP process, given where forward power and capacity prices are trading, the company could see a tailwind in the 2025/2026 timeframe.

Inflation Reduction Act Benefits Both CMS and Its Customers

Like many utilities who have now had a couple of months to pour over the many positive provisions included in the Inflation Reduction Act of 2022, CMS management also sees the legislation as striking the right positive balance for both customers and shareholders. Specifically, the company sees the IRA benefits impacting two primary areas: 1) **Support for additional renewable development as well as reducing costs.** Levelized cost of energy for solar is projected to come down by ~15% which would help levelized the company's competitive positions when bidding into upcoming RFPs and improve its probability of owning greater than 50% of the roughly 8GW of solar opportunity it sees. More importantly, relative to its plan, the IRA could reduce costs to customers by ~$60mm annually which would could help create the headroom to facilitate this increased investment; and 2) **Incentives additional clean energy deployment.** Not only does the legislation help accelerate EV adoption (which ultimately could lead to high load growth) but though its standalone tax credit for storage it also lowers the cost and increases flexibility for storage deployment which could help ramp the company's current 75MW IRP in 2024 to nearly 550MW by 2040. Finally, management noted that they see no material impact from the Corporate Alternative Minimum tax provision through the end of the decade.

Exhibit 3: CMS Energy Model Summary

CMS Model Summary	2020A	2021A	2022E	2023E	2024E	2025E	2026E	21-25
EPS By Segment								
Consumers Energy	$2.84	$3.07	$3.31	$3.61	$3.97	$4.23	$4.48	*8.4%*
Enterprises, EnerBank, & Parent	($0.17)	($0.42)	($0.43)	($0.51)	($0.60)	($0.60)	($0.60)	
Consolidated E.P.S.	$2.67	$2.65	$2.88	$3.11	$3.37	$3.63	$3.88	*8.2%*
Dividend per share	$1.63	$1.74	$1.84	$1.98	$2.14	$2.31	$2.50	*7.4%*
Payout Ratio total	61.1%	65.7%	63.8%	63.8%	63.5%	63.7%	64.4%	
Dividend Yield	3.3%	2.8%	3.4%	3.6%	3.9%	4.2%	3.8%	
Valuation Metrics								
Price to Earnings	22.9x	24.5x	22.6x	20.9x	19.3x	17.9x	16.7x	
Price to Book Value	2.9x	2.7x	2.6x	2.5x	2.4x	2.2x	2.1x	
Funding Sources								
Cash Flow from Operations	$1,276	$1,819	$2,084	$2,256	$2,461	$2,598	$2,761	
Total Debt Financings	$1,495	$100	$800	$1,575	$1,128	$765	$845	
Total Equity Financings	$253	$26	$0	$0	$0	$250	$250	
Credit Metrics								
Total Debt/Capitalization	71%	64%	65%	66%	67%	66%	65%	
FFO/Total Debt	18%	8%	18%	17%	17%	17%	17%	
Regulated Operations Performance - Realized ROE								
Consumers Energy Electric	10.0%	10.2%	10.0%	9.7%	10.0%	10.1%	10.2%	
Consumers Energy Gas	9.0%	9.5%	10.0%	9.7%	10.0%	10.1%	10.2%	

Source: BMO Capital Markets, Company Filings

Exhibit 4: CMS Energy Model Assumptions

Key Model Assumptions	2020A	2021A	2022E	2023E	2024E	2025E	46023	22-25
Total Capital Expenditures by Segment								
Consumers Energy - Electric	$1,281	$1,153	$1,500	$2,515	$1,700	$1,500	$1,800	$9,015
Consumers Energy - Gas	$885	$989	$1,100	$1,200	$1,300	$1,400	$1,400	$6,400
Consumers Energy - Other	$4	$2	$0	$0	$0	$0	$0	$0
Enterprises, EnerBank, & Parent	$147	$24	$0	$0	$0	$0	$0	$0
Consolidated Capital Expenditures	$2,317	$2,168	$2,600	$3,715	$3,000	$2,900	$3,200	$15,415
WAVG Rate Base Estimates								
Consumers Energy - Electric ex Renewables	$11,949	$12,254	$12,406	$13,657	$14,062	$14,351	$15,019	
Consumers Energy - Gas	$6,786	$7,654	$8,468	$9,360	$10,326	$11,366	$12,377	
Renewables	$990	$1,100	$1,742	$2,249	$2,734	$3,096	$3,338	
Total Rate Base	$19,724	$21,008	$22,616	$25,266	$27,123	$28,813	$30,734	*7.9%*

Source: BMO Capital Markets, Company Filings

Exhibit 5: CMS Energy SOTP Valuation

							BMO Low Case		BMO Base Case		BMO High Case	
Regulated, Parent & Other	Valuatior Metric	2024E EPS	Sector Comp	Sector Multiple	Prem/ (Discount)	Base Multiple	P/E Multiple	Implied Value ($ MM)	P/E Multiple	Implied Value ($ MM)	P/E Multiple	Implied Value ($ MM)
Consumers Energy	EPS	$3.97	Blend	15.7x	+20.0%	18.8x	15.3x	$61	18.8x	$75	20.8x	$83
Enterprises	EPS	$0.12		15.7x	+0.0%	15.7x	12.2x	$1	15.7x	$2	17.7x	$2
Parent & Other	EPS	($0.72)	Blend	18.7x	+0.0%	18.7x	18.7x	($13)	18.7x	($13)	18.7x	($13)
Utility & Parent Value		$3.37					14.5x	$49	18.7x	$63	21.2x	$71
Upside/(Downside)								(13.6%)		11.7%		26.2%
Current Yield								3.2%		3.2%		3.2%
Total Return								(10.3%)		15.0%		29.4%

Source: BMO Capital Markets, Company Filings

US Utilities & IPPs

Earnings first takes: CMS & SO cautious, AEP & XEL in line, DTE & PCG positive

Earnings Review

27 October 2022

Equity
United States
Utilities

Julien Dumoulin-Smith
Research Analyst
BofAS
+1 646 855 5855
julien.dumoulin-smith@bofa.com

Paul Zimbardo
Research Analyst
BofAS
+1 646 855 1470
paul.zimbardo@bofa.com

Dariusz Lozny, CFA
Research Analyst
BofAS
+1 646 743 2122
dariusz.lozny@bofa.com

Alex Vrabel
Research Analyst
BofAS
alexander.vrabel@bofa.com

Heidi Hauch
Research Analyst
BofAS
heidi.hauch@bofa.com

Morgan Reid
Research Analyst
BofAS
morgan.reid@bofa.com

CMS: Lower FY23 "preliminary guidance" versus expectations

CMS Energy (CMS) reported $0.56 3Q22 adjusted EPS, beating both $0.54 BofAe and $0.52 Consensus. CMS narrowed the FY22 guidance range slightly to the **top end** of the range, $2.87-$2.89 from $2.85-$2.89 prior, consistent with $2.89 BofAe at top end of the range. Management introduced $3.05-$3.11 "preliminary guidance," which represents approximately 6-8% CAGR versus the new midpoint of FY22 guidance, $2.88 EPS. The FY23 guidance was lower than $3.11 BofAe/$3.12 Consensus. The "preliminary" terminology is not consistent with CMS's historical language and implies some uncertainty in the FY23 guide. We continue to expect CMS to earn at the top end of FY23 guidance ($3.11 BofAe FY23 EPS) given visibility to electric and gas growth from 2022/2023 rate cases and the company's historical execution at the top end of annual earnings guidance. We maintain our Neutral rating on shares of CMS, which are trading around fair value. Despite the FY22 guidance raise, the FY23 guidance update came in less robust than expected, and the less forceful language implies less conviction. This uncertainty implied with the "preliminary" language is not consistent with what we see across other premium utility names (see XEL below), which typically offer investors more certain clarity on the forward-year outlook.

XEL: FY23 guide in line, capital up/equity down

Xcel Energy (XEL) posted Q3 EPS of $1.18, a miss versus BofAe of $1.22 and Street at $1.21. Among the usual drivers, operations and maintenance (O&M) stood out initially as coming in -6c versus 3Q21, an acceleration from the -4c in aggregate in the first half of the year. The company also narrowed its 2022 guidance range to $3.14-3.19 from $3.10-3.20 – we had initially assumed that management would reaffirm post Q3 given O&M and load growth variability. FY23 guidance was issued as expected at $3.30-3.40 ($3.37 BofA/Consensus), with growth comprised mostly of the usual drivers, including a higher level of capital rider revenue ($75m midpoint) given resolution of several major rate cases as well as a less aggressive load growth target of +1% normalized for the electric utilities. O&M is expected to remain "relatively flat" as a 2023 driver – we look for management commentary on the call regarding whether the Q3 print included some pull-forward to derisk next year at all. The company also issued a rolled-forward capital plan that now sees base capex of $53B in 2022-27 (+6.5% growth, unchanged) and $56B, including all incremental spend not formally in the plan (+7.6%, up from +7.3% previously), with the updated incremental spend comprised of $1.5-3.0B of new owned renewables investment in MN and CO following those states' resource plan processes as well as $0.5-1.0B related to the CO transmission pathway. New non-DRIP equity in the plan is $325m over the 2023-2027 period, down meaningfully from $800m previously – we attribute this to direct benefits from the Inflation Reduction Act (IRA), which the company credits with 100 bps balance sheet metric improvement and incremental $1.8B in cash flow over the five-year forecast. We maintain our Buy rating on in-line 2023 guidance and the robust forward outlook, which bolsters our confidence in the company's continuing to deliver at or above the midpoint of its guidance range.

See full report for AEP, DTE, SO, and PCG first takes

Refer to important disclosures on page 8 to 11. Analyst Certification on page 6. Price Objective Basis/Risk on page 4.
12477296

Timestamp: 27 October 2022 10:40AM EDT

AEP: Q3 beat and reaffirm; new SEC subpoena

American Electric Power (AEP) posted Q3 EPS of $1.62, ahead of BofAe at $1.58 and Street $1.57. Individual drivers were mostly within a few cents of our estimates, though weather stood out at +4c across the vertically integrated and transmission utilities (our estimate flat y/y) as well as +5c at the Retail marketing business versus our +2c estimate. Incremental updates on the sale of contracted renewables were limited versus previous disclosures, though we note that AEP now values the equity portion of the portfolio up for sale at $1.5B, up from $1.4B as of June 30. Expected sale timing remains closing in Q2 2023. Prospective corporate EPS volatility should decline, as management stated that it fully liquidated its ChargePoint (CHPT) equity position during 3Q22. In the 10Q, management disclosed that the company received a second subpoena from the Security and Exchange Commission's (SEC) Division of Enforcement relating to its ongoing inquiry of Ohio House Bill 6. AEP received the initial subpoena in May 2021 and stated that it is continuing to fully cooperate with the investigation.

As expected, the other parts of AEP's outlook, including long-term capital and financing, remained consistent with the plan put forward at the company's Analyst Day earlier this month. Management clarified the 2Q resolution on the renewable asset sale, limiting near-term excitement. We stress that sales commentary was particularly robust for peers and sustained upbeat commentary from the Analyst Day earlier. Sales growth was the best result since the mid-1990s, per call. Meanwhile, with ~$0.4Bn in accumulated fuel balance, we look for securitization legislation in WV clarity in coming months to help smooth this impact to customers. We maintain our Buy rating on AEP shares on the latest update, consistent with long-term outlook and valuation (see our 5 October 2022 report, American Electric Power: Analyst Day Takeaways: Few surprises, but an increasingly de-risked outlook).

DTE: Continuing to execute, expect updates during EEI

DTE Energy (DTE) reported $1.60 3Q22 adjusted EPS, slightly higher than $1.58 BofAe and Consensus. Management maintained $5.90-$6.10 FY22 adjusted EPS guidance after raising FY22 guidance to this range during 2Q22 earnings, consistent with BofA estimates. The more favorable 3Q22 earnings was driven by higher earnings growth at DTE Electric and Gas relative to BofA expectations, partially offset by a higher-than-expected loss at Energy Trading (-$0.17 adjusted EPS versus -$0.13 BofAe). The company reiterated no material impact from the alternative minimum tax (AMT) introduced with the Inflation Reduction Act. On the conference call, management clarified that it is relying on the repairs tax interpretation and still sees a very small potential impact, a favorable update. Management maintained its plans to update the five-year outlook and introduce 2023 guidance at Edison Electric Institute (EEI), following the company's Integrated Resource Plan (IRP) filing expected in early November. The 3Q22 update was unsurprisingly the dearth of 2023+ guidance updates. We hope to gain clarity on the company's financing plans related to the equity convert and remarketable securities note (RSN) tied to the 2019 midstream transaction, as we forecast that the November 2022 convert and remarketing of the $1.3Bn RSN will weigh on FY23 EPS growth. Management clarified that it did have offsets to interest expense headwinds. We did not read anything newly incremental from the earnings update or conference call, which reduces our expectation that DTE will raise its 5-7% long-term CAGR range to 6-8% with its EEI update off of the **original 2022 guidance midpoint** ($5.84). There was discussion of the ability to offset rising intertest rate exposure on debt, with the company assuming rising rates in the plan already and committing to offset the balance with no impact to earnings growth. We maintain our Buy rating on DTE, with the shares trading at a discount to premium peers despite expectations for increased long-term growth outlook and the company's consistent execution on earnings targets (see our 19 October 2022 report, US Utilities & IPPs: Michigan Utilities 3Q22 Preview: Where do we stand ahead of 2023 updates?).

SO: 3Q/FY22 below expectations but Vogtle intact

Southern Company (SO) reported $1.31 3Q22 adjusted EPS, missing $1.33 BofA/$1.34 Consensus. O&M was -$0.05 YoY and is now -$0.19 YoY YTD, likely due to management reinvesting a favorable weather benefit to a degree (+$0.06 versus normal YTD YoY). Other negative drivers cited were interest expense, where we see an emerging headwind for Southern and many utilities that rely more on variable-rate borrowings due to the sharper than originally contemplated pace of interest rate increases. FY22 guidance was reaffirmed, now near the top end of the $3.50-$3.60 range. **By segment, compared with initial FY22 guidance, SO now expects +4c electrics, -1c natural gas, -1c other, and -8c parent.** The $3.58 point estimate is marginally lower than $3.59 Consensus but below $3.64 BofA, where we expected FY22 to be above the range. For a comparison to last year, on the 3Q21 call, Southern indicated that it would favorably exceed the $3.25-$3.35 guidance range, ultimately reporting $3.41 adjusted EPS. Both 3Q and YTD weather-normalized sales have been above management's forecast, with 3Q22 +1.8% +80bp better than plan, driven by higher-margin residential (+100bp) and commercial (+240bp), more than offsetting lagging industrial (-100bp versus forecast but still +2.2%).

Critically and consistent with our expectations and recent company updates, the **Vogtle in-service date projections and costs were described as unchanged**: Unit 3 1Q23 and Unit 4Q23 timings. Total estimated Vogtle project capital cost forecast is $10.4Bn, with an estimated $1.1Bn remaining to complete, potentially increasing based on cost-sharing and tendering provisions. The discussion of Unit 4 timing improved, as management stated that its electrical production now supports the December 2023 in-service rather than qualifying the electrical work as of 2Q22. While SO caveated that electrical production "must be sustained for several more weeks," it is a positive update. Southern indicated that it completed fuel load at Unit 3 on October 17 and indicated that initial criticality is the next major milestone targeted for January 2023.

With respect to long-term debt financing as of October 27 versus June 30, Southern now favorably projects -$300Mn less Alabama Power debt needs, and there are no additional new debt needs. Commercial paper borrowings declined to $797Mn from $1,410Mn, and cash improved to $2.0Bn from $1.7Bn QoQ.

SO's 3Q earnings update was a small negative, with a weaker 3Q/FY22 driven by growing parent costs now $0.08 higher than original guidance. The progress on Vogtle is encouraging, particularly Unit 4 electrical, but we believe that successful commercial operations is now Consensus. We recently downgraded the shares to Underperform, primarily due to a slowing earnings trajectory (see our 24 October 2022 report, Southern Company: Contemplating Life Beyond Vogtle: Downgrade to Underperform 24 October 2022).

PCG: 3Q beat, FY23 miss but growing +10%, no FY22-FY24 equity, and rate base up

PG&E Corp (PCG) reported $0.29 adjusted core EPS, beating +$0.27 BofA and +15% ahead of $0.25 Consensus, the largest 3Q beat in our coverage of the day (see Exhibit 1). **PCG is now forecasting no equity needs in 2022-2024**, a substantial improvement, albeit not unexpected after the company announced that it is pursuing the non-nuclear generation sale. FY23 core guidance was initiated at $1.19-$1.23, below $1.27 BofA and $1.23 Consensus. FY23 guidance represents +10% YoY growth from the narrowed $1.10 FY22 guidance midpoint ($1.09-$1.11). FY22 guidance is in line with $1.10 BofA/Consensus. The 2022-2024 (at least 10%) and 2025-2026 (at least 9%) EPS growth guidance was reaffirmed. The 2022-2026 rate base CAGR was increased to +50bp to ~9.5%, with 2026 projected weighted-average rate base now $65-$82Bn versus $65-$77Bn as of 2Q22. The potentially higher capex and rate base was detailed by management in an 8K as well as regulatory filings related to a California inflation and broad capital refresh. PCG also provided some disclosures on the new Senate Bill 846 related to Diablo Canyon potential life extension, where the cost recovery was described as $60/MWh, lower than management's assessment of alternative new renewable baseload generation at $140-$165/megawatt hour (MWh).

FY23 guidance is below elevated BofA/Consensus expectations but is in line with management's consistent messaging of 10% linear growth in the initial years of the five-year plan. We see stronger earnings potential for PCG and do not view the FY23 guidance miss as indicative of underlying weakness but rather management's efforts to deliver a more stable earnings trajectory. As an example, the O&M savings target and customer impacts targets were reaffirmed. Removing near-term equity needs is a positive development, as we have consistently received questions about how PCG would finance the robust capital plan. Similarly, the higher capex/rate base is positive, again although largely expected and previewed in regulatory filings. We maintain our Buy rating on shares of PCG, which offers the fastest EPS growth in our utilities coverage, while the shares trade at one of the lowest 2024 P/E multiples (see our 18 October 2022 report, US Utilities & IPPs: California 3Q22: Dawn of a New Day for PCG and California Outlooks 18 October 2022).

Exhibit 1: Utilities 3Q22 EPS: Actual, BofAe, Consensus, and prior-year comparisons

PCG had the largest beat versus Consensus expectations, while SO and XEL missed

Regulated Utilities	Ticker	Actual	BofAe	Consensus	Actual vs Cons. (⊠)	Prior Year	YoY change (⊠)
DTE Energy	DTE	1.60	⊠1.58	⊠1.58	1%	⊠1.72	-8%
American Electric Power	AEP	1.62	⊠1.58	⊠1.57	3%	⊠1.43	10⊠
CMS Energy	CMS	0.56	⊠0.54	⊠0.52	7⊠	⊠0.53	2%
Xcel Energy	XEL	1.18	⊠1.22	⊠1.21	-2%	⊠1.13	8⊠
PG&E Corp	PCG	0.29	⊠0.27	⊠0.25	15⊠	⊠0.24	13⊠
Southern Company	SO	1.31	⊠1.33	⊠1.34	-2%	⊠1.22	9⊠

Source: Company Filings, Bloomberg, & BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 2: Primary stocks mentioned in this report

Prices and ratings for primary stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
DTE	DTE US	DTE Energy	US⊠ 109.23	A-1-7
AEP	AEP US	American Elec Power	US⊠ 87.45	A-1-7
CMS	CMS US	CMS Energy	US⊠ 55.9	A-2-7
XEL	XEL US	Xcel Energy	US⊠ 62.57	A-1-7
PCG	PCG US	PG&E Corp.	US⊠ 15.17	C-1-9
SO	SO US	Southern Company	US⊠ 65.64	A-3-7

Source: BofA Global Research

BofA GLOBAL RESEARCH

Price objective basis ⊠ risk

American Electric Power (AEP)

Our price objective of $98 is based on SOTP analysis. We ascribe a peer forward FY24E P/E multiple (15.8x) with a 1.0x premium for its transmission and distribution utilities and transmission-only utilities segments and a 0x premium (in-line multiple) for all of the vertically integrated utilities. For the unregulated portion, we apply a 3.5x discount to the legacy energy supply and marketing business and an 8x premium to the contracted renewables business to reflect sale aspirations.Our valuation reflects that the Kentucky Power sale pending appears to be nearing close. We note that electric peer P/E multiple is grossed up for a year by 5% to reflect capital appreciation across the sector.

Risks to achievement of the price objective are: 1) regulatory outcomes are less favorable than expected, which could result in reduced ROE, 2) large capital intensive projects are subject to delays or cost overruns, which can change the return profile, 3) natural disasters or catastrophic events can affect system reliability and are subject to regulatory cost recovery risk, 4) utilities are subject to interest rate risk to fund their business, which affects cost of capital, 5) uncertainty around announced asset divestitures versus guidance expectations, 6) volatility in volume of electric sales, 7) other adverse regulatory, political, or similar actions.

CMS Energy (CMS)
Our PO of $58 is based on a SotP relying on 2024E forward P/E multiples for the utility business and a 2024E forward EV/EBITDA multiple for CMS' IPP assets. For the utility seg we apply a 2.0x prem to the avg 24E regulated multiple P/E of 15.4x for the electric seg and of 14.9x for the gas seg, with the 10-yr capex update providing clear sight on ratebase growth and further upside, as well as cont'd favorable regulatory environment, and finally historically proven ability to consistently perform at the high end of guidance range.

Both electric and gas peer P/E multiples are grossed up to 2022 by 5% to reflect capital appreciation across the sector.

For CMS' merchant business we apply a 4x EV/EBITDA multiple, in line with current market value of CMS' power plants. We value Dearborn Industrial Generation (DIG) on a DCF basis given the plant is expected to be sold to Consumers at the end of 2025, with our valuation reflecting the remaining cash flows.

Risks are: 1) earned ROEs declining which reduce CMS utility earnings 2) execution risk on capex and cost cutting which would primarily affect the utility earnings, 3) negatives changes to market energy prices which could affect the DIG plant's ability to re-contract at the assumed prices.

DTE Energy (DTE)
We value DTE Energy at $120 using an SOTP approach. We value the utility segment on a 2024E forward P/E multiple basis and the non-utility segment on a 2024E forward EV/EBITDA multiple basis. For the utility segment we apply a 2x premium to both our regulated electric and gas utility peer multiples (of 15.4x and 14.9x, respectively). Both electric and gas peer P/E multiples are grossed up for a year to 2023 by 5% to reflect capital appreciation across the sector. We value the DTE Vantage segment on a multiple of 2024 EPS - the grossed-up electric multiple of 16.2x to account for the renewable natural gas (RNG) business. We assign an equity value of zero to the Equity Trading segment given potential for earnings volatility and opacity of the segment. We also reduce the equity value for estimated unallocated parent debt by applying a 15.9x multiple to both the interest expense and corporate overhead expenses at the parent. Risks to Price Objective: regulatory/political/legislative actions, realized returns from the unregulated Vantage segment, changes in equity needs, load growth/class mix, equity needs, weather/natural disasters, and interest rate fluctuations.

PG&E Corporation (PCG)
Our PO of $16 reflects an in-line P/E versus the respective electric (15.4x) and gas (14.9x) peer P/E groups with both grossed-up by 5% to reflect capital appreciation across the sector) based on 2024E. The acute wildfire risk is incorporated separately via a scenario probability weighted at 100% assuming PCG hits the cap in 3-year increments. Lastly, we net out 50% weighting of HoldCo debt and add back 50% weighting of interest expense to derive our Price Objective.

Risks to achievement to estimates and Price Objective include: 1) Wildfire and other natural disasters/catastrophic events, 2) regulatory outcomes, 3) interest rates, 4) equity needs, 5) earned returns and operating costs, 6) Fire Victim Trust moneitizations, 7) ability to deploy capital, and 8) environmental, social, & governance [ESG] profile.

Southern Company (SO)
Our $59 PO is derived from a sum-of-the-parts analysis (SOTP). We use a P/E valuation approach on 2025 and use peer multiples of 14.3x for electric and 13.9x for gas, respectively (with dis/prem applied per asset depending on growth/risk): we then gross up these multiples by +5% to account for sector wide EPS growth to derive a 12-month forward PO. We subtract 50% of the 2025 parent interest expense multiple by an electric P/E peer multiple to reflect parent leverage supporting the utilities. We net out total parent drag and add back the remaining parent interest expense with a 50% weighting.

Upside/Downside Risks to achievement of the PO are: 1) Vogtle construction timing and costs, 2) regulatory, political, and legislative changes, 3) ability to earn the allowed rate of return, 4) changes to the capital expenditure forecast, 5) nuclear incidents, weather, and natural disasters, 6) rate of customer and sales growth, 7) O&M trends, 8) interest rates, 9) environmental policies and regulations, 10) M&A, and 11) interest rates.

Xcel Energy Inc (XEL)
Our PO is $69. We value Xcel Energy using a sum of the parts (SOTP) approach. Given the difference in geography, earnings strength, growth opportunity and risk profile, we divide the segments by subsidiary. We use 2024E forward P/E multiple of 15.5x to derive a value for the different business segments, including the parent segment. Electric peer P/E multiple is grossed up for a year to reflect capital appreciation across the sector. We apply a 3x premium to XEL subsidiaries in MN, CO, NM, and WI as both utilities present solid or improving regulatory treatment with tangible investment upside. We see this multiple as appropriate as the company has growth opportunities, resolving regulatory drag and resolving uncertainty around rate cases. We also add a discrete item reflecting upside from potential Direct Pay legislation, estimating the equity savings from 75-100 bps improvement in credit metrics and applying a probability weight of 50% to account for uncertainty. We also net back 50% of the parent interest expense and instead subtract out 50% of parent debt to more accurately reflect HoldCo leverage.

Risks to achievement of the Price Objective are interest rate changes, regulatory risk, such as lower authorized ROEs or less favorable riders/trackers for renewables and transmission, inability to deploy capital at guided levels, adverse legislation, execution delays, and weather/natural disasters.

Analyst Certification

I, Julien Dumoulin-Smith, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

North America - Utilities and Alt Energy Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AES	AES	AES US	Julien Dumoulin-Smith
	Alliant Energy Corporation	LNT	LNT US	Julien Dumoulin-Smith
	AltaGas	YALA	ALA CN	Dariusz Lozny, CFA
	Ameren Corporation	AEE	AEE US	Julien Dumoulin-Smith
	Ameresco	AMRC	AMRC US	Julien Dumoulin-Smith
	American Electric Power	AEP	AEP US	Julien Dumoulin-Smith
	Atmos Energy Corporation	ATO	ATO US	Julien Dumoulin-Smith
	Bloom Energy	BE	BE US	Julien Dumoulin-Smith
	CenterPoint Energy	CNP	CNP US	Julien Dumoulin-Smith
	Cheniere Energy Inc	LNG	LNG US	Julien Dumoulin-Smith
	Constellation Energy Corp	CEG	CEG US	Paul Zimbardo
	Dominion Energy	D	D US	Paul Zimbardo
	DTE Energy	DTE	DTE US	Julien Dumoulin-Smith
	Duke Energy	DUK	DUK US	Julien Dumoulin-Smith
	Emera Inc	YEMA	EMA CN	Dariusz Lozny, CFA
	Entergy	ETR	ETR US	Paul Zimbardo
	Exelon	EXC	EXC US	Paul Zimbardo
	First Solar, Inc.	FSLR	FSLR US	Julien Dumoulin-Smith
	Hydro One	YH	H CN	Dariusz Lozny, CFA
	Idacorp	IDA	IDA US	Paul Zimbardo
	Maxeon Solar Technologies	MAXN	MAXN US	Julien Dumoulin-Smith
	NextEra Energy	NEE	NEE US	Julien Dumoulin-Smith
	NiSource Inc	NI	NI US	Julien Dumoulin-Smith
	NorthWestern Corporation	NWE	NWE US	Julien Dumoulin-Smith
	OGE Energy Corp	OGE	OGE US	Julien Dumoulin-Smith
	ONE Gas, Inc.	OGS	OGS US	Julien Dumoulin-Smith
	PG&E Corporation	PCG	PCG US	Julien Dumoulin-Smith
	PNM Resources Inc.	PNM	PNM US	Julien Dumoulin-Smith
	PPL Corporation	PPL	PPL US	Paul Zimbardo
	Public Service Enterprise Group	PEG	PEG US	Julien Dumoulin-Smith
	ReNew Power	RNW	RNW US	Julien Dumoulin-Smith
	Sempra Energy	SRE	SRE US	Julien Dumoulin-Smith
	Southwest Gas Holdings	SWX	SWX US	Julien Dumoulin-Smith
	Sunnova Energy	NOVA	NOVA US	Julien Dumoulin-Smith
	SunRun	RUN	RUN US	Julien Dumoulin-Smith
	Tellurian Inc	TELL	TELL US	Julien Dumoulin-Smith
	Vistra Energy	VST	VST US	Julien Dumoulin-Smith
	WEC Energy Group Inc	WEC	WEC US	Julien Dumoulin-Smith
	Xcel Energy Inc	XEL	XEL US	Julien Dumoulin-Smith
NEUTRAL				
	Allete Inc	ALE	ALE US	Julien Dumoulin-Smith
	Atlantica Sustainable Infrastructure	AY	AY US	Julien Dumoulin-Smith
	Black Hills Corporation	BKH	BKH US	Julien Dumoulin-Smith
	ChargePoint Holdings	CHPT	CHPT US	Alex Vrabel
	Clearway Energy	CWENA	CWEN/A US	Julien Dumoulin-Smith
	Clearway Energy	CWEN	CWEN US	Julien Dumoulin-Smith
	CMS Energy	CMS	CMS US	Julien Dumoulin-Smith
	Enphase Energy	ENPH	ENPH US	Julien Dumoulin-Smith
	Essential Utilities	WTRG	WTRG US	Julien Dumoulin-Smith
	Evergy, Inc	EVRG	EVRG US	Julien Dumoulin-Smith
	FirstEnergy	FE	FE US	Julien Dumoulin-Smith
	Generac Holdings Inc.	GNRC	GNRC US	Julien Dumoulin-Smith
	Northwest Natural Holdings	NWN	NWN US	Julien Dumoulin-Smith
	Ormat Technologies	ORA	ORA US	Julien Dumoulin-Smith
	SolarEdge Technologies	SEDG	SEDG US	Julien Dumoulin-Smith
	Spire	SR	SR US	Julien Dumoulin-Smith
	TransAlta Corp	TAC	TAC US	Dariusz Lozny, CFA
	TransAlta Corporation	YTA	TA CN	Dariusz Lozny, CFA
	TransAlta Renewables Inc.	YRNW	RNW CN	Dariusz Lozny, CFA
	UGI Corp.	UGI	UGI US	Julien Dumoulin-Smith
UNDERPERFORM				
	Algonquin Power & Utilities Corp	AQN	AQN US	Dariusz Lozny, CFA
	Algonquin Power & Utilities Corp	YAQN	AQN CN	Dariusz Lozny, CFA

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Research Bulletin

US Utilities: Earnings Flood: Our Initial Take & Key Focus Items

AEP, CMS, SO, DTE, XEL Morning Takes

Research Analysts

Nicholas Campanella / 212 325 7505
nicholas.campanella@credit-suisse.com

Fei She, CFA / 212 325 7648
fei.she@credit-suisse.com

Nathan Richardson / 212 325 7937
nathan.richardson@credit-suisse.com

- We are providing quick takes before earnings calls today for AEP, CMS, SO, DTE and XEL; Key themes to focus on today: Interest rate sensitivity impacts, O&M where we see most companies guiding higher within their FY22 outlooks; IRA related impacts to both cash flow, financing and CapEx. We are most encouraged by XEL's update this morning.

- **AEP (Neutral):** AEP reported 3Q22 of $1.62/sh vs CSe $1.56/sh and Cons of $1.55/sh. Consistent with Oct 4th AD, Mgmt. re-affirmed the narrowed '22 guidance of $4.97 - $5.07, 6-7% LT CAGR and $40 Bn capital plan. Expectations on several strategic initiatives remain unchanged: KY sale close by Jan '23, unregulated renewable business sales process completion by 2Q23, and review on retail business concluded by 1H23. Mgmt. provided detailed breakdown for load growth, and we expect more granular disclosure on capex during EEI. Key items to focus on the call: KY sale; unreg. renewable sale process; review on retail business; load growth; inflation.

- **CMS (Mixed Results):** CMS raised its '22 adjusted guidance to $2.87 to $2.89 (from $2.85 to $2.89) vs. $2.86/sh CSe and $2.88 Cons (FS). The company also introduced preliminary '23 adjusted earnings of $3.05 to $3.11 vs $3.11 CSe and $3.12 Cons (FS), a slight miss to the Street for '23 at the midpoint although slides point to high end of range. The company reaffirmed its LT EPS growth CAGR of 6-8%, with a bias toward the high end. CMS importantly completed Covert financing in the quarter issuing $438Mn of equity at $68/sh via forward contracts, with no expected equity needs through '25, based on our discussions. 5-year capital plan remains unchanged at $14.3Bn. Key things to look for on the call include an update on the electric rate case timeline and outlook, O&M guidance and an update on the outstanding IRP and timing of execution.

- **SO (In-line results):** Mgmt raised FY22 exceptions to the high end of the $3.50-3.60 guidance range (CSe $3.53, Cons $3.59) and importantly reaffirmed the projected in service dates for Vogtle Unit 3 (1Q23) and Unit 4 (4Q23). GPs share of total capital cost remains consistent with Q2 with $1.1Bn of remaining investment to complete . U3 completed fuel load with the next major milestone being initial criticality projected to be Jan '23. Mgmt also commented that U4 electrical production levels support the projected December '23 in-service date, though must be sustained for several weeks. On the qtr, SO reported $1.31 of 2Q EPS vs. Cons / CSe $1.34 / $1.33 with O&M and parent drag coming in slightly worse than our expectation. SO continues to see higher electric sales through the Southeast which is encouraging to future load prospects. Focus for the call: All about Vogtle progress; Regulatory strategy including re-actions to staff testimony / settlement potential, VCM '27, Electric loads / sales, inflation and managing O&M.

- **DTE (Neutral):** Mgmt. reported 3Q EPS of $1.60/sh vs. CSe of $1.61/sh and Cons. $1.62/sh. With the in-line 3Q result, mgmt. re-affirmed '22 guidance of $5.90 - $6.10, while we saw possibility of company pointing to high end prior to the release. Recall DTE raised guidance by 10c back in 2Q. We continue to expect refreshed '23 guidance, capital plan and LT EPS CAGR during EEI where we see chances of raising given DTE already is executing on 8% historical EPS growth and likely raised Capex on the back of the MI IRP. Key items of focus: electric rate case given additional ask compared to ALJ ruling; IRP filing in Nov; accelerated coal retirement (Monroe); potential MIGreenPower upsizing, impacts of inflation; Vantage / P&I Strategy.

- **XEL (Positive):** XEL issued FY23 Guidance of $3.30-3.40 vs. BBG $3.37 / CSe $3.37 and reaffirmed 5-7% EPS Growth off a 2022 base of $3.15/sh, bracketing Street / CSe outyear expectations at the high end of the 5-7% implied glide path. XEL raised its 5yr capital plan to $29.5Bn from $26Bn prior, extended its plan out to 2027 and reaffirming 6.5% LT rate base growth (unchanged) with upside to 7.6% rate base growth from incremental capex projects (Transmission $0.5-1Bn, Renewables $1.5-3Bn). On 2022 guidance, XEL narrowed expectations to $3.15-3.19, implying a 2c bump to the midpoint vs. prior guide. It's notable that O&M is expected to increase 4% in 2022 now vs. an increase of 2% expected in 2Q. This reflects a step increase to inflation impacts on the business with XEL projecting ~flat O&M in 2023. On Sales, W/A retail electric sales are expected to increase 1% in 2023 and remain flat at the gas business. On the financing plan, we're encouraged to see the 5yr plan see a ~$3Bn CFO upfit with XEL targeting just $750Mn of total equity (DRIP/other) vs. $1.25Bn of equity in the prior financing plan. XEL noted that IRA drives a $1.8Bn positive impact to cash flows (100bps FFO uplift) over the 5yr period providing additional flexibility on financing needs. XEL has underperformed through the last 3 months and while the 5-7% EPS midpoint is slightly below consensus we see a bias for estimates to remain at the high end of the 5-7% EPS range. We also think the update on the financing plan will be positively received by the market. Key focus items for the call: CO rate strategy, MN electric rate case; Financing updates; inflation impacts & customer bills.

Valuation Methodology and Risks

Target Price and Rating
Valuation Methodology and Risks: (12 months) for AEP Inc (AEP.OQ)

Method: We value AEP using an SOTP methodology and our target price is $87. We apply the electric group's 16.4x P/E multiple to all subsidiaries while applying a 15% and 5% multiple premium to AEP TransCo and AEP Texas, reflecting formulaic/timely recovery in FERC jurisdictions and the relative constructive regulatory environment in Texas. For the unregulated power generation business, we apply a -15% discount given there's less earnings visibility and AEP is transitioning to a more regulated growth strategy. We currently have zero EPS contribution from Kentucky Power under a base-case assumption of a timely close of its sales transaction. We rate AEP Outperform as we expect the stock's total return to outperform peers over the next 12 months.

Risk: Risks to our Outperform rating and $87 target price include: (1) any non-constructive regulatory decision for renewable capital spending recovery; (2) untimely execution of the Kentucky sale or unfavorable valuation applied to contracted renewable sales; (3) aggressive coal retirement programs could increase stranded asset risk given AEP's vision to retire an additional 5GW of coal generation by 2028.

Target Price and Rating
Valuation Methodology and Risks: (12 months) for CMS Energy Corp (CMS.N)

Method: Our target price is $59: We value CMS using an SOTP, applying relative P/E premiums/discounts to the two operating subsidiaries. In general, we view Michigan as a premium jurisdiction, given the historically constructive decisions and heathy earned ROEs. Michigan is also offering a premium allowed ROEs for renewable projects and EE. We take a premium view on both the Consumers and Enterprise segments with a 17.1x implied multiple for the electric and gas groups versus 15.3x and 14.3x implied multiples for the electric and gas peer groups, respectively. We place a premium on the two operating segments given the strength of the businesses and upside potential in both. We rate CMS Neutral as we expect the stock's total return to be in line with peers over the next 12 months.

Risk: Risks to achieving our $59 target price and Neutral rating include: Difficulty executing on settled IRP plans that could lead to reduced capex spending and ultimately rate base growth. Construction delays could push back timelines for renewable projects and could delay upside from increased ROEs currently offered in Michigan for such projects. Increased severe weather events, particularly as coal plants are being phased out, could cause service continuity issues that would be costly to address.

Target Price and Rating
Valuation Methodology and Risks: (12 months) for DTE Energy (DTE.N)

Method: We value DTE using an SOTP, applying 15% P/E premiums to both the electric (15.4x) and gas (14.7x) subsidiary, which yields a $118 target price. We hold a discounted view on Trading (-30% discount), given these are non-core businesses and contain higher earnings volatility. We rate DTE Outperform as we expect the stock's total return to be above peers over the next 12 months.

Risk: Risks to our Outperform rating and $118 target price include: The uncertainties around timely recovery cost through base rate increase. The unregulated business earning is more susceptible to economic and industry cycles, with potential upside/downside.

Target Price and Rating
Valuation Methodology and Risks: (12 months) for Southern Co (SO.N)

Method: We value SO using an SOTP that leads to a $62 target price, applying relative P/E premiums/discounts to the various operating subsidiaries. All P/Es are based on our 2024E EPS. We view Georgia and Alabama as premium jurisdictions given numerous constrictive mechanisms for real-time capital recovery. We have a discounted view on Southern Power (-25% discount, 13.4x), given its non-regulated earning with higher volatility. We also take a discounted view of 30% on the Vogtle-related earnings given the uncertainties in project delay, concerns on cost overrun, and potentially higher burden to Georgia Power among other co-owners given the co-ownership agreement. We rate SO Underperform as we expect the stock's total return to underperform peers over the next 12 months.

Risk: Risks to achieve our $62 target price and Underperform rating include: The marketability of mandatory convertible securities and corresponding equity issuance. Non constructive ruling on Georgia Power's rate review, which could lead investors to take a discounted view on SO's largest earnings contributor. Climate change, and increased regulation on GHG emissions could accelerate closure of certain fossil investments which would increase stranded asset risks to shares. Lastly, Federal legislation, such as change in tax policy could negatively impact CFO for SO given its tax equity exposure through Southern Power.

Target Price and Rating
Valuation Methodology and Risks: (12 months) for Xcel Energy (XEL.N)

Method: Our target price is $64. We ascribe a 15% P/E premium to the wider regulated utility group average, which is in-line with XEL's historical 5yr average. XEL tends to trade with the 'premium' utilities given its strong track record for delivering on the high end of its 5-7% EPS CAGR. We see the premium further supported by XEL's history of generally constructive regulatory outcomes, the company's Steel for Fuel program, which has enabled an acceleration of energy transition-related capital expenditures, as well as the potentially positive benefits stemming from Build-Back-Better legislation. We rate XEL Outperform as we expect the stock's total return to outperform peers over the next 12 months.

Risk: Risks to you Outperform rating and $64 target price include: Failure to obtain constructive outcomes in regulatory proceedings, failure to execute on the company's proposed IRP in CO, natural disasters, labor/inflationary pressures above management's current O&M trajectory. Climate change is also a risk to the extent federal or state legislatures implement more restrictions on GHG emissions than expected. Wildfires are becoming more common in some of XEL's service territories, which can cause its multiple to fluctuate more than peers.

Companies Mentioned *(Price as of 26-Oct-2022)*

AEP Inc (AEP.OQ, $87.45, OUTPERFORM, TP $87.0)

CMS Energy Corp (CMS.N, $55.9, NEUTRAL, TP $59.0)

EVERCORE ISI

Flash Note | Energy I Power & Utilities

October 27, 2022

CMS Energy Corp.
CMS I $55.90
In Line I Target Price/Base Case: $69.00
Company Update

Durgesh Chopra
212-653-8998
durgesh.chopra@evercoreisi.com

Sharon Wang
212-653-8999
Sharon.Wang@evercoreisi.com

First Crack at 3Q22

We believe CMS's 3Q22 earnings release has neutral implications for the stock.

Key Takes:

- **CMS reported an adjusted 3Q22 EPS of $0.56 vs our estimate of $0.51 and consensus of $0.54**
- **2022 EPS guidance midpoint raised to $2.88 from $2.87, in line with consensus**
- **Introduced 2023 adjusted earnings guidance of $3.05 to $3.11 per share. Street is close to the high end.**
- **Reaffirmed long-term annual EPS growth of 6%-8% and still expect to be towards the high end**
- **Reaffirmed 5-year capital plan of $14.3 billion excluding IRP upside**
- **Electric rate case is ongoing**

Additional Details:

1) CMS reported an adjusted 3Q22 EPS beat
   a. 3Q22 adj. EPS was $0.56 vs our estimate of $0.51 and consensus of $0.54.
   b. 3Q21 was $0.54, representing YoY increase of 4%

2) Raised 2022 adjusted earnings guidance to $2.87 to $2.89 from $2.85 to $2.89 per share
   a. 2022 EPS guidance midpoint raised to $2.88 from $2.87, in line with consensus

3) Introduced 2023 adjusted earnings guidance of $3.05 to $3.11 per share
   a. We are projecting $3.13, and consensus is at $3.12

4) Rate Case Update
   a. On April 28th, 2022, Consumers Energy filed an electric rate case with rate increase request of $275 million, based on 10.25% ROE vs current 9.9%. In August, staff recommended a rate increase of $178 million predicated on an equity layer of 51.0% and a return on equity of 9.70%. ALJ recommendation is due on Dec 16, 2022, and final order is expected in Q1 2023.

The call is today at 9:30am ET. The dial-in number is 844-200-6205 or 929-526-1599, and the passcode is 904871. We will follow the call with a detailed note.

VALUATION METHODOLOGY

We use a dividend discount model to derive our target price for CMS.

RISKS

Softer wholesale prices pose a risk to the Enterprises unit (where DIG resides) meeting rising investor expectations for earnings. On the flip side DIG could outperform if capacity prices continue to rise in MISO.

CMS Energy Corp. (CMS): First Take: 3Q22 beat, gives preliminary 2023 guidance pointing to top end of 6-8 EPS growth

Insoo Kim, CFA
+1(212)902-0459 | insoo.kim@gs.com
Goldman Sachs & Co. LLC

Michael Lapides
+1(212)357-6307 |
michael.lapides@gs.com
Goldman Sachs & Co. LLC

John Miller
+1(646)446-0292 | john.y.miller@gs.com
Goldman Sachs & Co. LLC

Shriya Dargan
+1(212)934-6047 |
shriya.dargan@gs.com
Goldman Sachs India SPL

Jaskaran Jaiya
+91(22)6616-9131 |
jaskaran.jaiya@gs.com
Goldman Sachs India SPL

Shuaib Joomun
+1(801)212-7241 |
shuaib.joomun@gs.com
Goldman Sachs & Co. LLC

CMS Energy (CMS, Buy) reported 3Q2022 operating EPS of 0.56, vs GS/FactSet consensus estimates of 0.55/0.59 and versus 0.54 in 3Q2021. Management narrowed its 2022 EPS guidance range to $2.87-$2.89 ($2.88 mid-point) from $2.85-$2.89 ($2.87 mid-point) in-line with GSe/FactSet at $2.88/$2.88. CMS initiated preliminary FY 2023 guidance at $3.05-$3.11 ($3.08 mid-point) implying a ~7% YoY growth in-line with their long-term EPS growth guidance of 6%-8%, while pointing to the top end of the range. This compares with GSe/FactSet consensus of $3.13/$3.12

Key takeaway: We view results and guidance measures as constructive, given CMS is pointing to a near-8% YoY growth in 2023 off the upper half of the 2022 range, which likely reflects the upside related to the planned mid-2023 acquisition of the approved $815mn Covert gas plant acquisition, in our view. We look for additional color on the assumptions embedded in the company's forecast.

Highlights from CMS's 3Q2022 results:

- **Weather-normal electric sales increased 0.9% in the quarter YoY,** driven by (1.1)%/2.1%/2.7% changes to residential/commercial/industrial demand, respectively.
- **CMS last quarter priced (at 68/share) 438mn in forward equity financing needs** related to the upcoming mid-2023 $815mn Covert gas plant acquisition.

Topics to monitor on the earnings call include: 1) thoughts on the Michigan commission docket on storm response and reliability, including potential range of outcomes and impact to Consumers Energy, 2) the latest update on electric rate case, including potential for reaching a settlement, and 3) updated view on longer-term EPS growth CAGR amidst the current operational/financing cost inflation environment.

Our 12-month 75 price target is based on 22x P/E multiple (5x premium to our industry average target multiple of 17x) to our 2024E EPS. **Key downside risks** include 1) Michigan's regulatory environment turns negative, impacting CMS's ability to earn a healthy rate of return, and 2) CMS's ability to achieve consistent cost savings slows, reducing bill headroom for future investments.

CMS	12m Price Target: **$75.00**	Price: **$55.90**	Upside: **34.2%**

Buy

Market cap: $16.2bn
Enterprise value: $29.9bn
3m ADTV: $122.7mn
United States
Americas Utilities
M&A Rank: 3

GS Forecast

	12/21	12/22E	12/23E	12/24E
Revenue ($ mn)	7,329.0	8,062.9	8,340.5	8,608.7
EBITDA ($ mn)	2,437.0	2,563.0	2,824.6	3,082.4
EBIT ($ mn)	1,323.0	1,404.9	1,550.2	1,700.0
EPS ($)	2.65	2.88	3.13	3.40
P/E (X)	23.0	19.4	17.9	16.4
EV/EBITDA (X)	12.4	11.7	11.1	10.7
FCF yield (%)	(1.5)	(3.8)	(5.9)	(6.4)
Dividend yield (%)	2.9	3.3	3.5	3.8
Net debt/EBITDA (X)	4.9	5.1	5.2	5.3

	6/22	9/22E	12/22E	3/23E
EPS ($)	0.53	0.55	0.60	1.27

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 26 Oct 2022 close.

GUGGENHEIM

The Guggenheim Daily Transmission: PCG, SO, CMS, AEP, DTE, NEE, CEG/M&A, Solar/M&A, PJM/NJ, CA, Nuclear, AZ/PNW, ISO-NE, Uranium, DUK

Shahriar Pourreza, CFA
shahriar.pourreza@guggenheimpartners.com
212 518 5862

Constantine Lednev
constantine.lednev@guggenheimpartners.com
212 651 0847

James Kennedy
james.kennedy@guggenheimpartners.com
212 823 6741

Jamieson Ward, CFA
jamieson.ward@guggenheimpartners.com
212 518 9661

Guggenheim Utilities Research Team
GSUtilities@guggenheimpartners.com

Ticker	Price	Rating
AEP	87.18	Buy
CEG	93.04	Buy
CMS	55.90	Neutral
DTE	109.28	Buy
DUK	91.04	Buy
NEE	75.47	Buy
PCG	15.38	Buy
PNW	66.47	Sell
SO	65.17	Buy

For details on our Guggenheim-hosted client Utility events including our EEI Conference meetings; and other events, scroll down…

PCG – 3Q EPS Beat; Clarity Continues to Emerge on a De-Risking Growth Story (see our note HERE)

SO – 3Q22 Update — Vogtle on Track, 2024 Guidance Refresh Coming with Q4 Call, and We Still Expect a Constructive Outcome in Georgia Power's Rate Case (see our note HERE)

CMS – 3Q EPS Beat and Guidance Raise; CMS Remains Well Positioned for 8% LT Growth (see our note HERE)

AEP – 3Q22 Results; Not Much Has Changed Since Analyst Day – More Granularity to Come at EEI; Focus Remains on Capital Allocation/Asset Sales (see our note HERE)

DTE – 3Q EPS Beat Builds Anticipation for LT Rebase; All Eyes on EEI for Capex and LT Growth Update (see our note HERE)

NEE 3Q EPS Beat, guidance reiterated; net backlog adds slow, announced acquisition of $1.1B RNG assets

CEG/M&A – Developments in Talen process yield insight into bidding; timeline tweaks

PCG — Fire Victim Trust selling 35M PCG shares

Solar/M&A — Engie buys 6GW of solar/storage projects from developer

PJM/NJ — NJ OSW transmission costs draw concerns over cost allocation

CA — CA Governor Newsom requests presidential major disaster declaration to help wildfire recovery

Nuclear — Holtec considering MI proposal to reopen Palisades nuclear plan

Nuclear — PacifiCorp and TerraPower announce joint study for potential additional reactors

AZ/PNW — Local media coverage profiling the candidates for the ACC's two open seats this election

ISO-NE — Maine PUC selects developer for new 345kv line

Uranium — Kazatomprom seeks to expand non-Russian transit route for western shipments

DUK — North Carolina Attorney General files testimony in Carbon Plan docket

NEE 3Q EPS Beat, guidance reiterated; net backlog adds slow, announced acquisition of $1.1B RNG assets

- NEE reported 3Q EPS $0.85 vs. a $0.81 consensus and our $0.81 estimate.
- NEE guidance in 2022 long-term financial expectations remain unchanged.
- NextEra Energy Resources originated approximately 1,215 MW of wind, 965 MW of solar and 165 MW of battery storage projects.
- NextEra Energy Resources' renewables and storage backlog now stands at roughly 20,000 MW vs. 19,600 MW at 2Q (small net adds in part due to 680MW falling out of backlog)
- NextEra Energy Resources intends to purchase a portfolio of RNG assets for a total consideration of approximately $1.1B
- The acquired portfolio will deliver more than $220 million of adjusted EBITDA by 2025 (indicating a ~5x EV/EBITDA valuation)

CEG/M&A – Developments in Talen process yield insight into bidding; timeline tweaks

- While the debtors have received multiple IOIs, they do not see anything received to date as actionable
- The deadline for selecting a successful third-party bid was moved up to November 18th (from the 29th) in Talen's updated disclosure statement
- "The Debtors are presently soliciting votes on a Plan premised on either the Equitization Transaction or a toggle to a Sale Transaction that meets the requirements of an Eligible Alternative Restructuring. **As set forth above, although the Debtors have not received any actionable proposals in connection with the sale process,** the Debtors will continue to consider any offers received, including those that do not meet the requirements of an Eligible Alternative Restructuring. For example, such bids may not contemplate payment of the Claims of Holders of the Unsecured Notes in full, including postpetition interest." – filing [emphasis added]
- "These indications of interest were from both financial and strategic investors (collectively, the "IOI Parties"); however, no IOIs for the entire enterprise, nor any combinations of IOIs for non-overlapping sets of assets, exceeded the amount required to meet the definition of an "Eligible Alternative Restructuring" under the RSA. **Moreover, the Debtors received (i) one IOI for the Debtors' enterprise at $4.5 billion, the value implied by the Rights Offering in the RSA, (ii) another IOI for the Debtors' enterprise at $4.8 billion, and (iii) multiple IOIs seeking to bid on solely Susquehanna.** However, subsequent discussions with the IOI parties revealed that the $4.5 billion and $4.8 billion IOIs were conditioned on establishing a consortium that would require each IOI party to find one or more partners before having an actionable proposal. As a result, the Debtors and their advisors attempted to pair certain bidders in an effort to create a consortium that could lead to a viable proposal. However, the Debtors have been unable to create any such consortium to make either of these IOIs actionable." – filing – [emphasis added]
- "Based on such discussions and updating the Consultation Parties of such discussions, the Debtors believe that none of the IOIs represent viable proposals because such proposals are not likely to lead to an actionable bid that provides value that is higher or better than the value provided to stakeholders under the Equitization Transaction (let alone qualify as an Eligible Alternative Restructuring) due to, among other factors, timing, value, structure, transaction-related costs, and execution risks associated with each of the IOIs." – filing
- More HERE, docket HERE

Guggenheim takeaway: The negative tone on the IOIs received to date leads us to believe that CEG may be more interested in ENGH than our prior expectations. *As we expected, based on our prior conversations, it appears several parties tried to carve out the Susquehanna plant from the balance of Talen's fleet (fossil) in the process, or proposed a multiparty purchase structure that would ultimately end with the same fractionation of the assets (consortiums). Based on our conversations, bankruptcy processes are fairly fluid in this regard, with an obvious focus on maximizing recovery. What about Energy Harbor's (ENGH) process? The timeline for this remains less clear, with initial bids due in late September, according to the trade press. We have seen few data points since then on the process. CEG management indicated in our meetings that its overall timing expectation for a transaction would be ~8-9 months at the NRC, putting ownership of new assets by YE23 within reach.* ***See our detailed note HERE for more on high-level valuations of Susquehanna and ENGH.***

PCG – Fire Victim Trust selling 35M PCG shares

- Fire Victim Trusts (FVT) is selling 35M shares, ~$14.90/sh according to trading desks.
- The current top 3 insider holders of PCG are FVT (343M sh), Blackstone (BX) Corporate Private Equity (48M sh), and Energy Capital Partners (private) (9M sh)
- PCG stock closed at $15.38/sh yesterday which is above the implied $14/sh value in the FVT funding calculation.

Guggenheim takeaway:*FYI. This was anticipated as the stock price has run up to the implied fully funded value for the FVT and the FVT receives no benefit for selling above the fully funded value. If the pricing and liquidity holds for PCG, we could see a faster wind down for FVT ownership and the FVT can continue selling after a 2 week lock up period. We additionally note a series of constructive legislative and strategic outcomes for PCG which have supported the company financial plan and a constructive 3Q earnings update (note HERE).*

Solar/M&A — Engie buys 6GW of solar/storage projects from developer

- The projects had been put up for sale earlier in the year, with the purchase marking Engie's ongoing expansion in the US
- "ENGIE North America (ENGIE) announced it has acquired a 6 GW portfolio of solar, paired and stand-alone battery storage development projects from Belltown Power U.S. The transaction includes 33 projects comprising some 2.7 GW of Solar with 0.7 GW of paired storage and 2.6 GW of stand-alone battery storage. The projects are located across ERCOT, PJM, MISO and WECC" – release [ENGI:EN Paris]
- More HERE

Guggenheim takeaway: *M&A data point for your awareness, although terms do not appear to be available at this time. As a reminder there are several developers/project books on the block at this time, of varying size and maturity.*

PJM/NJ — NJ OSW transmission costs draw concerns over cost allocation

- Several merchant transmission owners have raised concerns over the potential for costs from NJ's policy-driven transmission work to be allocated unfairly
- "The filings by the PJM TOs and the NJ BPU highlight a fundamental problem—that under the proposed Tariff language, costs for the NJ-SAA projects would be involuntarily charged to Border Rate customers in states outside of New Jersey. As stated in the PJM TOs' Deficiency Response, "[i]f the Border Rate Settlement is not approved and if transmission projects constructed to Rate Schedule FERC No. 49 are integrated with the PJM Transmission System, a small fraction of the revenue requirement of such facilities would be recovered through the Border Rate, including the Border Rate paid by MTF Parties."" - protest
- More HERE, ER22-2690

Guggenheim takeaway: *Flagged for your awareness in the event this generates some noise. In our view this is a narrow technicality that the Commission and the PJM stakeholder processes are equipped to resolve.*

CA — CA Governor Newsom requests presidential major disaster declaration to help wildfire recovery

- CA Governor Newsom requested a major disaster declaration from the office of the president to open availability of federal resources for wildfire recovery.
- "We are deploying every tool we have, including seeking the support of the federal government, to help Californians as they rebuild and recover from wildfires driven by the recent record-breaking heat dome." -Governor Newsom
- More here.

Guggenheim takeaway:*FYI. CA continues recovery from wildfires this year, although the level of property damage has been significantly reduced.*

Nuclear — Holtec considering MI proposal to reopen Palisades nuclear plan

- Media reports on Holtec (private) contemplating reopening Palisades nuclear plan in MI.
- The considerations come after MI announced interest in keeping the nuclear plant online (after shutdown this summer).

- Hotec will reportedly make a decision around January 2023.
- More here.

Guggenheim takeaway:*FYI. Holtec is the decommissioning agent, and it is unclear if there is available staffing to restart operations. CMS has maintained its prior stance in support of MI policy in either direction for Palisades. Palisades would be able to participate in the resource RFP as outlined in the CMS IRP and would be eligible for the FCM (if the plant can submit an economic bid). That said, reversing the decommissioning path is a heavy lift given the currently shut down status, needing to invest in capex, finding labor and or an ultimate owner for the power plant (ETR has been clear in commitments to cease operations at Palisades prior to the decommissioning sale). There is currently no regulatory mechanism for LT operations support at Palisades and further state level support would require legislative intervention.*

Nuclear — PacifiCorp and TerraPower announce joint study for potential additional reactors

- "TerraPower [PRIVATE], a nuclear innovation company, and PacifiCorp [NYSE: BKH.A], a regulated utility, announced today their undertaking of a joint study to evaluate the feasibility of deploying up to five additional Natrium reactor and integrated energy storage systems in the PacifiCorp service territory by 2035. PacifiCorp and TerraPower announced last year their plans to bring the Natrium demonstration plant to Kemmerer, Wyoming, where a PacifiCorp coal-fueled power plant is slated for retirement." - release
- More HERE

Guggenheim takeaway: *Yet more activity in the advanced nuclear space – these two entities are already quite familiar with one another, with TerraPower specifically targeting potential brownfield coal sites – something we have seen from other players. As a reminder the design in question here remains fairly differentiated from more familiar LWRs – see our SMR launch HERE for more.*

AZ/PNW — Local media coverage profiling the candidates for the ACC's two open seats this election

- The article includes profiles of current incumbent Sandra Kennedy (D), Lauren Kuby (D), former ACC Staff member and now candidate Nicholas Myers (R), and Kevin Thompson (R).
- More HERE

Guggenheim takeaway: *Flagging for the helpful profiles of all four candidates, which we believe will be of interest to investors in PNW.*

ISO-NE — Maine PUC selects developer for new 345kv line

- "LS Power's [PRIVATE] plan calls for building over 100 miles of new 345 kV transmission lines and multiple substations to deliver new wind generation from Aroostook County, Maine. These projects will provide significant benefits to Maine and the region, including jobs, tax revenues, and environmental benefits. The location of the new facilities will be determined through an open and transparent siting process." - release
- More HERE

Guggenheim takeaway: *This line is intended to support in-state generation development (wind/biomass), with its completion at least partially dependent on the MA DPU's own deliberations. Its progress is in stark contrast to the CMP line which remains fiercely opposed.*

Uranium — Kazatomprom seeks to expand non-Russian transit route for western shipments

- The uranium producer [PRIVATE] is seeking to expand the Transcaspian route from its current 3500tU limit
- More HERE

Guggenheim takeaway: *Interesting data point for your awareness as future sanctions on Russian actors remains a possibility. As a reminder this route is something we flagged in our earlier uranium baseline – see HERE.*

DUK — North Carolina Attorney General files testimony in Carbon Plan docket

- The NC Attorney General's Office files testimony arguing that in order to comply with HB 951, meeting the timelines for the authorized carbon reduction goals must be the primary consideration, arguably ahead of potentially other least cost paths.
- Docket E-100 Sub 179

Guggenheim takeaway: *We note that the AG typically takes an adversarial role in NCUC proceedings.*

GUGGENHEIM

Invite: 57th EEI Financial Conference

Dates

November 13 - 15, 2022

Location

The Diplomat Beach Resort
Hollywood, FL

Company Dinners (Hosted by Guggenheim)

Sunday, November 13, 2022

5:30 p.m. | Cocktail Reception with full Guggenheim Securities Team & corporate utility clients
Hyde Beach House — 4010 South Ocean Drive, Hollywood, FL 33019

6:30 p.m. | Dinner with **Duke Energy Corp (DUK)** CEO, CFO, and others
Terrazas at Hyde Hollywood — 4111 S Ocean Drive, Hollywood, FL 33019

Monday, November 14, 2022

6:30 p.m. | Dinner with **Entergy (ETR)** CEO, CFO, and others
ETARU — 111 S Surf Rd, Hallandale Beach, FL 33009

Guggenheim Hosted Utilities Investor Discussion Panel with Shar Pourreza and Trading/Sales

Tuesday, November 15, 2022

6:00 p.m. | *Billy's Stone Crab — 400 North Ocean Drive, Hollywood, FL 33019*

Company Meetings

More Utilities may be added and we will update schedule accordingly

Sunday, November 13th	
Time	*Co.*
9:00AM	SRE
10:00AM	WEC
11:00AM	LNT
12:00PM	POR
1:00PM	ED
2:00PM	ALE
3:00PM	CNP
4:00PM	AWK
5:00PM	AVA

Monday, November 14th	
Time	*Co.*
8:00AM	PCG
9:00AM	PEG
10:00AM	PNW
11:00AM	DTE
12:00PM	CMS
1:00PM	PPL
2:00PM	FE
3:00PM	AEP
4:00PM	D
5:00PM	NI

Tuesday, November 15th	
Time	*Co.*
8:00AM	EVRG
9:00AM	EIX
10:00AM	NEE
11:00AM	EXC
12:00PM	OGE
1:00PM	SO
2:00PM	NWE
3:00PM	ES
4:00PM	AEE
5:00PM	HE

Participating Guggenheim Analyst

Shar Pourreza, *Senior Managing Director, Senior Equity Research Analyst – Power & Utilities*

See pages 17 - 18 for analyst certification and important disclosures.

Guggenheim 2022 Client and Corporate Access Utility Events

Ticker	Dates	Regions
PNW	1/24	Virtual
Quarterly Utility Roundtable	1/26	Virtual
Commissioners Meeting	1/26	Virtual
DUK	2/14	Virtual
WEC	2/16 & 2/18	Virtual
PCG	2/17	In Person at Guggenheim
D	2/23	Virtual
ETR	3/16–3/17	NYC and Boston
AEE	3/22	Virtual
NWE	3/24	Virtual
D	3/28	NYC Dinner
NJ Utilities Dinner	3/31	NJ Dinner
Quarterly Utility Roundtable	4/20	NYC Dinner
CNP	5/9–5/10	NYC
AGA Conference	5/17–5/18	Miami
EVRG	5/23–5/24	Virtual/Boston
AWK	5/26	New York
EXC	5/31-6/2	Midwest (5/31-6/1) & Texas (6/2)
LNT	6/6–6/7	NYC/Boston
ES	6/8	Virtual
SO	6/9–6/10	West Coast
PPL	6/13	NYC/Virtual
CMS	6/15	Virtual
OGE	6/29	NYC/Virtual
EIX	7/8	Boston
SO Meeting, Porsche racing, baseball, & GA PSC	7/11–7/12	Atlanta
DTE	8/8–8/9	New York
POR	8/9–8/10	New York
NEE	8/30–9/2	West Coast
PCG Group Video Call	9/6	Virtual
CEG	9/7–9/9	NY (9/7-8) & Boston (9/9)
OGS	9/27–9/28	New York
EEI Conference	11/13–11/15	Hollywood, FL

MORE TO BE ADDED…

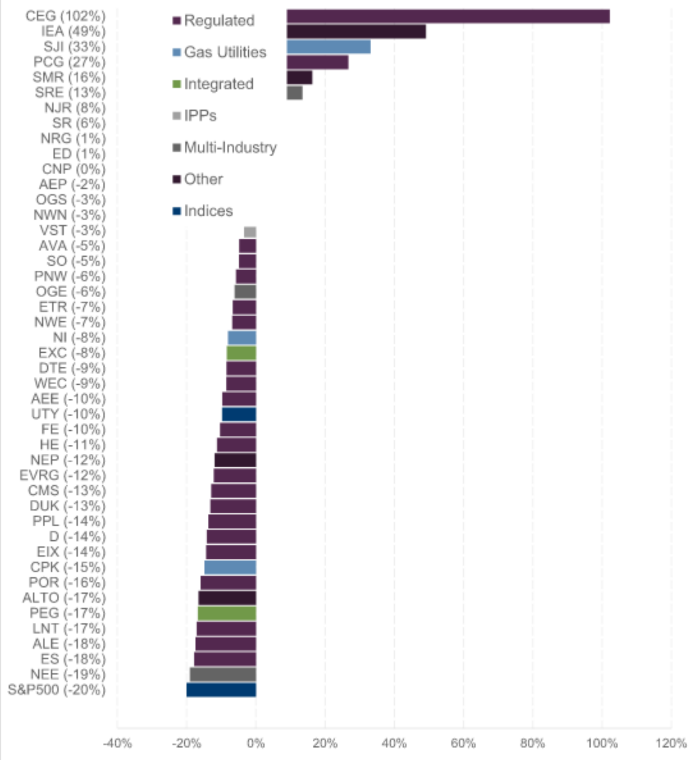
Guggenheim Comp Sheet

10/27/2022		Market	Guggenheim EPS Ests				Consensus				Δ vs Consensus (>$0.02)				Implied P/E Multiple				Prem/(Disc) vs Mid/Lg Cap Utes				'22–'25	NTM	Payout	Guggenheim		NTM Total	Consensus		NTM Total
	Price	Cap ($m)	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	EPS	Yield	Ratio	Rating	Target	Return	Rating	Target	Return
Small Cap Electric																															
ALE	$54.73	3,124	3.75	3.91	4.14	4.41	3.74	3.92	4.12	4.40	–	–	–	–	14.6x	14.0x	13.3x	12.4x	-18%	-17%	-15%	-15%	5.6%	4.9%	72%	Neutral	$53	2%	Neutral	$56	6%
AVA	$40.41	2,949	1.94	2.47	2.59	2.72	1.95	2.45	2.63	2.75	–	–	(0.04)	–	20.7x	16.5x	15.4x	14.7x	16%	-2%	-2%	-0%	11.9%	4.5%	94%	Sell	$33	-14%	Neutral	$37	-3%
NWE	$53.21	3,074	3.28	3.50	3.60	4.00	3.28	3.50	3.55	3.88	–	–	0.06	0.12	16.2x	15.2x	15.0x	13.7x	-9%	-10%	-4%	-7%	6.8%	4.8%	79%	Neutral	$48	-5%	Buy	$57	11%
POR	$44.42	4,481	2.83	2.84	3.02	3.17	2.81	2.77	3.02	3.22	–	0.07	–	(0.05)	15.8x	16.0x	14.7x	13.8x	-11%	-5%	-6%	-6%	3.9%	4.2%	66%	Buy	$48	12%	Buy	$50	16%
		13,628													**16.8x**	**15.4x**	**14.6x**	**13.7x**	**-5%**	**-8%**	**-7%**	**-7%**	**7.0%**	**4.6%**	**78%**						
Mid/Large Cap Electric																															
AEE	$80.28	20,742	4.04	4.32	4.64	4.95	4.07	4.36	4.65	5.00	–	(0.04)	–	(0.04)	19.7x	18.4x	17.3x	16.1x	11%	9%	10%	9%	7.0%	3.1%	61%	Buy	$84	8%	Buy	$89	14%
AEP	$87.18	44,799	5.00	5.30	5.64	6.00	5.02	5.28	5.62	6.00	–	–	–	–	17.4x	16.5x	15.5x	14.5x	-2%	-2%	-1%	-1%	6.3%	3.8%	66%	Buy	$93	10%	Buy	$98	16%
CMS	$56.60	16,428	2.88	3.13	3.45	3.69	2.88	3.12	3.39	3.65	–	–	0.06	0.04	19.6x	18.2x	16.7x	15.5x	10%	8%	6%	5%	8.6%	3.4%	68%	Neutral	$57	4%	Buy	$62	14%
CNP	$27.99	17,618	1.38	1.49	1.63	1.75	1.39	1.49	1.58	1.74	–	–	0.05	–	20.2x	18.7x	17.7x	16.1x	14%	11%	12%	9%	8.2%	2.6%	52%	Buy	$30	10%	Buy	$31	12%
D	$67.37	56,086	4.12	4.40	4.70	5.00	4.11	4.37	4.68	5.00	–	–	–	–	16.4x	15.4x	14.4x	13.5x	-8%	-8%	-8%	-8%	6.7%	4.2%	68%	Buy	$75	15%	Buy	$80	22%
DTE	$109.28	21,172	6.06	6.31	6.73	7.18	6.02	6.27	6.71	7.18	0.04	0.04	–	–	18.2x	17.4x	16.3x	15.2x	2%	4%	4%	3%	5.8%	3.4%	62%	Buy	$122	15%	Buy	$124	16%
DUK	$91.04	70,101	5.45	5.65	6.05	6.50	5.44	5.74	6.13	6.50	–	(0.09)	(0.08)	–	16.7x	15.9x	14.9x	14.0x	-6%	-6%	-5%	-5%	6.0%	4.5%	75%	Buy	$97	11%	Buy	$102	16%
ED	$86.42	30,643	4.51	4.71	5.18	5.48	4.52	4.80	5.12	5.39	–	(0.09)	0.06	0.09	19.1x	18.0x	16.9x	16.0x	8%	7%	7%	9%	6.7%	3.8%	72%	Neutral	$82	-1%	Sell	$81	-2%
EIX	$58.38	22,268	4.63	4.79	5.18	5.44	4.52	4.85	5.24	5.44	0.11	(0.05)	(0.06)	–	12.9x	12.0x	11.1x	10.7x	-27%	-28%	-29%	-27%	5.5%	5.0%	63%	Buy	$66	18%	Buy	$67	20%
ES	$74.67	25,869	4.10	4.42	4.75	5.11	4.10	4.38	4.65	5.03	–	0.04	0.10	0.08	18.2x	17.1x	16.1x	14.8x	2%	1%	2%	1%	7.6%	3.6%	65%	Buy	$82	13%	Buy	$85	17%
ETR	$105.03	21,365	6.43	6.78	7.27	7.74	6.38	6.78	7.27	7.71	0.05	–	–	–	16.5x	15.5x	14.4x	13.6x	-7%	-8%	-8%	-7%	6.4%	4.0%	66%	Buy	$117	15%	Buy	$118	17%
EVRG	$60.20	13,815	3.56	3.77	4.02	4.30	3.57	3.77	4.04	4.25	–	–	–	0.05	16.9x	16.0x	14.9x	14.2x	-5%	-5%	-5%	-4%	6.5%	4.1%	69%	Buy	$64	10%	Buy	$65	12%
EXC	$37.70	37,389	2.27	2.34	2.58	2.82	2.26	2.40	2.57	2.78	–	(0.06)	–	0.04	16.7x	15.7x	14.7x	13.6x	-6%	-6%	-7%	-8%	7.5%	3.9%	64%	Neutral	$40	10%	Buy	$44	20%
FE	$37.25	21,298	2.45	2.57	2.75	2.95	2.43	2.53	2.74	2.86	–	0.04	–	0.09	15.3x	14.7x	13.6x	13.0x	-14%	-13%	-13%	-12%	6.4%	4.3%	65%	Neutral	$34	-4%	Buy	$42	16%
LNT	$50.90	12,772	2.78	2.90	3.04	3.23	2.77	2.90	3.09	3.28	–	–	(0.05)	(0.05)	18.3x	17.5x	16.5x	15.5x	3%	4%	5%	6%	5.1%	3.5%	65%	Neutral	$50	2%	Neutral	$58	17%
OGE	$36.00	7,207	1.99	2.08	2.22	2.32	2.05	2.07	2.17	2.30	(0.06)	–	0.05	–	17.6x	17.4x	16.6x	15.7x	-1%	4%	5%	6%	5.2%	4.7%	85%	Buy	$38	10%	Buy	$38	11%
PCG	$15.38	30,571	1.11	1.24	1.36	1.49	1.10	1.23	1.35	1.45	–	–	–	0.04	14.0x	12.5x	11.4x	10.6x	-22%	-25%	-28%	-28%	10.3%	0.6%	9%	Buy	$19	24%	Buy	$17	10%
PEG	$55.49	27,682	3.50	3.58	4.06	4.39	3.47	3.58	4.00	4.33	0.04	–	0.06	0.06	16.0x	15.5x	13.9x	12.8x	-10%	-8%	-12%	-13%	7.8%	4.1%	64%	Buy	$71	32%	Buy	$69	28%
PNW	$66.47	7,514	4.05	4.25	4.50	4.75	4.03	4.20	4.49	4.72	–	0.05	–	–	16.5x	15.8x	14.8x	14.1x	-7%	-6%	-6%	-4%	5.5%	5.3%	87%	Sell	$54	-13%	Sell	$67	6%
PPL	$25.91	19,075	1.39	1.58	1.70	1.80	1.42	1.61	1.71	1.82	–	–	–	–	18.3x	16.1x	15.2x	14.3x	3%	-4%	-3%	-3%	9.0%	3.6%	68%	Buy	$27	8%	Buy	$28	13%
SO	$65.17	69,245	3.60	3.80	4.15	4.40	3.59	3.79	4.08	4.41	–	–	0.07	–	18.1x	17.2x	16.0x	14.8x	2%	2%	2%	0%	6.9%	4.3%	77%	Buy	$69	10%	Neutral	$69	10%
WEC	$88.72	27,985	4.40	4.59	4.89	5.21	4.39	4.61	4.90	5.23	–	–	–	–	20.2x	19.2x	18.1x	17.0x	13%	14%	15%	15%	5.8%	3.4%	69%	Neutral	$95	11%	Neutral	$95	10%
Mid/Lg Cap (excl. EIX, PCG)															**17.8x**	**16.8x**	**15.7x**	**14.7x**					**6.8%**	**3.9%**	**68%**						
Regulated Electrics		**635,271**													**17.6x**	**16.6x**	**15.5x**	**14.5x**					**6.8%**	**4.0%**	**70%**						
		Market	Guggenheim EPS Ests				Consensus				Δ vs Consensus (>$0.02)				Implied P/E multiple				Prem/(Disc) vs Mid/Lg Cap Utes				'22–'25	NTM	Payout	Guggenheim		NTM Total	Consensus		NTM Total
Diversified	Price	Cap ($m)	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	EPS	Yield	Ratio	Rating	Target	Return	Rating	Target	Return
HE	$36.80	4,028	2.18	2.43	2.48	2.70	2.13	2.30	2.42	2.57	0.05	0.13	0.06	0.13	17.3x	16.0x	15.2x	14.3x	-3%	-5%	-3%	-3%	7.4%	3.9%	67%	Neutral	$36	2%	Sell	$37	4%
NEE	$75.47	148,282	2.90	3.12	3.42	3.73	2.88	3.11	3.38	3.64	–	–	0.04	0.09	26.2x	24.3x	22.4x	20.7x	47%	44%	42%	41%	8.8%	2.4%	63%	Buy	$99	34%	Buy	$91	23%
SRE	$150.00	47,147	8.70	9.08	9.58	10.21	8.66	9.04	9.67	10.19	0.04	0.04	(0.09)	–	17.3x	16.6x	15.5x	14.7x	-3%	-1%	-1%	0%	5.5%	3.3%	56%	Buy	$165	13%	Buy	$164	13%
		199,457													**20.3x**	**19.0x**	**17.7x**	**16.6x**	**14%**	**13%**	**13%**	**13%**	**7.2%**	**3.2%**	**62%**						
Gas LDCs																															
NI	$25.37	10,299	1.45	1.53	1.70	1.84	1.45	1.55	1.72	1.88	–	–	–	(0.04)	17.5x	16.4x	14.7x	13.5x	-1%	-1%	-5%	-7%	8.3%	3.9%	69%	Buy	$27	10%	Buy	$30	21%
CPK	$124.02	2,200	5.08	5.49	5.87	6.26	5.10	5.55	5.87	6.24	–	(0.05)	–	–	24.3x	22.4x	21.1x	19.9x	38%	35%	36%	37%	7.2%	1.8%	44%	Neutral	$120	-1%	Buy	$137	12%
NJR	$44.44	4,276	2.45	2.45	2.64	2.81	2.46	2.47	2.73	2.84	–	–	(0.09)	–	18.1x	18.0x	16.3x	15.7x	3%	9%	5%	8%	4.7%	3.5%	64%	Neutral	$40	-6%	Neutral	$44	3%
NWN	$47.45	1,625	2.56	2.73	2.83	2.98	2.53	2.68	2.76	2.99	0.03	0.05	0.07	–	18.8x	17.7x	17.2x	15.9x	6%	7%	11%	9%	5.2%	4.1%	76%	Neutral	$40	-12%	Buy	$52	14%
OGS	$75.59	4,092	4.08	4.38	4.65	5.00	4.08	4.38	4.64	4.99	–	–	–	–	18.5x	17.3x	16.3x	15.2x	5%	4%	5%	4%	7.0%	3.5%	64%	Neutral	$70	-4%	Buy	$81	10%
SJI	$34.77	4,258	1.71	1.82	1.94	2.05	1.72	1.79	1.88	1.94	–	–	0.06	0.11	20.2x	19.4x	18.5x	17.9x	14%	17%	19%	23%	6.2%	3.6%	74%	Neutral	$36	7%	Neutral	$36	7%
SR	$69.10	3,627	3.84	4.27	4.91	5.03	3.89	4.37	4.60	4.88	(0.05)	(0.10)	0.31	0.16	17.8x	15.8x	15.0x	14.2x	1%	-5%	-3%	-2%	9.4%	4.2%	75%	Neutral	$67	1%	Neutral	$74	11%
		30,378													**19.3x**	**18.1x**	**17.0x**	**16.0x**	**9%**	**9%**	**10%**	**10%**	**6.9%**	**3.5%**	**67%**						
Regulated Water																															
AWK	$142.02	25,817	4.44	4.85	5.23	5.70	4.44	4.81	5.18	5.64	–	0.04	0.05	0.06	32.0x	29.5x	27.4x	25.2x	80%	75%	74%	71%	8.7%	1.9%	62%	Neutral	$138	-1%	Buy	$154	10%
		Market	Guggenheim EBITDA Ests				Consensus				Δ vs Consensus (>$20m)				Implied EV/EBITDA multiple				Enterprise Value				'22–'25	NTM	Payout	Guggenheim		NTM Total	Consensus		NTM Total
IPPs	Price	Cap ($m)	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	2022E	2023E	2024E	2025E	Growth	Yield	Ratio	Rating	Target	Return	Rating	Target	Return
CEG	$93.04	30,393	2,605	3,269	3,424	3,675	2,652	3,109	3,485	3,695	(47)	159	(61)	–	13.2x	10.8x	9.2x	8.2x	34,980	33,599	32,021	30,287	12.2%	0.8%	19%	Buy	$121	31%	Buy	$95	3%
NRG	$43.70	10,276	1,950	2,287	2,309	2,274	1,938	2,296	2,371	2,371	–	–	(63)	(97)	9.2x	7.5x	7.0x	6.4x	17,736	17,138	16,517	15,178	5.3%	3.4%	31%	Neutral	$43	2%	Buy	$43	2%
VST	$21.98	9,151	3,126	3,505	3,608	3,797	3,131	3,686	3,605	3,280	–	(181)	–	517	6.6x	5.6x	5.7x	6.0x	20,821	20,789	20,576	19,825	6.7%	3.6%	29%	Buy	$32	49%	Buy	$31	46%
Other																															
ALTO	$4.01	297	59	74	75	76	54	167	255	305	–	(93)	(179)	(229)									9.0%	–	–	Buy	$11	174%	Buy	$12	191%
IEA	$13.72	667	147	164	174	178	145	165			–	–	–	–									6.7%	–	–	Neutral	$14	2%	Neutral	$14	2%
NEP	$74.27	6,232	1,660	1,775	1,889	2,003	1,811	1,946	2,086	2,333	(151)	(171)	(197)	(330)									6.5%	4.6%	–	Buy	$85	19%	Buy	$86	20%
SMR	$11.66	495	(156)	(100)	(57)	8	(125)	(78)	(49)	9	(31)	(23)	–	–										–	–	Buy	$18	54%	Buy	$16	39%

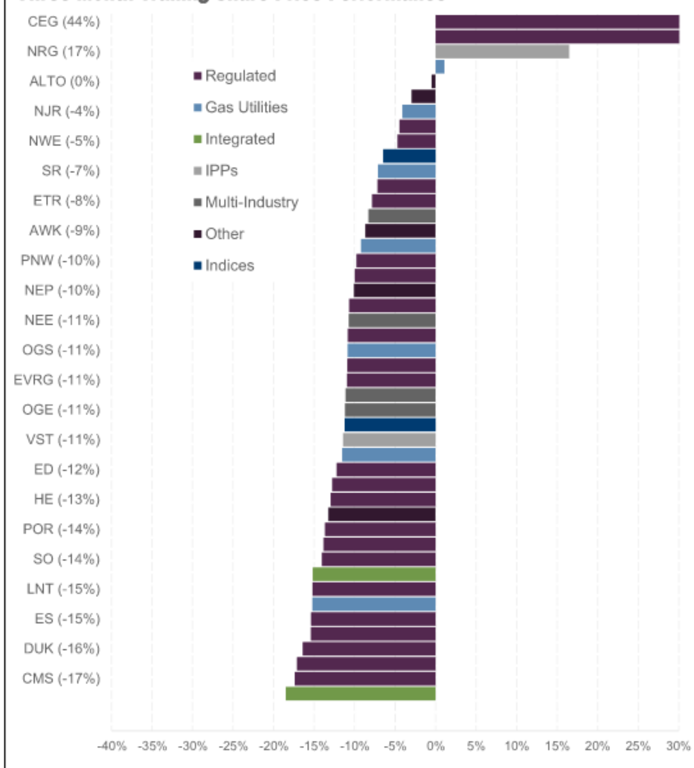
Source: Guggenheim Securities, LLC estimates, Bloomberg LP.

Share Price Performance (Year-to-Date, Three-Month, One-Month, & Five-Day Trailing)

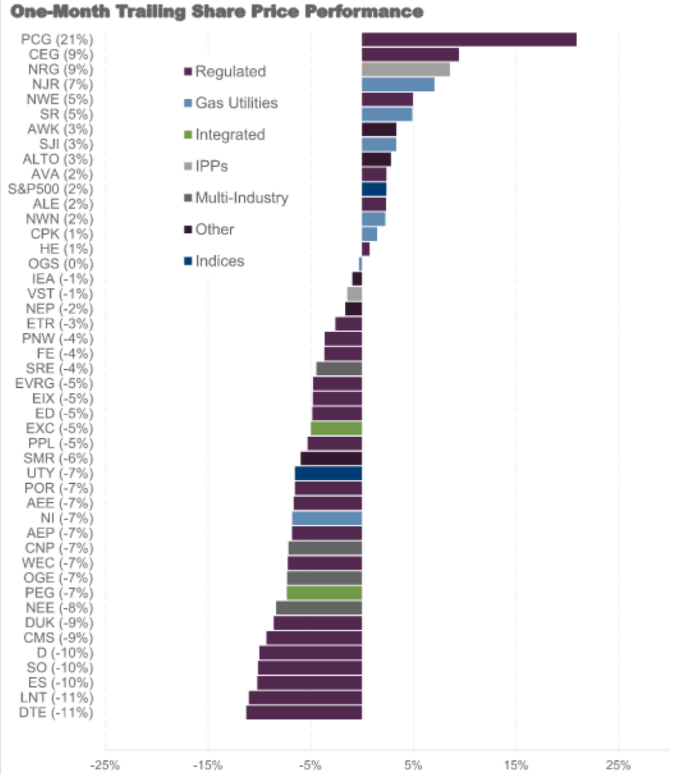
Year-to-Date Trailing Share Price Performance



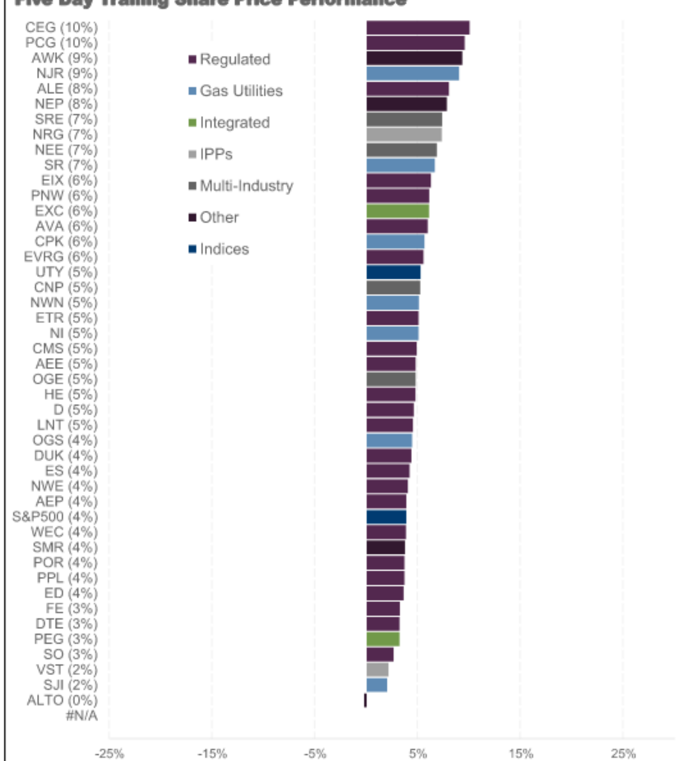
Three-Month Trailing Share Price Performance



One-Month Trailing Share Price Performance



Five Day Trailing Share Price Performance



(1) Regulated utilities deliver power to end-use customers via regulated transmission & distribution (T&D) infrastructure; vertically integrated utilities with regulated or mostly contracted generation are also included.

(2) Local Gas Distribution Companies (LDCs), as well as diversified utilities with a business mix largely comprised of gas infrastructure and related activities (i.e., LDC franchises, interstate pipelines, and/or other gas midstream activities).

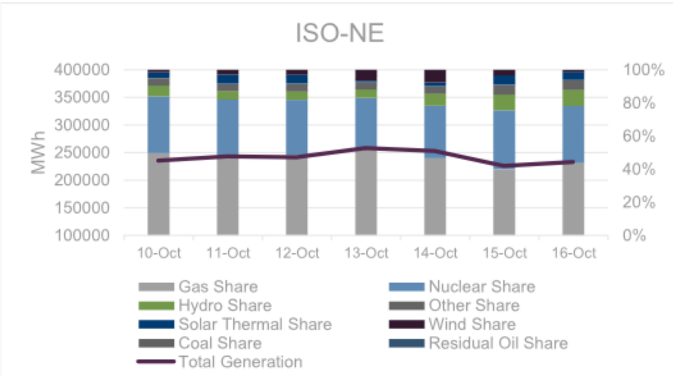
(3) Integrated utilities own and operate regulated T&D franchises, as well as un-regulated power generation with commodity exposure.

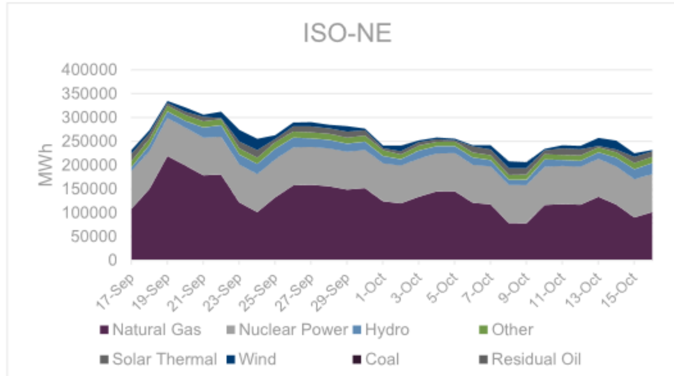
(4) IPPs operate merchant (i.e., un-regulated, non-utility) power plants that compete to sell power in wholesale markets or through retail marketing businesses.

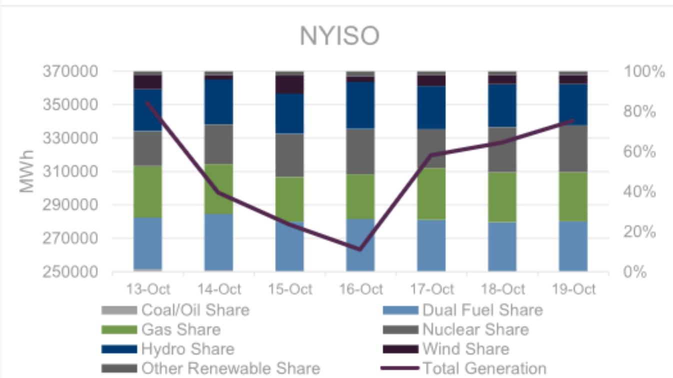
Source: Bloomberg, Guggenheim Securities, LLC estimates.

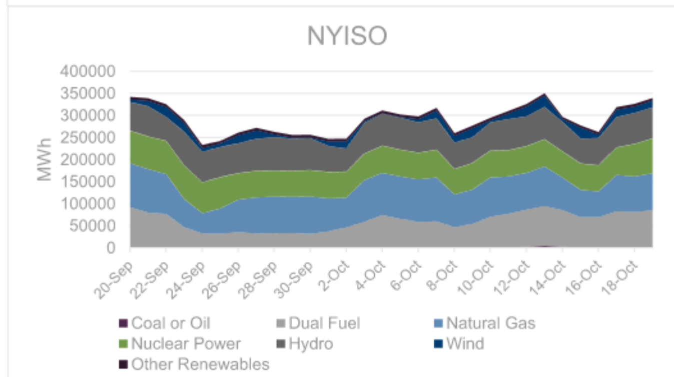
See pages 17 - 18 for analyst certification and important disclosures.

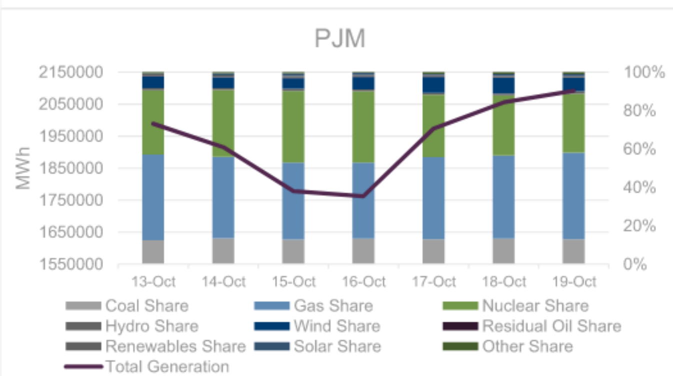
Generation and Mix

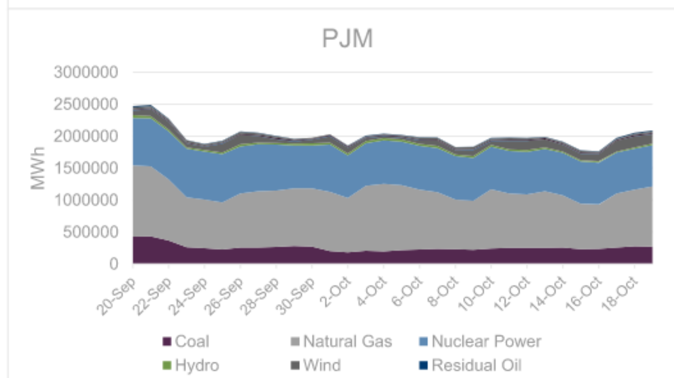


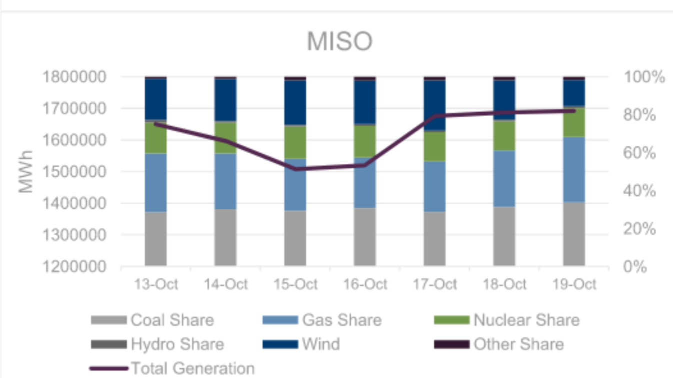


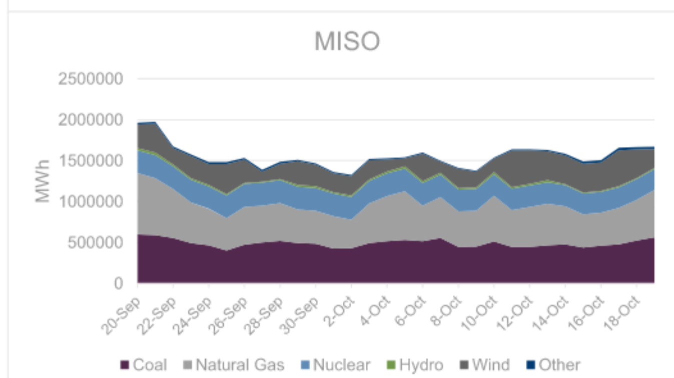






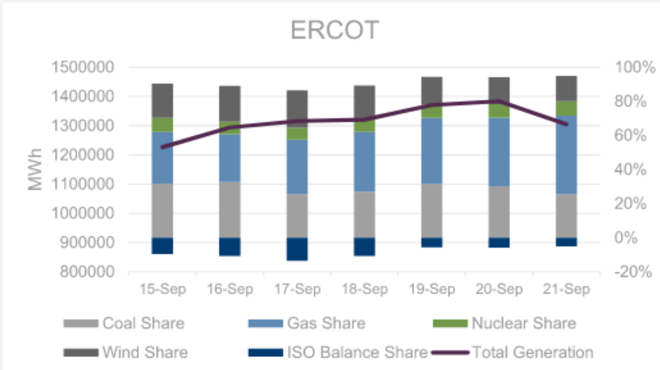


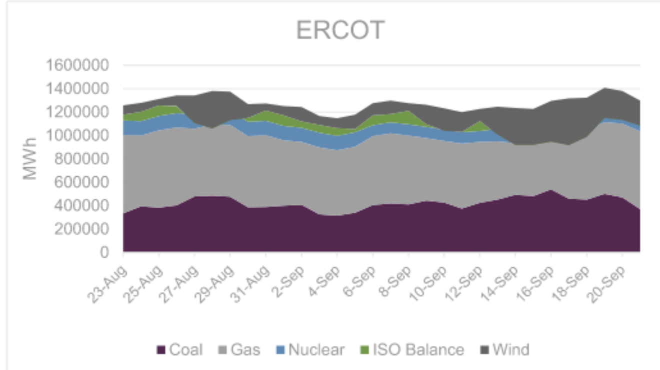


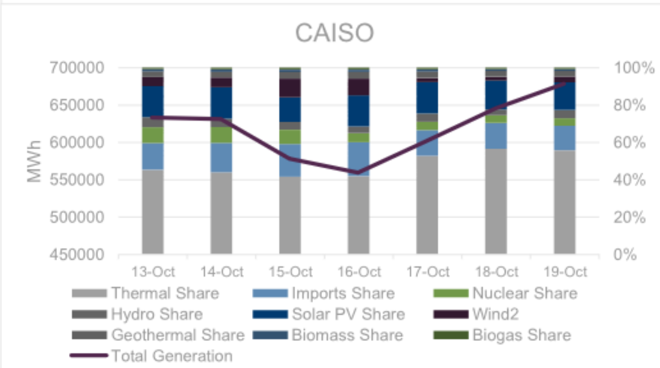


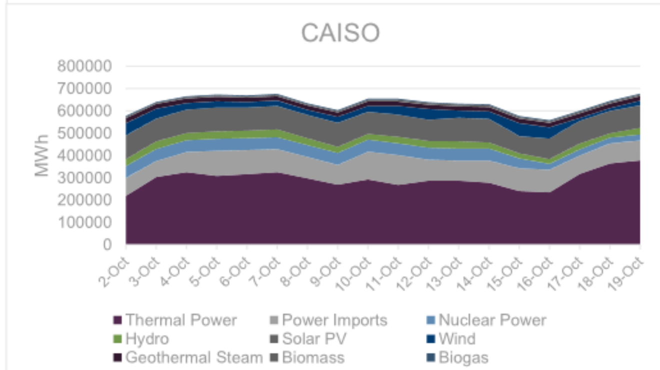
Source: S&P Global Platts, Guggenheim Securities, LLC.

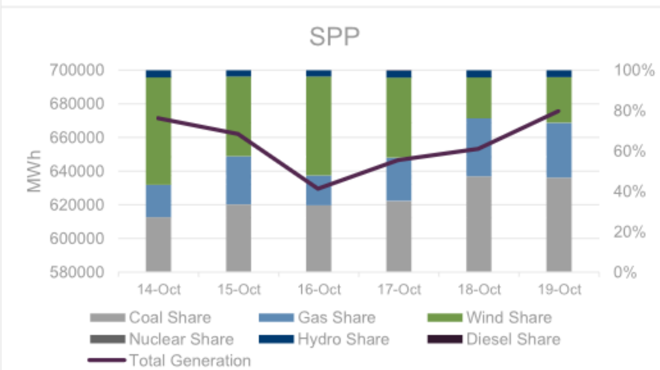
Generation and Mix (continued)

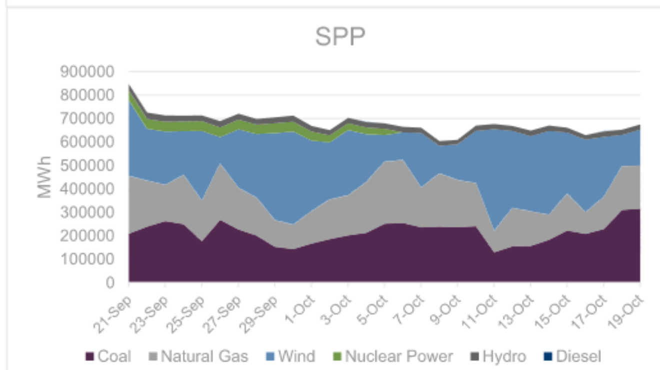








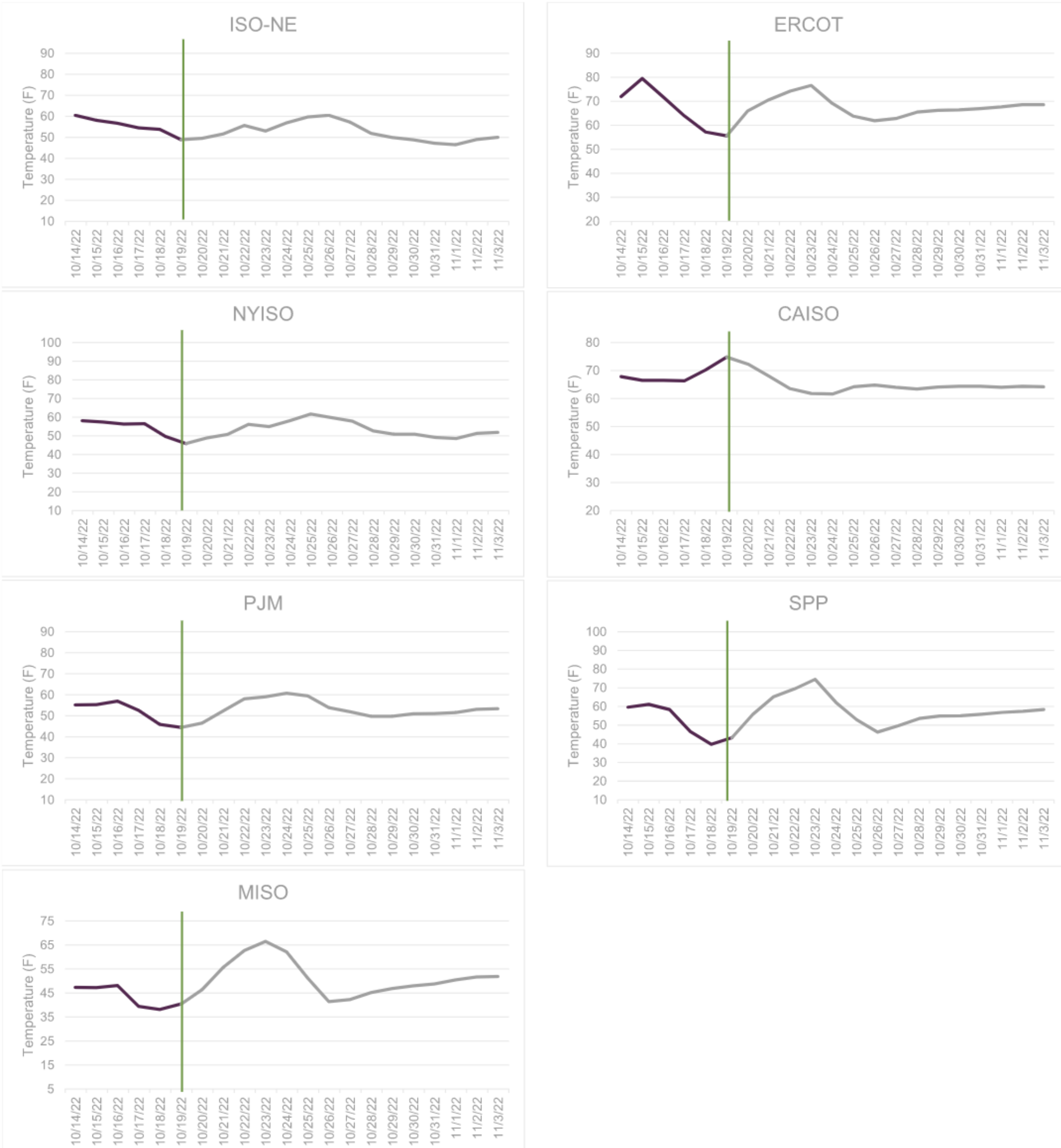




Source: S&P Global Platts, Guggenheim Securities, LLC.

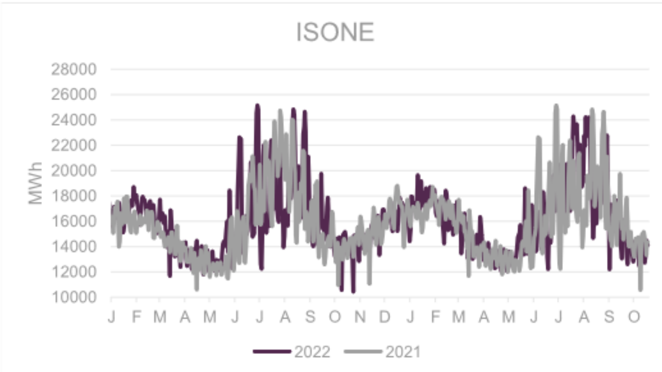
See pages 17 - 18 for analyst certification and important disclosures.

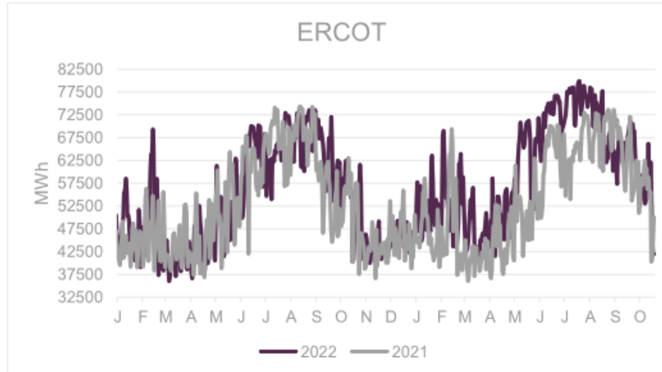
Weather

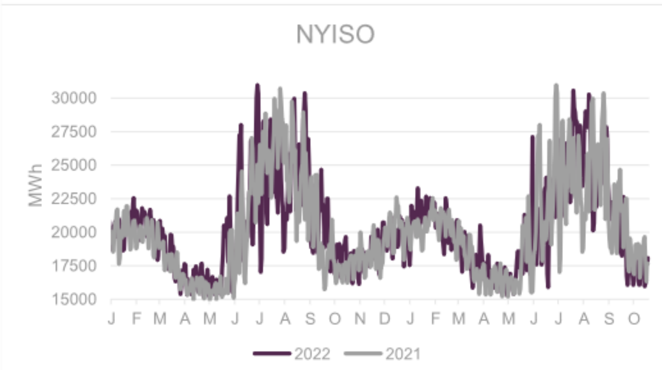


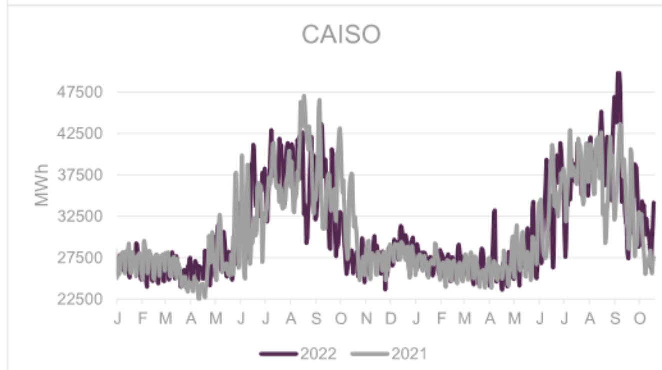
Source: S&P Global Platts, Guggenheim Securities, LLC.

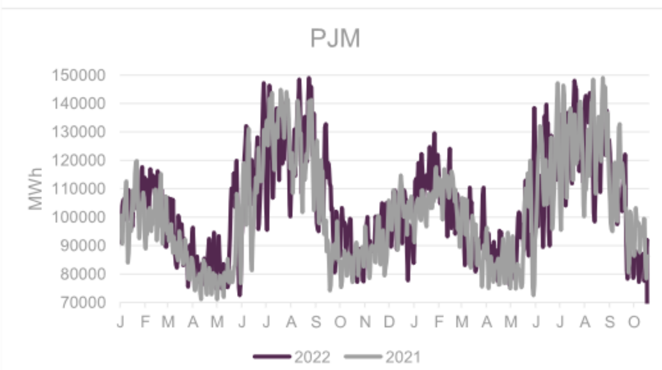
Peak Load

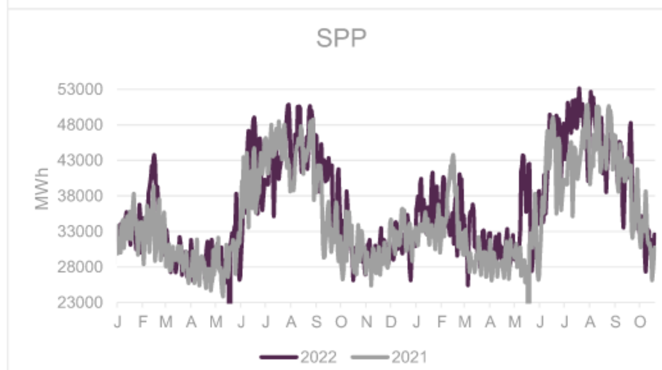


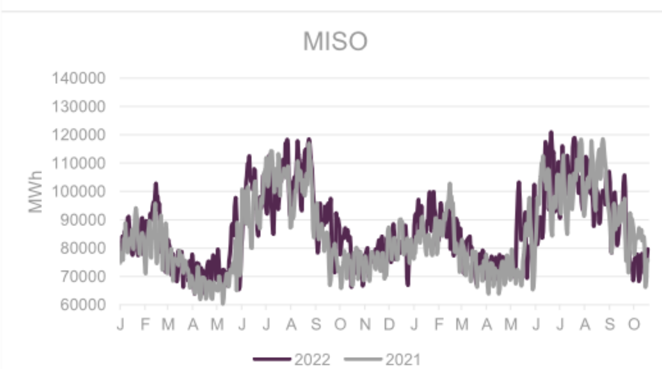












Average Deviation in Peak Load vs Prior Year

RTO/ISO	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22
ISONE	0.0%	-0.5%	1.5%	-1.2%	5.1%	-1.6%
NYISO	-0.3%	0.6%	2.1%	-0.1%	3.5%	-4.7%
PJM	3.1%	2.5%	3.9%	3.8%	0.2%	-8.9%
MISO	3.4%	2.5%	4.0%	5.0%	0.1%	-7.4%
CAISO	-0.2%	-2.6%	1.6%	1.2%	4.0%	9.0%
ERCOT	4.4%	2.5%	13.7%	19.1%	7.9%	1.0%
SPP	6.3%	0.5%	5.9%	9.7%	5.0%	0.3%

Source: S&P Global Platts, Guggenheim Securities, LLC.

KeyBanc Capital Markets

Alert

October 27, 2022

Energy: Electric Utilities

NYSE: CMS

CMS Energy Corporation

CMS: Another Quarter, Another Beat; 2023 Guidance Released

Sophie Karp / (917) 368-2361 / sophie.karp@key.com

Sangita Jain, CFA / (917) 368-2354 / sangita.jain@key.com

Brendan Cutler / (917) 368-2345 / brendan.cutler@key.com

Michael Pelletier / (917) 368-2306 / michael.pelletier@key.com

CMS reported an above-consensus quarter with the beat vs. our estimates spread across the segments. The Company also raised/narrowed 2022 EPS guidance to a new midpoint of $2.88 (vs. $2.87) and released preliminary 2023 EPS guidance of $3.05-$3.11 with a bias toward the top end and in line with the Company's long-standing 6-8% growth expectations. Expect growth in investments in renewables generation and energy storage as CMS works to execute the recently approved IRP. A capex refresh/upgrade is expected in early 2023 to align with the provisions in the IRP. CMS continues to deliver on the targeted growth objectives with a disciplined approach. We believe that current fundamentals are well reflected in the stock and remain Sector Weight.

Another quarter, another beat: CMS reported 3Q EPS of $0.56 vs. our $0.52 with the beat spread across the segments. Load trends were favorable as growth in C&I loads more than offset the post-pandemic softness in residential volumes. YTD, the weather has been a significant benefit, allowing the Company to possibly pull forward O&M spending and creating a reasonable buffer for the 4Q.

Figure 1 - Earnings Summary

Earnings Comparison 3Q22	KBCM Est	Actual
Utility	0.61	0.62
NorthStar Clean Energy	0.02	0.04
Parent & Other	(0.12)	(0.10)
Consolidated	**0.52**	**0.56**
Consensus	**0.55**	

Source: Company Reports, KBCM Estimates, Thomson Reuters

2022 EPS guidance narrowed/raised; preliminary 2023 guidance provided: CMS raised the midpoint of 2022 guidance and narrowed the range from $2.85-$2.89 to $2.87-$2.89. Our current estimate and consensus are at the updated midpoint of $2.88. Management maintained the long-term outlook for 6-8% EPS growth with a bias toward the high end and provided a preliminary 2023 EPS guidance of $3.05-$3.11 (KBCM at $3.14, consensus at $3.12). We expect the guidance to be refined after 4Q when 2022 EPS is actualized (to align with the guidance of 6-8% vs. 2022). The CMT provision in the IRA is not likely to impact CMS's earnings profile.

Capex refresh likely after 4Q earnings; funding for purchasing Covert lined up: We anticipate an upgraded capex from the current $14.3B 5-year plan to accommodate the recently approved IRP and to take into account the IRA legislation. In the meantime, CMS has entered into a forward sale contract for $438M in equity at an average price of $68/share to fund the $815M purchase of the Covert gas plant in 2023. We expect that the equity issuance will be settled in 1H23, with the timing coinciding with the purchase.

IRA benefits renewables growth: Management quantified some benefits from the IRA, including that it reduces customer costs by $60M per year as a function of the various PTCs included in the bill. The bill will also reduce the LCOE for solar by ~15% and the transferability of the tax credits will likely allow for greater funding opportunities and likely allow for a greater percentage of the generation assets being located within the rate base vs. PPA. Management highlighted the potential for deploying energy storage given that the IRA includes tax credits for standalone energy storage. The IRP provides for 550 MW of energy storage, although the near-term opportunity is closer to 75 MW. As more storage technologies become commercially feasible and as the cost curve for energy storage bends down, weexpect CMS to accelerate storage deployments.

The electric rate case is underway, and a gas rate case is expected in 4Q: Staff testimony in the electric rate case has been filed and appears constructive, especially in contrast to the last electric rate case outcome. We expect the ultimate outcome to be book-ended by CMS's ask and testimony offered by staff. A commission order is expected in 1Q23.

Recent Research: **CMS: Uneventful Quarter; Capex Refresh Post IRP Is Next**; **CMS: IRP Settlement Lengthens Investment Horizon**

Valuation: We rate shares of CMS Sector Weight. Based on a stock price of $55.90 and our 2023E EPS of $3.14, shares of CMS are trading at a P/E ratio of ~18x, representing a 7% premium to Large-Cap Regulated Utilities trading at ~17x. We view the shares as fairly valued.

Risks: As a regulated utility, CMS is exposed to a number of risks, including regulatory risk in its jurisdictions and on the federal level, weather variations affecting electricity demand and the reliability of its system, interest rate risk affecting its cost of capital, risks related to the current pandemic, and macroeconomic risk as underlying economic activity affects demand for electric power and gas. Should the impacts of these risks be greater than we currently anticipate, the Company and the shares may underperform relative to our expectations. Conversely, should the impact of these risks be less than currently anticipated, the Company and the shares may outperform relative to our current expectations.

Sophie Karp (917) 368-2361 / sophie.karp@key.com

CMS Energy Corporation

Michigan Tune Up; Lowering 2023-24 EPS Estimates

Summary

We are updating our 2023-24 EPS estimates that now include a mix of equity and debt financing in 2023 to fund the acquisition of the Covert CCGT ($815M) versus our previous assumption of all parent-level debt. Also, our earnings at the utility are lower due to reduced rate relief assumptions. Our revised EPS estimates are inline with management guidance of 6-8% EPS CAGR. We believe headed into 3Q/EEI investors will focus on 2023 guidance, financing for the Covert acquisition, PFD for electric case due Dec. 16, and gas rate filing. We maintain our Buy rating and update our PT to $59 (prev. $73) based on current market multiples.

Key Points

We are lowering our 2023-24 EPS estimates to reflect revised financing rate relief assumptions. Our revised 2023 EPS estimate of $3.07 (prev. $3.17) now assumes $400M of equity needs for the Covert CCGT ($815M) versus our previous assumption that the company would finance it with all debt. CMS currently has an ATM authorized for $440M and our forecast, which is consistent with management, does not assume any additional equity needs in their 5-year plan. Our 2024 EPS estimate of $3.30 (prev. $3.47) assumes a full year of dilution coupled with reduced rate relief assumptions.

Electric rate filing PFD expected on December 16. The utility filed in April for a $287M/10.25%/53% rate increase/ROE/equity layer and in August Staff recommended a $161M/9.7%/50.7%. For every 10 bps change in ROE we see a $7M impact to revenue.

Gas rate case filing expected in late December. Consumers is expected to file a gas rate case in December to recover new capital investment and higher operating expenses. The company's last gas rate filing was in December 2021, resolved via settlement, which set rates based on a 9.9% ROE and ~72% of revenue ask.

Attorney General and Gubernatorial elections in November are expected to have minimal impact in the state's regulatory environment. The Michigan AG and governor are up for reelection, and we don't see any major change to the Michigan regulatory environment. CMS has been able to deliver on 6-8% EPS CAGR under both Republican and Democratic administrations.

We are introducing a 2025 EPS estimate of $3.53.

Rating	**Buy**
Previous Rating	No Change
Price (10/20)	**$53.97**
Price Target	**$59.00**
Previous Price Target	$73.00

Key Data

Symbol	CMS(NYSE)
52-Week Range	$73.76 - $52.41
Market Cap ($mm)	$15,662
Shares Outstanding (mm)	290.2
Float	288.9
Average Daily Volume	1,816,215
Dividend/Yield	$1.74/3.2%

Fiscal Year-End: Dec 31

Earnings per Share ($) Non-GAAP	2022E	2023E Prior	2023E Curr	2024E Prior	2024E Curr
1Q	–	–	–	–	–
2Q	–	–	–	–	–
3Q	–	–	–	–	–
4Q	–	–	–	–	–
Yr	**2.87E**	**3.17E**	**3.07E**	**3.47E**	**3.30E**

Anthony Crowdell
Managing Director
+1 646 949 9524
Anthony.Crowdell@mizuhogroup.com

Paul Fremont
Managing Director
+1 212 205 7854
Paul.Fremont@mizuhogroup.com

Brandon Lee, CFA
Senior Associate
+1 212 205 7869
Brandon.Lee@mizuhogroup.com

Estimate Change

Exhibit 1: Updating Estimates for Covert Financing

	2022E	2023E	2024E	2025E
New	**$2.87**	**$3.07**	**$3.30**	**$3.53**
Prior	$2.87	$3.17	$3.47	
Differences	$0.00	($0.10)	($0.17)	

Source: Company reports, MSUSA estimates

Valuation

Base Case

Our $59 price target is derived as follows:

We value Consumers Electric Utility based on 2024 regulated electric operating earnings of $2.45 per share and applying a P/E multiple of 18.3 times, a premium of 18.0% to the electric utilities group due to earnings stability and Michigan regulation, resulting in a valuation of $45.00 per share.

We value Consumers gas utility based on 2024 operating earnings of $1.26 per share using a P/E multiple of 17.8 times, an 18% premium to the gas utility average multiple due to earnings stability and Michigan regulation, resulting in a valuation of $22.50 per share.

We value 2024 Enterprises EBITDA of $82 million, using an 8.8 times EV/EBITDA multiple, resulting in a valuation of $2.00 per share.

In 2024, we forecast CMS will have approximately $3.7 billion of unallocated debt out of roughly $15.7 billion (net of cash) and therefore we adjust our valuation downward by $10.50.

Bull Case

We estimate upside of $1.50 to our price target for $500 million of incremental capex the company is able to invest at its regulated electric and gas utility.

Bear Case

The ROE can continue to decline in the electric segment. The company currently has an electric rate case pending with the Michigan Public Service Commission. With 2022 rate base expected to be $21 billion, a 50 bps decline in ROE (for combined electric and gas) could negatively impact our valuation by $3.00.

Company Model

In the pages that follow, we highlight our detailed consolidated financial model, including both historical and projections for income statement, cash flow and balance sheet 2019 to 2024. To derive the consolidated results, we modeled full financials for each operating subsidiary. To see the full models please reach out to us through our contact information on the front page.

Exhibit 1: Consolidated Income Statement

Consolidated Income Statement ($ millions)	2019A	2020A	2021A	2022E	2023E	2024E
Revenues	6,845	6,680	7,329	7,534	7,713	7,904
Cost of Goods Sold	(2,833)	(2,508)	(3,070)	(3,070)	(3,070)	(3,070)
O&M	(1,411)	(1,383)	(1,581)	(1,606)	(1,622)	(1,639)
Taxes Other then Income	(333)	(359)	(389)	(395)	(399)	(403)
EBITDA	**$2,268**	**$2,430**	**$2,289**	**$2,462**	**$2,622**	**$2,792**
D&A	(992)	(1,048)	(1,114)	(1,165)	(1,183)	(1,177)
EBIT	**$1,276**	**$1,382**	**$1,175**	**$1,297**	**$1,439**	**$1,614**
Interest	(523)	(563)	(503)	(536)	(620)	(705)
Other Income	89	73	159	97	97	97
EBT	**$842**	**$892**	**$831**	**$859**	**$916**	**$1,007**
Taxes	(156)	(144)	(102)	(66)	(70)	(79)
Non controlling Interests						
Net Income GAAP	686	748	729	794	846	927
Net Income (Operating)	**708**	**764**	**768**	**832**	**902**	**982**
EPS (Operating)	**$2.49**	**$2.67**	**$2.65**	**$2.87**	**$3.07**	**$3.30**

Source: Company reports, MSUSA estimates

Exhibit 2: Consolidated Cash Flow Statement

Consolidated Cash Flow Statement ($ millions)	2019A	2020A	2021A	2022E	2023E	2024E
Net Income	708	764	768	832	902	982
Depreciation	992	1,048	1,114	1,165	1,183	1,177
Deferred Taxes	150	170	249	252	279	259
CapEx	(2,104)	(2,317)	(2,076)	(2,645)	(3,745)	(3,045)
Net Cash Generation	**(254)**	**(335)**	**55**	**(395)**	**(1,382)**	**(627)**

Source: Company reports, MSUSA estimates

Exhibit 3: Consolidated Balance Sheet

Consolidated Balance Sheet *($ millions)*	2019A	2020A	2021A	2022E	2023E	2024E
Cash & Equivalents	157	185	476	349	649	183
Short Term Debt	1,220	1,506	382	382	382	382
Current Portion Long Term Debt	0	0	0	0	0	0
Long Term Debt	11,951	11,951	12,092	12,410	14,286	15,087
Total Debt	**$13,171**	**$13,457**	**$12,474**	**$12,792**	**$14,668**	**$15,469**
Preferred Stock	0	0	0	0	0	0
Total Debt & Preferred	**$13,171**	**$13,457**	**$12,474**	**$12,792**	**$14,668**	**$15,469**
Shareholder's Equity	5,018	5,019	6,407	6,718	7,455	7,822
Total Capitalization	**$18,189**	**$18,476**	**$18,881**	**$19,510**	**$22,123**	**$23,291**

Source: Company reports, MSUSA estimates

Price Target Calculation and Key Risks

Price Target Calculation: Our $59 price target is derived as follows:

We value Consumers Electric Utility based on 2024 regulated electric operating earnings of $2.45 per share and applying a P/E multiple of 18.3 times, a premium of 18.0% to the electric utilities group due to earnings stability and Michigan regulation, resulting in a valuation of $45.00 per share.

We value Consumers gas utility based on 2024 operating earnings of $1.26 per share using a P/E multiple of 17.8 times, an 18% premium to the gas utility average multiple due to earnings stability and Michigan regulation, resulting in a valuation of $22.50 per share.

We value 2024 Enterprises EBITDA of $82 million, using an 8.8 times EV/EBITDA multiple, resulting in a valuation of $2.00 per share.

In 2024, we forecast CMS will have approximately $3.7 billion of unallocated debt out of roughly $15.7 billion (net of cash) and therefore we adjust our valuation downward by $10.50.

Consistent with our methodology, our price targets are dynamic, changing with the group average multiples recalculated on a daily basis.

Key Risks: Near-term risks include: (1) lower ROE in the electric utility segment, (2) longer-than expected impact of COVID-19 on load demand. Other risks include: general economic conditions, changes in state and/or federal regulation, weather, ongoing business operational risk, broader macroeconomic conditions, and interest rate movements are among the key risks to our rating and expected stock performance.

EQUITY RESEARCH QUICK TAKE

RBC Capital Markets, LLC
Shelby Tucker, CFA (Analyst)
(212) 428-6462, shelby.tucker@rbccm.com

October 27, 2022

CMS Energy Corporation

CORRECTION - 3Q22 EPS beat; 2022 guidance expected at top end of previous range; 2023 guidance introduced

NYSE: CMS | USD 55.90 | Sector Perform | Price Target USD 69.00

Sentiment: **Positive**

[We correct our interpretation of EPS growth implied in the 2023 initial guidance. Our sentiment is changed to Positive.]

Our view: CMS reported 3Q22 adjusted EPS results slightly above RBC and Street estimates. Initial 2023 guidance introduced and CMS expects to execute at the top end of the range. We note that this guidance is preliminary and should be slightly rebased at year-end. On the call, we expect management to highlight upside potential to its initial guidance. Additionally, we expect management to address the equity forwards ($68/sh) contracted for the financing of Covert; its current share price sits at ~ $56/sh. Finally, we believe other topics of question will include the electric rate case, IRA opportunities, and near-term cost pressures.

CMS reported 3Q22 adjusted earnings of $0.56 per share, vs. prior year of $0.55, consensus and RBC estimate of $0.54. Management introduced 2023 EPS guidance of $3.05 – $3.11; our estimate and consensus are $3.12. Management reaffirmed its long-term 6-8% adjusted EPS and DPS growth. We highlight key YoY variances vs. our estimate below:

- Weather: -$0.03 vs. RBCe of -$0.08
- Deliveries, net of weather: -$0.05 vs. RBC estimate of +0.01
- Rate relief: +$0.02 vs. RBC estimate of +$0.02
- O&M / customer initiatives and storm costs: +$0.04 vs. RBC estimate of +$0.11
- Investment cost: -$0.03 vs. RBC estimate of -$0.06
- Parent: +$0.04 vs. RBC estimate flat

Covert Facility financing update. CMS contracted equity forwards to issue $493M of equity at ~$68/share, which we expect will be issued in mid-2023.

Guidance update. 2022 guidance reaffirmed to the top end of its previous $2.85-$2.89 guidance to $2.87-$2.89. 2023 guidance was introduced at $3.05-$3.11. 2023 guidance midpoint of $3.08 implies 6.9% EPS growth off of the 2022 midpoint, which is in-line with its 6% to 8% EPS growth target.

Load growth. Consumers Energy recorded 3.1% weather- normalized electric load growth for the quarter, comprised of (-2.0%), (-0.1%), and 14.4% for residential/commercial/industrial, respectively. In the slides, CMS highlights strong industrial developments occurring in the state, which we expect will translate to continue strong load growth in the coming years.

Conference call today at 9:30AM. The dial in number is 1-844-200-6205, passcode 904871.

CMS Energy Corp

Q3'22 Beat & EPS Guidance Raised

Equities

Americas

Electric Utilities

12-month rating	Neutral
12m price target	US$61.00
Price (27 Oct 2022)	US$56.60

RIC: CMS.N **BBG:** CMS US

Trading data and key metrics

52-wk range	US$73.56-53.36
Market cap.	US$16.4b
Shares o/s	290m (COM)
Free float	99%
Avg. daily volume ('000)	706
Avg. daily value (m)	US$44.3
Common s/h equity (12/22E)	US$6.70b
P/BV (12/22E)	2.4x
Net debt to EBITDA (12/22E)	5.9x

EPS (UBS, diluted) (US$)

	12/22E			
	From	To	% ch	Cons.
Q1	1.20	1.20	0	1.20
Q2	0.53	0.53	0	0.53
Q3	0.52	0.56	8	0.55
Q4E	0.62	0.58	-7	0.63
12/22E	2.87	2.87	0	2.88
12/23E	3.12	3.12	0	3.12
12/24E	3.37	3.37	0	3.39

Ross Fowler, CFA
Analyst
ross.fowler@ubs.com
+1-212-713-1287

Gregg Orrill
Analyst
gregg.orrill@ubs.com
+1-212-713 1064

Q3'22 Results

CMS reported Q3'22 Adj. EPS of $0.56 vs. $0.55 consensus estimates and $0.52 UBSe. For a detailed review of drivers, see our earlier note.

Drivers for 2023

On the call CMS provided some drivers for 2023 EPS guidance. These include some headwinds from normal weather and the sales mix. The Covert transaction and the equity forward at $68/share are additive to the IRP contribution. A partial year of the electric and gas rate case impacts are also positive offset by other items. Based on these drivers, we are providing our analysis for 2023 earnings guidance in the next page.

IRP Updates

For the IRP, which includes 8GW of solar, 200MW of wind, the IRA provides tax incentives reducing costs and creating a substantial backlog of renewables. Also, the 550MW of battery storage might be accelerated through 2040 with 75 MG of battery storage starting in 2024. Costs for new solar could be reduced by ~15%, which implies $60mln of savings on a year basis.

Valuation:

Our $61 price target is a 19% premium to the Utility average or 18x $3.37 in 2024E. The base scenario represents 8% EPS growth or the high-end of the 6% to 8% EPS growth guidance. The 19% premium includes +5% for the sustainable premium relationship of the relative yield versus the Baa corporate bond, +10% for first quartile regulation, and +4% or top quartile growth.

Highlights (US$m)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
Revenues	6,851	6,680	7,329	7,279	7,734	7,952	8,197	8,364
EBIT (UBS)	1,354	1,409	1,351	1,387	1,552	1,673	1,793	1,945
Net earnings (UBS)	708	766	767	832	905	983	1,074	1,175
EPS (UBS, diluted) (US$)	2.49	2.67	2.65	2.87	3.12	3.37	3.64	3.93
DPS (net) (US$)	1.53	1.63	1.74	1.86	2.02	2.22	2.40	2.57
Net (debt) / cash	(13,068)	(15,553)	(13,506)	(14,670)	(16,615)	(18,246)	(19,418)	(20,535)
Profitability/valuation	**12/19**	**12/20**	**12/21**	**12/22E**	**12/23E**	**12/24E**	**12/25E**	**12/26E**
EBIT (UBS) margin %	19.8	21.1	18.4	19.0	20.1	21.0	21.9	23.3
ROIC (EBIT) %	7.9	7.2	6.6	6.7	6.9	6.8	6.8	6.9
EV/EBITDA (UBS core) x	12.3	13.0	13.0	12.4	11.5	11.3	11.0	10.8
P/E (UBS, diluted) x	23.3	23.0	23.0	19.7	18.1	16.8	15.6	14.4
Equity FCF (UBS) yield %	(1.9)	(5.9)	(2.3)	(5.2)	(10.7)	(6.0)	(4.3)	(3.6)
Dividend yield (net) %	2.6	2.7	2.9	3.3	3.6	3.9	4.2	4.5

Source: Company accounts, Thomson Reuters, UBS estimates. Metrics marked as (UBS) have had analyst adjustments applied. Valuations: based on an average share price that year, (E): based on a share price of US$ 56.60 on 27-Oct-2022 17:37:40 EDT

Figure 1: 2023 Earnings Guidance Drivers

2023 Earnings Guidance Drivers	
2022 Midpoint	$2.88
Normal Weather	-$0.20
Covert/IRP contribution	$0.04
Equity forward	$0.02
Gas rate relief $170M effective 10/1/22	$0.35
Electric rate base $1.3B at 9.9% ROE --Effective 3/1/2022	$0.14
Retail sales/other	-$0.15
2023 Midpoint	**$3.08**

Source: Company Reports, UBS

CMS Energy Corp (CMS.N)

Income Statement (US$m)	12/19	12/20	12/21	12/22E	%ch	12/23E	%ch	12/24E	12/25E	12/26E
Revenues	**6,851**	**6,680**	**7,329**	**7,279**	-0.7	**7,734**	6.2	**7,952**	**8,197**	**8,364**
Gross profit	4,018	4,172	4,259	4,438	4.2	4,834	8.9	5,027	5,247	5,389
EBITDA (UBS)	**2,346**	**2,457**	**2,465**	**2,466**	0.1	**2,791**	13.2	**3,005**	**3,211**	**3,355**
Depreciation & amortisation	(992)	(1,048)	(1,114)	(1,080)	3.1	(1,239)	-14.8	(1,332)	(1,418)	(1,409)
EBIT (UBS)	**1,354**	**1,409**	**1,351**	**1,387**	2.6	**1,552**	11.9	**1,673**	**1,793**	**1,945**
Associates & investment income	0	0	0	0	-	0	-	0	0	0
Other non-operating income	0	0	(160)	0	-	0	-	0	0	0
Net interest	(488)	(493)	(490)	(415)	15.2	(473)	-13.8	(518)	(554)	(580)
Exceptionals (incl goodwill)	0	0	0	0	-	0	-	0	0	0
Pre-tax profit	**866**	**916**	**701**	**971**	38.6	**1,079**	11.1	**1,155**	**1,239**	**1,365**
Tax	(156)	(148)	68	(137)	-	(161)	-17.6	(151)	(142)	(169)
Profit after tax	**710**	**768**	**769**	**834**	8.5	**918**	10.1	**1,005**	**1,096**	**1,197**
Preference dividends	(2)	(2)	(2)	(2)	0.0	(14)	NM	(22)	(22)	(22)
Minorities	0	0	0	0	-	0	-	0	0	0
Extraordinary items	(28)	(11)	581	3	-99.5	0	-	0	0	0
Net earnings (local GAAP)	**680**	**755**	**1,348**	**835**	-38.0	**905**	8.3	**983**	**1,074**	**1,175**
Net earnings (UBS)	**708**	**766**	**767**	**832**	8.5	**905**	8.7	**983**	**1,074**	**1,175**
Tax rate (%)	18.0	16.2	0.0	14.1	-	14.9	5.8	13.0	11.5	12.4
Per Share (US$)	**12/19**	**12/20**	**12/21**	**12/22E**	**%ch**	**12/23E**	**%ch**	**12/24E**	**12/25E**	**12/26E**
EPS (UBS, diluted)	2.49	2.67	2.65	2.87	8.4	3.12	8.7	3.37	3.64	3.93
EPS (local GAAP, diluted)	2.39	2.63	4.66	2.88	-38.1	3.12	8.3	3.37	3.64	3.93
EPS (UBS, basic)	2.50	2.68	2.65	2.89	8.7	3.14	8.7	3.39	3.65	3.94
DPS (net) (US$)	1.53	1.63	1.74	1.86	6.7	2.02	8.8	2.22	2.40	2.57
Cash EPS (UBS, diluted) [1]	5.98	6.33	6.50	6.60	1.6	7.40	12.1	7.94	8.44	8.64
Book value per share	17.67	19.20	22.38	23.13	3.3	24.23	4.8	25.07	26.82	28.65
Average shares (diluted)	284	287	290	290	0.1	290	0.0	292	295	299
Balance Sheet (US$m)	**12/19**	**12/20**	**12/21**	**12/22E**	**%ch**	**12/23E**	**%ch**	**12/24E**	**12/25E**	**12/26E**
Cash and equivalents	140	168	476	11	-97.6	44	288.2	18	9	10
Other current assets	2,191	2,236	2,151	2,151	0.0	2,151	0.0	2,151	2,151	2,151
Total current assets	**2,331**	**2,404**	**2,627**	**2,162**	-17.7	**2,195**	1.5	**2,169**	**2,160**	**2,161**
Net tangible fixed assets	18,926	21,039	22,352	23,678	5.9	26,154	10.5	27,822	29,304	30,794
Net intangible fixed assets	0	0	0	0	-	0	-	0	0	0
Investments / other assets	5,580	6,223	3,774	3,779	0.1	3,384	-10.5	3,388	3,392	3,396
Total assets	**26,837**	**29,666**	**28,753**	**29,620**	3.0	**31,733**	7.1	**33,379**	**34,855**	**36,351**
Trade payables & other ST liabilities	1,484	1,568	897	897	0.0	897	0.0	897	897	897
Short term debt	1,220	1,506	925	350	-62.2	783	123.7	250	300	0
Total current liabilities	**2,704**	**3,074**	**1,822**	**1,247**	-31.6	**1,680**	34.7	**1,147**	**1,197**	**897**
Long term debt	11,951	13,634	12,276	13,776	12.2	15,323	11.2	17,463	18,578	19,998
Other long term liabilities	7,127	6,881	7,467	7,340	-1.7	7,156	-2.5	6,862	6,560	6,284
Preferred shares	37	581	781	555	-28.9	553	-0.4	551	549	547
Total liabilities (incl pref shares)	**21,819**	**24,170**	**22,346**	**22,918**	2.6	**24,712**	7.8	**26,023**	**26,884**	**27,726**
Common s/h equity	**5,018**	**5,496**	**6,407**	**6,701**	4.6	**7,021**	4.8	**7,355**	**7,971**	**8,625**
Minority interests	0	0	0	0	-	0	-	0	0	0
Total liabilities & equity	**26,837**	**29,666**	**28,753**	**29,620**	3.0	**31,733**	7.1	**33,379**	**34,855**	**36,351**
Cash Flow (US$m)	**12/19**	**12/20**	**12/21**	**12/22E**	**%ch**	**12/23E**	**%ch**	**12/24E**	**12/25E**	**12/26E**
Net income (before pref divs)	682	757	1,350	837	-38.0	918	9.7	1,005	1,096	1,197
Depreciation & amortisation	992	1,048	1,114	1,080	-3.1	1,239	14.8	1,332	1,418	1,409
Net change in working capital	0	0	0	0	-	0	-	0	0	0
Other operating	116	(529)	(645)	(167)	74.1	(202)	-21.2	(321)	(329)	(304)
Operating cash flow	**1,790**	**1,276**	**1,819**	**1,750**	-3.8	**1,955**	11.7	**2,016**	**2,186**	**2,302**
Tangible capital expenditure	(2,104)	(2,317)	(2,233)	(2,600)	-16.4	(3,715)	-42.9	(3,000)	(2,900)	(2,900)
Intangible capital expenditure	0	0	0	0	-	0	-	0	0	0
Net (acquisitions) & disposals	0	0	0	0	-	0	-	0	0	0
Other investing	0	0	0	0	-	0	-	0	0	0
Investing cash flow	**(2,104)**	**(2,317)**	**(2,233)**	**(2,600)**	-16.4	**(3,715)**	-42.9	**(3,000)**	**(2,900)**	**(2,900)**
Equity dividends paid	(436)	(467)	(503)	(538)	-7.0	(585)	-8.8	(647)	(708)	(770)
Share issues / (buybacks)	12	253	57	0	-	0	-	0	250	250
Other financing	(2)	(2)	(2)	(2)	0.0	(2)	0.0	(2)	(2)	(2)
Change in debt & pref shares	1,497	1,020	750	925	23.3	1,300	40.5	1,607	1,165	1,120
Financing cash flow	**1,071**	**804**	**302**	**385**	27.5	**713**	85.1	**958**	**705**	**598**
Cash flow inc/(dec) in cash	**757**	**(237)**	**(112)**	**(465)**	-316.4	**(1,047)**	-125.2	**(26)**	**(9)**	**1**
FX / non cash items	(770)	265	420	0	-99.9	1,080	NM	0	0	0
Balance sheet inc/(dec) in cash	**(13)**	**28**	**308**	**(465)**	-	**33**	-	**(26)**	**(9)**	**1**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.[1] Cash EPS (UBS, diluted) is calculated using UBS net income adding back depreciation and amortization.

CMS Energy Corp (CMS.N)

Valuation (x)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
P/E (local GAAP, diluted)	24.3	23.3	13.1	19.6	18.1	16.8	15.6	14.4
P/E (UBS, diluted)	23.3	23.0	23.0	19.7	18.1	16.8	15.6	14.4
P/CEPS	9.7	9.7	9.4	8.5	7.6	7.1	6.7	6.5
Equity FCF (UBS) yield %	(1.9)	(5.9)	(2.3)	(5.2)	(10.7)	(6.0)	(4.3)	(3.6)
Dividend yield (net) %	2.6	2.7	2.9	3.3	3.6	3.9	4.2	4.5
P/BV	3.3	3.2	2.7	2.4	2.3	2.3	2.1	2.0
EV/revenues (core)	4.2	4.8	4.4	4.2	4.1	4.3	4.3	4.4
EV/EBITDA (UBS core)	12.3	13.0	13.0	12.4	11.5	11.3	11.0	10.8
EV/EBIT (core)	21.2	22.6	23.8	22.0	20.7	20.2	19.7	18.7
EV/OpFCF (core)	21.2	22.6	23.8	22.0	20.7	20.2	19.7	18.7
EV/op. invested capital	1.7	1.6	1.6	1.5	1.4	1.4	1.3	1.3

Enterprise value (US$m)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
Market cap.	16,423	17,530	17,628	16,420	16,420	16,420	16,420	16,420
Net debt (cash)	12,330	14,311	14,530	14,088	15,642	17,430	18,832	19,977
Buy out of minorities	0	0	0	0	0	0	0	0
Pension provisions/other	0	0	0	0	0	0	0	0
Total enterprise value	**28,753**	**31,840**	**32,158**	**30,507**	**32,062**	**33,850**	**35,252**	**36,396**
Non core assets	0	0	0	0	0	0	0	0
Core enterprise value	**28,753**	**31,840**	**32,158**	**30,507**	**32,062**	**33,850**	**35,252**	**36,396**

Growth (%)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
Revenue	(0.3)	(2.5)	9.7	(0.7)	6.2	2.8	3.1	2.0
EBITDA (UBS)	8.4	4.7	0.3	0.1	13.2	7.6	6.9	4.5
EBIT (UBS)	9.9	4.1	(4.1)	2.6	11.9	7.8	7.2	8.5
EPS (UBS, diluted)	6.8	7.3	(0.8)	8.4	8.7	8.0	8.0	7.9
Net DPS	7.0	7.0	6.4	6.7	8.8	9.8	8.1	7.3

Margins & Profitability (%)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
Gross profit margin	58.6	62.5	58.1	61.0	62.5	63.2	64.0	64.4
EBITDA margin	34.2	36.8	33.6	33.9	36.1	37.8	39.2	40.1
EBIT (UBS) margin	19.8	21.1	18.4	19.0	20.1	21.0	21.9	23.3
Net earnings (UBS) margin	10.3	11.5	10.5	11.4	11.7	12.4	13.1	14.0
ROIC (EBIT)	7.9	7.2	6.6	6.7	6.9	6.8	6.8	6.9
ROIC post tax	6.4	6.0	6.6	5.8	5.9	5.9	6.0	6.0
ROE (UBS)	14.5	14.6	12.9	12.7	13.2	13.7	14.0	14.2

Capital structure & Coverage (x)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
Net debt / EBITDA	5.6	6.3	5.5	5.9	6.0	6.1	6.0	6.1
Net debt / total equity %	260.4	283.0	210.8	218.9	236.7	248.1	243.6	238.1
Net debt / (net debt + total equity) %	72.3	73.9	67.8	68.6	70.3	71.3	70.9	70.4
Net debt/EV %	42.9	44.9	45.2	46.2	48.8	51.5	53.4	54.9
Capex / depreciation %	NM	NM	NM	NM	NM	NM	NM	NM
Capex / revenue %	NM	NM	NM	NM	NM	NM	NM	NM
EBIT / net interest	2.8	2.9	2.8	3.3	3.3	3.2	3.2	3.4
Dividend cover (UBS)	1.6	1.6	1.5	1.6	1.6	1.5	1.5	1.5
Div. payout ratio (UBS) %	61.1	61.0	65.6	64.3	64.4	65.5	65.6	65.2

Revenues by division (US$m)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
Others	6,851	6,680	7,329	7,279	7,734	7,952	8,197	8,364
Total	**6,851**	**6,680**	**7,329**	**7,279**	**7,734**	**7,952**	**8,197**	**8,364**

EBIT (UBS) by division (US$m)	12/19	12/20	12/21	12/22E	12/23E	12/24E	12/25E	12/26E
Others	1,354	1,409	1,351	1,387	1,552	1,673	1,793	1,945
Total	**1,354**	**1,409**	**1,351**	**1,387**	**1,552**	**1,673**	**1,793**	**1,945**

Source: Company accounts, UBS estimates. (UBS) metrics use reported figures which have been adjusted by UBS analysts.

Forecast returns

Forecast price appreciation	+7.8%
Forecast dividend yield	3.6%
Forecast stock return	+11.3%
Market return assumption	9.4%
Forecast excess return	+1.9%

Company Description

CMS owns Consumers Energy, which is a utility that provides service to 6.7m of Michigan's 10.0m residents, and CMS Enterprises, which owns 1.2 GW of generation, primarily in the Midwest.

Valuation Method and Risk Statement

Our valuation methodology for the group is price-to-earnings based. The adjustments applied fall into 7 categories. These are as follows: 1) Group Valuation Bias: Flowing from our valuation work comparing Baa corporate yields to group dividend yields and RU price to earnings ratios to those for the S&P 500, we incorporate a positive or negative adjustment to our group multiple representing the gap we calculate to the nearest 5%; 2) Growth Adjustment: We adjust our valuations based on the growth quartile each utility occupies. First quartile receives a 4% premium, second quartile a 2% premium, third quartile a 2% discount and fourth quartile a 4% discount; 3) Regulatory Adjustment: Our valuation adjustments for regulation are based on our proprietary Regulatory Rankings. First quartile jurisdictions receive 10%, second quartile 5%, third quartile -5% and fourth quartile -10%; 4) Clean Energy Transition: A potential 5% premium for a risk adjusted clean energy transition growth opportunity; 5) Earnings Consistency Adjustment: For companies that fall in the top quartile of % Time Beat/Meet, we include +4%; 6) Multi Utility Diversified Valuation: For multi utilities (those with more than 15% of unregulated earnings), we perform a sum-of-the-parts analysis applying business/region appropriate valuations to those diversified businesses; 7) One-off Adjustments: In special situations, we value risk on an issue-specific basis. Common areas where we apply such an adjustment include: large project construction risk, legal risk, and announced M&A completion risk. We identify the following risk factors: rising interest rates; regulatory and policy risks; operational risks; construction risks; cyber security risk to the transmission grid and/or customer data, and extreme weather events. We identify the following company specific risks for CMS: Michigan regulation, allowed ROEs, customer rates.

Our $61 price target is a 19% premium to the Utility average or 18x $3.37 in 2024E. The base scenario represents 8% EPS growth or the high-end of the 6% to 8% EPS growth guidance. The 19% premium includes +5% for the sustainable premium relationship of the relative yield versus the Baa corporate bond, +10% for first quartile regulation, and +4% or top quartile growth.

Quantitative Research Review

UBS publishes a quantitative assessment of its analysts' responses to certain questions about the likelihood of an occurrence of a number of short term factors in a product known as the 'Quantitative Research Review'. The views for this month can be found below. Views contained in this assessment on a particular stock reflect only the views on those short term factors which are a different timeframe to the 12-month timeframe reflected in any equity rating set out in this note. For previous responses please make reference to (i) previous UBS research reports; and (ii) where no applicable research report was published that month, the Quantitative Research Review which can be found at https://neo.ubs.com/quantitative, or contact your UBS sales representative for access to the report or the Quantitative Research Team on qa@ubs.com. A consolidated report which contains all responses is also available and again you should contact your UBS sales representative for details and pricing or the Quantitative Research Team on the email above.

CMS Energy Corp

Question	Response
1. Is the industry structure facing the firm likely to improve or deteriorate over the next year? Rate on a scale of 1-5 (1 = getting worse, 3 = no change, 5 = getting better, N/A = no view)	4
2. Is the regulatory/government environment facing the firm likely to improve or deteriorate over the next year? Rate on a scale of 1-5 (1 = getting tougher 3 = no change, 5 = getting better, N/A = no view)	3
3. Over the last 3-6 months in broad terms have things been improving/no change/getting worse for this stock? Rate on a scale of 1-5 (1 = getting a lot worse, 3 = not much change, 5 = getting a lot better, N/A = no view)	4
4. Relative to the current CONSENSUS EPS forecast, is the next company EPS update likely to lead to: (1 = negative surprise vs consensus, 3 = in-line with consensus, 5 = positive surprise vs consensus expectations, N/A = no view)	3
5. What's driving the difference?	
6. Relative to YOUR current earnings forecast, is there relatively greater risk at the next earnings result of:(1 = downside skew risk to earnings, 3 = equal upside or downside risk to earnings, 5 = upside skew risk to earnings, N/A = no view)	3
7. What's driving the difference?	
8. Is there an upcoming catalyst for the company over the next three months?	No Catalyst
9. Is there an actual or approximate date for the catalyst?	
10. Is the catalyst date an actual or approximate date?	N/A
11. What is the catalyst?	

Equity Research

WELLS FARGO

Price Target Change — October 27, 2022

Regulated Electric Utilities

Earnings Round-Up: AEP, CMS, DTE, PCG, SO & XEL

Our Call

Several of our electric utilities reported Q3'22 earnings on 10/27. Despite fears that the macro backdrop could result in more headwinds for the sector, we viewed the tone of the updates and calls to be quite positive. The IRA was front and center with mgmt. teams highlighting the positive customer savings and capex implications of the climate bill.

Below, we provide quick takeaways on XEL, PCG, CMS, DTE, SO, and AEP, followed by longer discussions in the body of the note (except AEP, given the recency of the company's Analyst Day).

XEL (Equal Weight). Bullish 5-yr update included a 13% capex increase, lower external equity needs due to IRA-related cash flow benefits and a 6.5-8.0% rate base CAGR. Equal Weight rating reflects premium valuation (10% P/E multiple premium on our 23E EPS).

PCG (Overweight). The growth utility. Higher rate base CAGR (9.5% vs. 9.0%) reinforces confidence in PCG's 10% EPS CAGR through '26. Guidance of no equity needs through '24 also positive (assuming Pacific Generation minority sale). Our SOTP-based PT goes to $18/sh from $17/sh.

CMS (Overweight). Yet another solid update. No surprise, '22 guidance raised to $2.87-2.89 while '23 EPS guidance of $3.05-3.11 reflects 6-8% growth (bias is toward top end). We tweak our EPS outlook down slightly reflecting assumed higher parent debt costs, but our 5-yr EPS CAGR remains 8%.

DTE (Overweight). While DTE is saving the major financial updates for the EEI conference (11/13-11/16), mgmt. strongly suggested that capex would go higher driven by next week's IRP filing and the IRA. We also think DTE might raise the 5-yr EPS CAGR range to 6-8% from 5-7%.

SO (Equal Weight). No changes were made to the new nuclear project's projected in-service dates or costs. Mgmt expects to deliver near the top end of '22's adjusted EPS guidance range of $3.50-3.60. Execution over the next 12-15 months remains key on new nuclear, plus GA regulatory matters (rate case, fuel case, prudency, etc.).

AEP (Overweight). Not much new from AEP as the Q3 update comes shortly on the heels of the 10/4 Analyst Day. We nudge up our 22E EPS to/from $5.02/$4.97, which reflects the midpoint of company guidance, and maintain our 23-26E EPS of $5.29, $5.59, $5.92 & $6.25. We continue to like the risk/reward proposition as shares still screen relatively cheap vs. peers (4-5% P/E multiple discounts). We think the focus at EEI will be on execution and how to improve earned ROEs at the underperforming utilities.

Equity Analyst(s)

Neil Kalton, CFA
Equity Analyst | Wells Fargo Securities, LLC
Neil.Kalton@wellsfargo.com | 314-875-2051

Jonathan Reeder
Equity Analyst | Wells Fargo Securities, LLC
Jonathan.Reeder@wellsfargo.com | 314-875-2052

David Welkener, CFA
Associate Equity Analyst | Wells Fargo Securities, LLC
David.Welkener@wellsfargo.com | 314-875-2054

Amanda Bersing
Associate Equity Analyst | Wells Fargo Securities, LLC
Amanda.Bersing@wellsfargo.com | 314-875-2048

Financials

$	Rating		Price	FY EPS					FY P/E		Price Target	
				2021A	2022E	2022E	2023E	2023E				
Company Name (Ticker)	Curr.	Prior	10/27/22		Curr.	Prior	Curr.	Prior	2022	2023	To	From
Regulated Electric Utilities												
American Electric Power Company, Inc. (AEP)	1	NC	$87.15	4.73	5.02	4.97	5.29	NC	17.4x	16.5x	$96.00	NC
CMS Energy Corporation (CMS)^	1	NC	$56.60	2.65	2.89	NC	3.12	3.15	19.6x	18.2x	$68.00	NC
DTE Energy Company (DTE)	1	NC	$109.28	5.99	6.00	NC	6.20	NC	18.2x	17.6x	$128.00	NC
PG&E Corporation (PCG)	1	NC	$15.38	1.00	1.10	NC	1.23	NC	14.0x	12.5x	$18.00	$17.00
The Southern Company (SO)	2	NC	$65.17	3.41	3.60	NC	3.85	NC	18.1x	16.9x	$70.00	NC
Xcel Energy, Inc. (XEL)	2	NC	$63.25	2.96	3.17	NC	3.38	NC	20.0x	18.7x	$69.00	NC

^ Signature Picks
Source: Company data and Wells Fargo Securities, LLC estimates, and Refinitiv.
1 = Overweight, 2 = Equal Weight, 3 = Underweight, NR = Not Rated, SR = Suspended
NA = Not Available, NC = No Change, NE = No Estimate, NM = Not Meaningful

Xcel Energy (XEL/Equal Weight)

Key Points. XEL's 5-yr capex refresh ('23-27) represents a 13% increase vs. '22-26 ($29.5B vs. $26.0B). In addition, XEL continues to highlight $2-4B of incremental opportunities above the base plan consisting of $1.5-3.0B of 3,500 MW of proposed renewables in CO & MN (50% ownership) and $0.5-1.0B of transmission in CO. The base capex plan supports a rate base CAGR of 6.5% while full execution of the upside opportunities would result in an 8% CAGR. Notably, new external equity needs have been substantially mitigated by expected cash flow benefits from the IRA. Specifically, XEL expects the renewable tax credit transferability provision will generate $1.8B of additional cash flow and positively impact the FFO/Debt ratio by 100 bps. As a result, XEL projects $750M of new equity during '23-27 (base plan) vs. the '22-26 guidance of $1.25B.

Turning to EPS, XEL narrowed the '22 EPS guidance range to $3.14-3.19 vs. the original guidance of $3.10-3.20, initiated a '23 EPS guidance range of $3.30-3.40 and reiterated the 5-yr EPS CAGR of 5-7%, which is now off the original mid-point of '22 guidance ($3.15)

Analysis. We adjust our model to reflect XEL's '23-27 base capex and financing plans while also incorporating higher assumed parent borrowing costs. While there is no change to our 23E EPS of $3.38, which sits in the upper half of XEL's guidance range, we increase our 24-26E EPS to/from $3.60/$3.58, $3.83/$3.78 & $4.05/$3.97. We introduce a 27E EPS of $4.23. Our EPS outlook results in a 6% CAGR off of the original midpoint of '22 guidance ($3.15). Our outlook could prove to be conservative given $2-4B of identified incremental regulated capex opportunities along with the continued possibility of PPA buyouts. We estimate that every $2B of incremental investment could add $0.10 to annual EPS power (after factoring in parent financing costs) and increase the EPS CAGR by 50 bps. We reiterate our Equal Weight rating as we think the share price adequately reflects XEL's favorable characteristics. We maintain our forward price target of $69/sh.

PG&E Corp. (PCG/Overweight)

Key Points. PCG initiated a '23 EPS guidance range of $1.19-1.23, which represents an 8-12% increase vs. the midpoint of the '22 guidance range ($1.10). In addition, the company increased the 5-yr rate base CAGR to 9.5% from 9.0%. PCG's rate base CAGR reflects the midpoint of the company's '22-26 capex projection of $65-82B. The low end of the range represents authorized capex and results in a ~7% CAGR while capex above $65B relates to spend above authorized (undergrounding, transportation electrification, etc.). Separately, mgmt. guided to no equity needs in '23 & '24 in light of expected proceeds from the planned 49.9% sale of Pacific Generation. We assume net proceeds of $1.6-1.8B premised on a transaction multiple of 1.4-1.5X estimated '23 rate base of $3.5B. The minority interest sale is subject to regulatory approval. Lastly, PCG continues to target at least 10% EPS growth in each of '23 & '24 and at least 9% EPS growth in each of '25 & '26.

Analysis. Positive update from PCG on several fronts. First, mgmt. highlighted the success of the company's wildfire mitigation efforts including the EPSS and PSPS programs. PCG estimates that the wildfire programs have mitigated 90% of the wildfire risk in the company's service territory. And longer term, undergrounding of distribution lines should further reduce risk. Second, we viewed the financial updates favorably. No change to our 23E ES of $1.23. We nudge up our 24E EPS to/from $1.36/$1.35. We continue to project a 5-yr EPS CAGR of 10% off of the 21A adjusted EPS of $1.00.

We reiterate our Overweight rating and increase our SOTP-based forward price target to $18/sh from $17/sh largely driven by a lower assumed P/E multiple discount relative to peers (5-10% vs. 10%) as we continue to gain confidence in PCG's EPS growth outlook. Separately, we slightly lowered our estimated present value of PCG's future wildfire liabilities to $5B from $6B.

CMS Energy (CMS/Overweight)

Key Points. CMS initiated '23 EPS guidance of $3.05-3.11, which represents a 6-8% increase over the original midpoint of '22 guidance ($2.87). Consistent with prior commentary mgmt. indicated a bias toward the high end of the 6-8% range. Separately, CMS raised the '22 EPS guidance range to $2.87-2.89 from $2.85-2.89 and pointed out that the company's long-term CAGR (6-8%) is premised of off prior year actual results. Turning to the IRA, CMS provided additional details on the positive impacts of the climate bill. These include >$60M in customer savings driven by projected lower solar costs and enhanced competitive position of utility-owned solar vs. PPA (better chance that CMS owns >50% of the targeted 8 GW of solar). In addition, CMS sees no material impact from the corporate AMT through the end of the decade.

Analysis. We tweak our 23-26E EPS to/from $3.12/$3.15, $3.40/$3.45, $3.65/$3.70 & $3.90/$3.95. Our '23 revision takes into account CMS's initial guidance range, although we would not be surprised to see a modest future upward adjustments. Post '23, our modestly lower EPS estimates reflect assumed higher parent debt costs in light of the recent material increase in interest rates. Our EPS outlook results in an 8% CAGR off of our 22E EPS of $2.89. YTD, CMS shares have underperformed the S&P Utilities by ~700 bps and now trade at a 6-7% P/E multiple premium vs. peers on our 23E & 24E EPS. We think an expansion to the multiple is warranted given above-average EPS growth prospects (8% vs. 5-6% for peers), a lengthy track record of execution on financial goals and a top tier regulatory jurisdiction. We reiterate our Overweight rating and our forward price target of $68/sh.

DTE Energy (DTE/Overweight)

Key Points. DTE is on track to achieve the midpoint of mgmt's $5.90-6.10 guidance range. This represents 8% growth from original '21 guidance midpoint. DTE plans to provide initial '23 guidance and an update to 5-year plan — capex as well as the EPS CAGR using the original '22 midpoint of $5.84 as the base — at the upcoming EEI conference. In terms of top-of-mind issues for investors, mgmt does not anticipate any significant impact from the IRA's tax provisions or higher interest rates and believes the company's strong relationships throughout MI will not be impacted by the upcoming elections such that regulatory support for the utility's strategy will remain intact.

Analysis. DTE's Q3 update was very straightforward as mgmt deferred updates to mid-November at EEI. But that didn't stop mgmt from alluding to potential upside to the current 5-7% EPS CAGR target driven by (1) next week's IRP filing and (2) the benefits of the Inflation Reduction Act. Significant regulated investment opportunity exists in order to transition to cleaner energy and modernize the grid both to withstand climate impacts and handle new demand from electrification efforts. That said, DTE believes affordability (and reliability) can be maintained as the transition away from fossil fuels lowers O&M costs while IRA tax credits flow to customer benefit. Meanwhile, the IRA strengthens the economics of non-regulated Vantage's pipeline of RNG, co-gen and even CCS projects — mgmt characterized Vantage's constraint as keeping the portfolio to no more than 10% of consolidated DTE.

Our 2022-26E EPS remain $6.00, $6.20, $6.75, $7.28 & $7.85. Our outlook results in a 7.7% CAGR off the original '22 midpoint, which is above the top end of mgmt's current 5-7% target. With (1) the resolution of the DTE Electric rate case in sight (mgmt is comfortable with the staff's and ALJ's positions), (2) the IRA having a positive impact on the upcoming IRP filing (accelerate clean energy transition while maintaining affordability) and (3) minimal external equity needs to support the growth, we would not be surprised to see DTE increase the 5-7% EPS CAGR target. We reiterate our Overweight rating and forward SOTP-based price target of $128/sh.

Southern Company (SO/Equal Weight)

Key Points. Mgmt's brief prepared remarks on the Q3'22 update said it all. The complexity of the story is diminishing as the Vogtle project nears completion. No changes were made to the projected completion timeline (late Q1'23 & Q4'23) or capital cost forecast ($10.4B) from the Q2'22 update. '22 adjusted EPS is expected to be near the top end of the $3.50-3.60 range and the strength of the Southeast's economy continues to drive the core business. Mgmt echoed prior remarks that the IRA will improve customer affordability of the forthcoming fleet transition while the corporate AMT impacts are minimal.

Analysis. We reiterate our Equal Weight rating and $70/sh price target. Our 2022-26E EPS remain $3.60, $3.85, $4.20, $4.50 & $4.78. Focus in the months ahead remains on the new nuclear project and pending Georgia Power rate case before shifting to Vogtle prudency during 2H'23 – we believe constructive outcomes will be achieved. The fuel is loaded into Unit 3 and preparations and testing of systems are underway for the next major milestone of initial criticality (Jan. '23). Direct construction is 97% complete on Unit 4 but the recent electrical production levels need to be sustained for several more weeks to keep things on track — testing follows with HFT slated for March '23. For additional comments on GA regulatory matters and the potential longer-term shift in the regulatory environment, please see our GA field trip takeaways earlier this month.

Acronyms:

ALJ – Administrative Law Judge

AMT – Alternative Minimum Tax

CCS – Carbon Capture & Storage

EEI – Edison Electric Institute

EPSS – Enhanced Powerline Safety Settings

GW – Gigawatt

HFT – Hot Functional Testing

IRA – Inflation Reduction Act

IRP – Integrated Resource Plan

MW – Megawatt

O&M – Operations & Maintenance

PPA – Power Purchase Agreement

PSPS – Public Safety Power Shutoffs

RNG – Renewable Natural Gas

XEL Earnings Model (in millions except per share data)	2021	2022E	2023E	2024E	2025E	2026E	2027E
Revenues	**$13,431**	**$14,726**	**$15,212**	**$15,733**	**$16,278**	**$16,775**	**$17,251**
Expenses							
Electric Fuel & Purchase Power	$4,733	$5,269	$5,299	$5,329	$5,359	$5,390	$5,421
Natural Gas Sold and Transported	1,081	1,112	1,115	1,119	1,122	1,126	1,130
Costs of Sales - Other	38	39	40	41	43	44	45
Operating & Maintenance	2,321	2,527	2,557	2,587	2,617	2,647	2,678
Conservation	304	306	306	306	306	306	306
Depreciation & Amortization	2,121	2,254	2,451	2,664	2,894	3,110	3,325
Other Taxes	630	675	687	699	711	724	737
Total Operating Expenses	**$11,228**	**$12,182**	**$12,455**	**$12,744**	**$13,053**	**$13,347**	**$13,642**
Operating Income	**2,203**	**2,544**	**2,757**	**2,989**	**3,225**	**3,428**	**3,609**
EBITDA	**4,324**	**4,798**	**5,208**	**5,653**	**6,119**	**6,538**	**6,933**
Total Other Income	**$140**	**$111**	**$111**	**$111**	**$111**	**$111**	**$111**
Total Interest Expense	**816**	**898**	**984**	**1,082**	**1,180**	**1,249**	**1,316**
Income Taxes	**(70)**	**23**	**23**	**28**	**31**	**34**	**35**
Tax Rate	-5%	1%	1%	1%	1%	1%	1%
Net Income from Continuing Ops.	**$1,597**	**$1,734**	**$1,860**	**$1,990**	**$2,125**	**$2,255**	**$2,368**
Discontinued Operations	0	0	0	0	0	0	0
Net Income	**1,597**	**1,734**	**1,860**	**1,990**	**2,125**	**2,255**	**2,368**
Preferred Dividends	0	0	0	0	0	0	0
Earnings Available to Common	**$1,597**	**$1,734**	**$1,860**	**$1,990**	**$2,125**	**$2,255**	**$2,368**
Diluted - Average	540	547	551	553	556	558	559
EPS	**$2.96**	**$3.17**	**$3.38**	**$3.60**	**$3.83**	**$4.05**	**$4.23**
Non-Recurring Items	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Operating EPS (Diluted)	**$2.96**	**$3.17**	**$3.38**	**$3.60**	**$3.83**	**$4.05**	**$4.23**
Q1 EPS	0.67	0.70A					
Q2 EPS	0.58	0.60A					
Q3 EPS	1.13	1.18A					
Q4 EPS	0.58	0.69					

XEL Supplemental Information	2021	2022E	2023E	2024E	2025E	2026E	2027E
Dividend Information							
Dividends Per Share - YE Rate	$1.83	$1.95	$2.07	$2.19	$2.32	$2.46	$2.61
Dividends Paid Per Share	$1.83	$1.95	$2.07	$2.19	$2.32	$2.46	$2.61
Payout Ratio	62%	62%	61%	61%	61%	61%	62%
Cash Flow & Balance Sheet Items							
Capital Expenditures (millions)	$4,244	$5,280	$5,390	$6,200	$6,270	$5,410	$6,220
ROE	10.6%	10.7%	10.9%	11.0%	11.2%	11.3%	11.3%
FFO / Debt	16%	17%	19%	19%	19%	19%	19%
Debt / EBITDA	5.0x	4.9x	4.8x	4.8x	4.8x	4.6x	4.6x
Common Equity as % of Total Capitalization	40%	42%	41%	41%	40%	41%	41%

Source: Wells Fargo Securities, LLC estimates and company filings

CMS Earnings Model ($ millions except per share data)	2021	2022E	2023E	2024E	2025E	2026E
Revenues	**$7,329**	**$7,369**	**$7,595**	**$7,904**	**$8,154**	**$8,399**
Expenses						
Fuel, Purchased Power & Gas	3,070	3,035	3,045	3,055	3,066	3,076
Other O&M	1,610	1,507	1,535	1,565	1,594	1,625
Depreciation	1,114	1,091	1,118	1,191	1,244	1,291
Other	389	396	404	412	420	428
Total Expenses	**$6,183**	**$6,029**	**$6,103**	**$6,223**	**$6,324**	**$6,419**
EBIT	**$1,146**	**$1,340**	**$1,492**	**$1,682**	**$1,830**	**$1,980**
EBITDA	**$2,260**	**$2,431**	**$2,610**	**$2,873**	**$3,074**	**$3,270**
Other Income	177	105	105	105	105	105
Interest Expense	500	498	557	635	690	734
Income Taxes	95	123	138	156	170	187
Tax Rate	*12%*	*13%*	*13%*	*14%*	*14%*	*14%*
Earnings						
Income from Continuing Operations	$728	$824	$901	$996	$1,075	$1,163
Discontinued Operations	0	0	0	0	0	0
Non-Controlling Interests	(23)	(24)	(25)	(25)	(25)	(26)
Preferred Stock Dividends	5	9	9	9	9	9
Net Income	**$746**	**$839**	**$916**	**$1,011**	**$1,091**	**$1,179**
Avg. Diluted Shares Outstanding	290	290	294	298	299	302
EPS	$2.58	$2.89	$3.12	$3.40	$3.65	$3.90
Non-Recurring Adjustments	(0.07)	0.00	0.00	0.00	0.00	0.00
Ongoing EPS	**$2.65**	**$2.89**	**$3.12**	**$3.40**	**$3.65**	**$3.90**
Q1 EPS	1.09	1.20				
Q2 EPS	0.55	0.53				
Q3 EPS	0.54	0.56				
Q4 EPS	0.47	0.60				

CMS Supplemental Information	2021	2022E	2023E	2024E	2025E	2026E
Dividend Information						
Dividends Per Share - YE Rate	$1.74	$1.84	$1.97	$2.11	$2.25	$2.41
Dividends Paid Per Share	1.74	1.84	1.97	2.11	2.25	2.41
Payout Ratio	66%	64%	63%	62%	62%	62%
Cash Flow & Balance Sheet Items						
Capital Expenditures (millions)	$2,076	$2,624	$3,739	$3,024	$2,924	$2,924
Book ROE	12.9%	12.8%	12.8%	13.0%	13.2%	13.2%
FFO/Adjusted Debt	17%	15%	15%	14%	13%	13%
Adjusted Debt/EBITDA	4.8x	5.2x	5.4x	5.5x	5.6x	5.5x
Common Equity Ratio	33%	32%	32%	31%	32%	32%

Source: Wells Fargo Securities, LLC estimates and company filings

DTE Earnings Model ($ millions except per share data)	2021	2022E	2023E	2024E	2025E	2026E
Revenues	**$14,964**	**$13,025**	**$13,434**	**$13,884**	**$14,342**	**$14,823**
Expenses						
Fuel, Purchased Power & Gas	9,208	6,760	6,840	6,930	7,026	7,142
Other O&M	2,420	2,372	2,395	2,419	2,442	2,466
Depreciation	1,377	1,466	1,579	1,695	1,813	1,931
Other	464	437	445	454	462	471
Total Expenses	**$13,469**	**$11,036**	**$11,260**	**$11,498**	**$11,744**	**$12,009**
EBIT	**$1,495**	**$1,989**	**$2,175**	**$2,386**	**$2,598**	**$2,813**
EBITDA	**$2,872**	**$3,456**	**$3,753**	**$4,081**	**$4,411**	**$4,744**
Other Income	(209)	124	124	124	124	125
Interest Expense	630	667	736	803	872	933
Income Taxes	(130)	281	305	335	365	399
Tax Rate	*-20%*	*19%*	*19%*	*20%*	*20%*	*20%*
Earnings						
Income from Continuing Operations	$786	$1,166	$1,258	$1,372	$1,484	$1,606
Less Non-Controlling Interests	(10)	(10)	(10)	(10)	(10)	(10)
Net Income	**$796**	**$1,176**	**$1,268**	**$1,382**	**$1,494**	**$1,616**
Avg. Diluted Shares Outstanding	194	196	204	205	205	206
EPS	$4.10	$6.00	$6.20	$6.75	$7.28	$7.85
Non-Recurring	(1.89)	0.00	0.00	0.00	0.00	0.00
Ongoing EPS	**$5.99**	**$6.00**	**$6.20**	**$6.75**	**$7.28**	**$7.85**
Q1 EPS	2.00	2.31				
Q2 EPS	1.25	0.88				
Q3 EPS	1.72	1.60				
Q4 EPS	1.05	1.21				

DTE Supplemental Information	2021	2022E	2023E	2024E	2025E	2026E
Dividend Information						
Dividends Per Share - YE Rate	$3.30	$3.54	$3.79	$4.05	$4.34	$4.64
Dividends Paid Per Share	3.82	3.54	3.79	4.05	4.34	4.64
Payout Ratio	64%	59%	61%	60%	60%	59%
Cash Flow & Balance Sheet Items						
Capital Expenditures (millions)	$3,772	$3,655	$3,900	$3,900	$3,950	$3,950
Book ROE	11.0%	12.5%	11.8%	12.2%	12.5%	12.8%
FFO/Debt	19%	14%	15%	15%	15%	15%
Debt/EBITDA	5.7x	5.3x	5.3x	5.3x	5.2x	5.1x
Adjusted Common Equity Ratio	39%	37%	36%	36%	36%	36%

** 2021 actuals exclude Midstream segment that was spun-off 7/1/21*

Source: Wells Fargo Securities, LLC estimates and company filings

PCG Earnings Model ($ millions except per share data)	2021	2022E	2023E	2024E	2025E	2026E
Revenues	**$20,642**	**$21,083**	**$21,895**	**$22,620**	**$23,345**	**$24,170**
Expenses						
Fuel, Purchased Power & Gas	4,381	4,381	4,381	4,381	4,381	4,381
Other O&M	10,200	8,608	8,415	8,247	8,082	7,920
Depreciation	3,403	3,635	3,963	4,329	4,712	5,104
Other	775	470	470	470	470	470
Total Expenses	**$18,759**	**$17,094**	**$17,229**	**$17,426**	**$17,644**	**$17,875**
EBIT	**$1,883**	**$3,989**	**$4,666**	**$5,194**	**$5,701**	**$6,295**
EBITDA	**$5,286**	**$7,624**	**$8,629**	**$9,522**	**$10,412**	**$11,399**
Other Income	446	130	130	130	130	130
Interest Expense	1,581	1,581	1,562	1,586	1,685	1,781
Income Taxes	836	710	905	1,046	1,160	1,299
Tax Rate	*277%*	*29%*	*29%*	*29%*	*29%*	*29%*
Earnings						
Income from Continuing Operations	($88)	$1,828	$2,329	$2,692	$2,986	$3,345
Preferred Stock Dividend of Sub	14	14	14	14	14	14
Minority Interest - Pacific Generation		0	0	93	93	93
Net Income	**($102)**	**$1,814**	**$2,315**	**$2,585**	**$2,879**	**$3,238**
Avg. Diluted Shares Outstanding	2,130	2,141	2,151	2,151	2,171	2,211
EPS	($0.05)	$0.85	$1.08	$1.20	$1.33	$1.46
Non-Recurring Adjustments	(1.05)	(0.25)	(0.16)	(0.16)	(0.16)	(0.15)
Ongoing Diluted EPS	**$1.00**	**$1.10**	**$1.23**	**$1.36**	**$1.48**	**$1.62**
Q1 EPS	0.23	0.30				
Q2 EPS	0.27	0.25				
Q3 EPS	0.24	0.29				
Q4 EPS	0.28	0.26				

PCG Supplemental Information	2021	2022E	2023E	2024E	2025E	2026E
Dividend Information						
Dividends Per Share - YE Rate	$0.00	$0.00	$0.25	$0.27	$0.30	$0.32
Dividends Paid Per Share	0.00	0.00	0.12	0.27	0.30	0.32
Payout Ratio	0%	0%	10%	20%	20%	20%
Cash Flow & Balance Sheet Items						
Capital Expenditures (millions)	$7,689	$8,400	$9,550	$10,500	$10,500	$11,000
Book ROE	9.5%	9.9%	10.3%	10.4%	10.5%	10.6%
FFO/Debt	12%	17%	18%	19%	19%	21%
Debt/Adjusted EBITDA	5.9x	5.6x	4.7x	4.5x	4.3x	4.0x
Common Equity Ratio	32%	35%	38%	39%	40%	42%

Source: Wells Fargo Securities, LLC estimates and company filings

SO Earnings Model ($ millions except per share data)	2021	2022E	2023E	2024E	2025E	2026E
Revenues	**$23,113**	**$24,237**	**$25,173**	**$26,262**	**$27,255**	**$28,231**
Expenses						
Fuel, Purchased Power & Gas	6,964	7,707	7,751	7,822	7,894	7,967
Other O&M	6,088	5,568	5,675	5,785	5,897	6,012
Depreciation	3,565	3,647	3,877	4,129	4,384	4,642
Other	2,798	1,310	1,336	1,363	1,390	1,418
Total Expenses	**$19,415**	**$18,232**	**$18,640**	**$19,099**	**$19,565**	**$20,039**
EBIT	**$3,698**	**$6,005**	**$6,533**	**$7,163**	**$7,689**	**$8,192**
EBITDA	**$7,263**	**$9,652**	**$10,410**	**$11,292**	**$12,073**	**$12,834**
Other Income	722	625	623	603	622	631
Interest Expense	1,844	1,986	2,088	2,207	2,340	2,469
Income Taxes	267	870	959	1,066	1,153	1,235
Tax Rate	*11%*	*19%*	*20%*	*20%*	*20%*	*20%*
Earnings						
Income from Continuing Operations	$2,309	$3,775	$4,110	$4,493	$4,818	$5,118
Preferred Stock Dividend of Sub	15	14	14	14	14	14
Non-Controlling Interest	(99)	(99)	(99)	(99)	(99)	(99)
Net Income	**$2,393**	**$3,859**	**$4,194**	**$4,578**	**$4,903**	**$5,203**
Avg. Basic Shares Outstanding	1,061	1,073	1,089	1,089	1,089	1,089
EPS	$2.26	$3.60	$3.85	$4.20	$4.50	$4.78
Non-Recurring Adjustments	(1.15)	0.00	0.00	0.00	0.00	0.00
Ongoing EPS	**$3.41**	**$3.60**	**$3.85**	**$4.20**	**$4.50**	**$4.78**
Q1 EPS	0.98	0.97				
Q2 EPS	0.84	1.07				
Q3 EPS	1.23	1.31				
Q4 EPS	0.36	0.24				

SO Supplemental Information	2021	2022E	2023E	2024E	2025E	2026E
Dividend Information						
Dividends Per Share - YE Rate	$2.64	$2.72	$2.88	$3.04	$3.20	$3.36
Dividends Paid Per Share	2.62	2.70	2.86	3.02	3.18	3.34
Payout Ratio	77%	75%	74%	72%	71%	70%
Cash Flow & Balance Sheet Items						
Capital Expenditures (millions)	$7,240	$9,200	$9,484	$9,119	$9,069	$9,344
Book ROE	12.9%	13.2%	13.5%	14.3%	14.7%	15.0%
FFO/Debt	13%	15%	14%	14%	14%	15%
Debt/EBITDA	7.2x	5.8x	5.8x	5.6x	5.5x	5.5x
Common Equity Ratio	33%	34%	33%	32%	32%	32%

Source: Wells Fargo Securities, LLC estimates and company filings

AEP Earnings Model (in millions except per share data)	2020	2021	2022E	2023E	2024E	2025E	2026E
Revenues	14,919	16,792	17,358	17,567	18,252	18,963	19,631
Expenses							
Fuel & Purchased Power	$4,370	$5,466	$4,295	$4,194	$4,223	$4,252	$4,282
Operation & Maintenance	3,583	3,670	4,872	4,655	4,675	4,695	4,716
Depreciation & Amortization	2,683	2,826	2,977	3,061	3,306	3,568	3,816
Other Taxes	1,296	1,408	1,396	1,385	1,403	1,421	1,440
Asset Impairments & Other Charges	0	12	0	0	0	0	0
Total Operating Expenses	**$11,931**	**$13,381**	**$13,540**	**$13,295**	**$13,606**	**$13,937**	**$14,253**
Operating Income	**2,988**	**3,411**	**3,819**	**4,272**	**4,646**	**5,026**	**5,377**
EBITDA	**$5,671**	**$6,237**	**$6,796**	**$7,333**	**$7,951**	**$8,594**	**$9,193**
Total Other Income	**$324**	**$300**	**$283**	**$286**	**$286**	**$297**	**$307**
Total Interest Expense	**$1,166**	**$1,199**	**$1,270**	**$1,359**	**$1,496**	**$1,633**	**$1,742**
Income Taxes	**$41**	**$116**	**$335**	**$520**	**$561**	**$599**	**$637**
Tax Rate	*2%*	*5%*	*12%*	*16%*	*16%*	*16%*	*16%*
Equity Earnings in Unconsolidated Subs	$91	$92	$62	$62	$62	$62	$61
Net Income from Continuing Ops.	**$2,197**	**$2,488**	**$2,559**	**$2,740**	**$2,937**	**$3,152**	**$3,367**
Discontinued Operations	0	0	0	0	0	0	0
Extraordinary Loss	0	0	0	0	0	0	0
Less Income from Noncontrolling Interests	(3)	0	3	3	3	3	3
Preferred Stock Dividends	0	0	0	0	0	0	0
Earnings Avaialble for Common	**$2,200**	**$2,488**	**$2,556**	**$2,737**	**$2,933**	**$3,148**	**$3,363**
Diluted Shares - Average	497	502	509	517	525	532	538
EPS	$4.42	$4.96	$5.02	$5.29	$5.59	$5.92	$6.25
Non-Recurring Items	$0.00	$0.23	$0.00	$0.00	$0.00	$0.00	$0.00
Operating EPS (Diluted)	**$4.42**	**$4.73**	**$5.02**	**$5.29**	**$5.59**	**$5.92**	**$6.25**
Q1 EPS	$1.02	$1.15	$1.22A				
Q2 EPS	$1.08	$1.18	$1.20A				
Q3 EPS	$1.47	$1.43	$1.62A				
Q4 EPS	$0.87	$0.98	$0.98				

AEP Supplemental Information	2020	2021	2022E	2023E	2024E	2025E	2026E
Dividend Information							
Dividends Per Share - YE Rate	$2.96	$3.12	$3.27	$3.42	$3.57	$3.72	$3.87
Dividends Paid Per Share	2.84	3.00	3.15	3.30	3.45	3.60	3.75
Payout Ratio (%)	64	63	63	62	62	61	60
Cash Flow & Balance Sheet Items							
Capital Expenditures (millions)	6,246	5,660	7,588	7,072	8,437	7,839	7,310
Book ROE	10.9%	11.0%	10.9%	10.8%	10.8%	10.8%	10.8%
FFO/Debt	12.7%	13.2%	15.0%	15.2%	14.8%	15.0%	15.5%
Debt/EBITDA	5.9	5.8	5.4	5.3	5.4	5.3	5.1
Common Equity as % of Total Capitalization	38%	38%	40%	40%	40%	40%	41%

Source: Wells Fargo Securities, LLC estimates and company filings

US Utilities

Michigan PSC Orders Audit of DTE and CMS

Equities

Americas

Utilities

Ross Fowler, CFA
Analyst
ross.fowler@ubs.com
+1-212-713-1287

Gregg Orrill
Analyst
gregg.orrill@ubs.com
+1-212-713 1064

William Appicelli, CFA
Analyst
william.appicelli@ubs.com
+1-212-713 1414

These are the areas of the Audit

Last Wednesday, the Michigan Public Service Commission (MPSC) ordered its staff to begin independent audits of its two largest electricity providers, DTE's and CMS's electrical distribution systems. The investigation was ordered after the state was struck by a storm on August 29 and left ~500,000 customers without power, some for almost a week. In order to determine measures that may mitigate or prevent future crises, the Commission concluded that an independent review of the DTE and CMS electric distribution system is required. The comprehensive review also includes a management audit and a review of internal policies. The review will focus on both the total number of outages and how long they last. It will also look for ways to improve safety, especially in terms of how the public might come into contact with the electrical distribution systems.

What is the process?

DTE and CMS should file a report in docket (U-21305) as described in the order by November 4, 2022. DTE and CMS' electric distribution systems must be reviewed by a third party as directed by the Commission. Any party may file an appeal within 30 days of receiving notice of this order.

Investment opportunity

Post the audit there is likely an incremental opportunity in substation investment and other grid hardening. We expect updates when the companies report third quarter earnings.

Valuation

We maintain Neutral ratings on DTE and CMS.

Valuation Method and Risk Statement

Our valuation methodology for the group is price to earnings based.

North American utilities: We identify the following risk factors for the sector overall: rising interest rates; regulatory and policy risks; operational risks; construction risks; cybersecurity risk to the transmission grid and/or customer data, and extreme weather events.

CMS:
Our $76 price target for CMS is a 23% premium to the Regulated Utility group and is 22.6x our $3.37 2024 EPS estimate. The premium includes a 10% premium for the group's undervaluation, 5% for first quartile Michigan regulation, 4% for first quartile growth, and a 4% reliability premium for beating or meeting initial EPS guidance.

We identify the following risk factors for the sector overall: rising interest rate; regulatory and policy risks; operational risks; construction risks; cybersecurity risk to the transmission grid and/or customer data, and extreme weather events. We identify the following company specific risks for CMS: Michigan regulation, allowed ROEs, customer rates.

DTE:
Our DTE $142 price target is a 17% premium to the Utility group average or 21.4x our $6.64 2024E EPS estimate. The 17% premium is and reflects: +10% for first quartile Regulation, -2% for third quartile EPS growth, +4% for EPS reliability, and +5% for sustainable Regulated Utility group undervaluation relative to Baa corporate bond.
Risks to the outlook include utility regulation, legal risk, interest rates, and the credit environment.

CMS ENERGY (CMS)

CMS – Equity done covertly

October 27, 2022

Rating:
Peer Perform
Price:
$56.60
Price Target:
NA

View CMS Model
View Comp Table

The Wolfe Byte

CMS reported an in-line Q3 and raised 2022 guidance. Initial 2023 guidance missed consensus/us even at the top-end, while the high-end of 6-8% EPS growth was reaffirmed. Getting forward equity contracted for Covert at higher prices was smart.

Q3 EPS in-line and 2022 guidance raise. CMS reported Q3 EPS of $0.56 – in-line with consensus/us at $0.54. This was up from $0.54 last year on rate relief and lower O&M/storms. CMS also raised the low-end of its 2022 guidance range – moving up to $2.87-2.89.

2023 guidance missed, what happened to Covert upside/accretion? CMS also issued 2023 guidance at $3.05-3.11 and pointed to the high-end, which still missed our prior estimate and then-consensus. The high-end implies 8.0% growth off the midpoint of 2022 guidance. While CMS often talked about "strengthening and lengthening" the plan with rate-basing Covert, this was also referred to as an upside and accretive. It ended up being neither.

High-end of 6-8% EPS growth still solid. CMS reaffirmed its long-term target of 6-8% growth, which will be re-based off 2022 actuals at year-end. This is still better than most peers. However, we and others had hoped that getting back to the pre-Enerbank sale trajectory could happen sooner.

Getting Covert equity contracted was smart. CMS announced that it has contracted (but not yet drawn) $493M of equity. This was done via forward under the ATM. Of that amount, $438M was for Covert, which matched expectations. Getting pricing done at $68/sh before the sector decline was a savvy move.

Year-end call will have more on capex/equity. We expect a refresh/increase to CMS' current $14.3B five-year capex plan. We'll also be watching long-term equity needs, as the current plan has $250M/year of issuances re-starting in 2025.

Revising estimates – 2022 up, 2023-2025 down. We nudge our 2022E up by $0.01 to reflect the strong year. However, we've effectively offset any Covert upside in 2023-2025, to reflect CMS growing at 8% – resulting in $0.02-0.04/sh of downside. We use a 10% premium multiple, which implies a fair value range of $61-64. Remain Peer Perform.

ESTIMATES				
($)	**2022E**	**2023E**	**2024E**	**2025E**
EPS FY	2.88 E	3.10 E	3.34 E	3.60 E
Prior	2.87 E	3.14 E	3.38 E	3.62 E
Cons.	2.88 E	3.12 E	3.39 E	3.66 E
P/E	19.6x	18.3x	17.0x	15.7x
Dividend per Share FY	1.84 E	1.95 E	2.09 E	2.23 E
Dividend Yield	3.3%	3.4%	3.7%	3.9%

Source: Company Documents, Wolfe Research, FactSet
Numbers may not add up due to rounding; Fiscal Year Ends December

Company Information

52-Week Range	$53 - $74
Market Cap. (MM)	$16,425
Enterprise Value (MM)	$30,795
Shares Out. (MM)	290.2
Dividend Yield	3.3%
Dividend Payout Ratio	63.8%
ROE	11.3%
Debt to Cap	64.4%
Avg. Value Traded (MM)	$170.51

Price Performance

	YTD	LTM
CMS	(13)%	(7)%
UTY Index	(10)%	(4)%
S&P 500	(20)%	(17)%

Source: FactSet

Priced as of 10/27/22

Steve Fleishman
sfleishman@wolferesearch.com
(646) 582-9241
View Steve's Research

Michael Sullivan, CFA
msullivan@wolferesearch.com
(646) 582-9245

Investment Conclusion

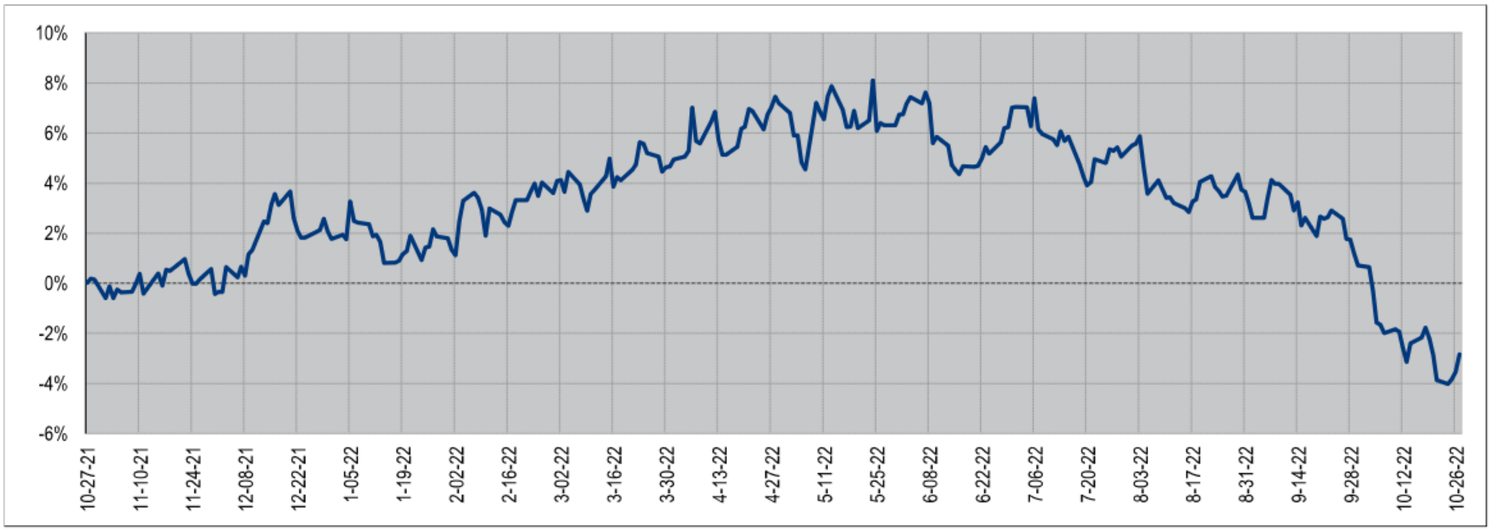
We are Peer Perform-rated on CMS Energy given that it still trades at a premium pro forma for the Enerbank sale and IRP capex. The stock has historically been one of the core, low-risk names in the sector. CMS targets above-average long-term earnings / dividend growth (6-8%), with the potential to hit the high-end. The company continues to have long-dated visibility on its robust capital spend opportunities with 95%+ regulated EPS. We also find Michigan's regulatory environment to be consistently constructive. The company has a long history of cost cutting initiatives to offset most headwinds. There had been some concern on CMS' percentage of gas LDC earnings (~37%), which screens amongst the highest in our coverage, particularly during the recent run-up in commodity prices. However, CMS has a significant portion of its gas needs in storage. Further, we believe that mgmt. has been helpful in addressing electrification challenges in Michigan, while recent gas LDC sale multiples (ie: CNP, SJI) have been helpful in alleviating fears as well. CMS is also positioned to be one of the first vertically integrated utilities to exit coal in 2025.

Exhibit 1: Regulated Utilities Comparables

Company Name	Ticker	Current Price	Current Shares	Mkt Cap ($M)	P/E 2022E	P/E 2023E	P/E 2024E	P/E 2025E	Div Yield	Div Growth (E)	Payout Ratio	Price/ Book	Equity Ratio
AES Corp.	AES	$25.77	668	$17,213	16.1x	14.5x	13.6x	12.3x	2.5%	5.0%	39%	8.0x	16%
Alliant Energy	LNT	$50.90	251	$12,772	18.5x	17.7x	16.5x	15.5x	3.4%	6.2%	62%	2.1x	43%
Ameren	AEE	80.28	258	20,742	19.7x	18.4x	17.0x	16.1x	2.9%	7.0%	58%	2.1x	40%
American Electric	AEP	87.18	514	44,787	17.4x	16.5x	15.6x	14.6x	3.6%	6.0%	62%	1.9x	39%
Avangrid	AGR	40.02	387	15,473	17.2x	18.8x	18.2x	16.5x	4.4%	0.0%	76%	0.8x	70%
CenterPoint Energy	CNP	27.99	630	17,620	20.3x	18.7x	17.3x	16.1x	2.4%	8.0%	49%	1.9x	40%
CMS Energy	CMS	56.60	290	16,425	19.6x	18.3x	17.0x	15.7x	3.3%	5.7%	64%	2.5x	35%
Con Edison	ED	86.42	355	30,643	19.1x	18.1x	17.0x	16.3x	3.7%	3.0%	70%	1.5x	44%
Dominion	D	67.37	831	55,961	16.4x	15.3x	14.3x	13.3x	4.0%	6.0%	65%	2.1x	39%
DTE Energy	DTE	109.28	194	21,172	18.2x	17.5x	16.4x	15.2x	3.3%	7.0%	60%	2.5x	31%
Duke Energy	DUK	91.04	770	70,092	16.8x	16.1x	14.9x	14.1x	4.4%	2.0%	74%	1.5x	41%
Edison International	EIX	58.38	381	22,268	13.5x	12.4x	11.6x	10.7x	4.8%	5.7%	65%	1.8x	34%
Emera*	EMA	51.00	266	13,556	17.2x	15.7x	14.9x	14.2x	5.3%	4.0%	90%	1.5x	38%
Entergy	ETR	105.03	203	21,365	16.4x	15.6x	14.6x	13.6x	4.1%	6.0%	67%	1.8x	31%
Evergy	EVRG	60.20	230	13,817	17.0x	15.7x	14.9x	14.0x	3.9%	7.0%	66%	1.5x	44%
Eversource Energy	ES	74.67	346	25,869	18.2x	17.0x	15.3x	14.4x	3.4%	6.2%	62%	1.7x	41%
Exelon	EXC	37.70	992	37,389	16.8x	16.2x	15.0x	13.6x	3.6%	7.0%	60%	1.6x	38%
FirstEnergy	FE	37.25	572	21,298	15.4x	15.3x	14.2x	13.3x	4.2%	0.0%	64%	2.0x	34%
Fortis*	FTS	52.13	479	24,955	18.5x	17.3x	16.5x	16.0x	4.2%	6.0%	77%	1.3x	43%
NextEra Energy	NEE	75.47	1,986	149,915	26.4x	24.5x	22.3x	20.7x	2.2%	10.0%	59%	4.1x	36%
NiSource	NI	25.37	406	10,299	17.6x	16.5x	15.1x	N/A	3.7%	6.0%	65%	1.8x	40%
OGE Energy	OGE	36.00	200	7,207	17.1x	17.7x	16.6x	15.7x	4.6%	2.0%	79%	1.7x	46%
PG&E	PCG	15.38	1,988	30,570	14.1x	12.9x	11.8x	10.8x	0.0%	N/A	0%	1.4x	30%
Pinnacle West	PNW	66.47	113	7,514	16.2x	16.1x	15.0x	14.3x	5.2%	2.5%	84%	1.3x	41%
Portland General	POR	44.42	89	3,966	15.6x	16.3x	14.4x	13.7x	4.0%	5.3%	63%	1.4x	43%
PPL Corp.	PPL	25.91	736	19,075	18.9x	16.3x	15.1x	14.4x	3.5%	6.5%	66%	1.4x	50%
PSEG	PEG	55.49	499	27,682	15.9x	15.6x	14.7x	13.6x	3.9%	5.9%	62%	2.1x	39%
Sempra	SRE	150.00	314	47,147	17.6x	16.8x	15.7x	14.8x	3.2%	8.0%	57%	1.8x	51%
Southern Company	SO	65.17	1,088	70,921	18.1x	17.3x	15.7x	14.6x	4.2%	3.8%	76%	2.4x	34%
WEC Energy Group	WEC	88.72	315	27,985	20.2x	19.3x	18.2x	17.0x	3.3%	7.4%	66%	2.5x	42%
Xcel Energy	XEL	63.25	547	34,597	20.0x	18.8x	17.5x	16.5x	3.1%	6.0%	61%	2.2x	40%
Average					**17.7x**	**16.9x**	**15.7x**	**14.7x**	**3.6%**	**5.4%**	**64%**	**2.1x**	**40%**
Average (ex EIX & PCG)					**18.0x**	**17.2x**	**16.0x**	**15.0x**	**3.7%**	**5.4%**	**66%**	**2.1x**	**40%**

Source: Wolfe Utilities & Power Research, FactSet

Exhibit 2: CMS Relative Performance vs. Regulated Utilities



Source: Wolfe Utilities & Power Research, FactSet

CMS Energy Snapshot

Exhibit 3: Financial Summary

Financial Summary	2022E	2023E	2024E	2025E
EPS	$2.88	$3.10	$3.34	$3.60
Diluted Shares Outstanding	290	295	298	299
Dividends Per Share	$1.84	$1.95	$2.09	$2.23
Dividend Yield	3.3%	3.4%	3.7%	3.9%
Dividend Payout Ratio	64%	63%	63%	62%
Equity Ratio	34%	35%	33%	33%
FFO/Net Debt	15%	14%	13%	12%
Valuation Metrics				
P/E	19.6x	18.3x	17.0x	15.7x
Price/Book	2.4x	2.2x	2.1x	2.0x
Segment EPS				
Consumers	$3.33	$3.55	$3.83	$4.09
NorthStar Clean Energy	0.13	0.13	0.13	0.13
Enerbank				
Parent	(0.57)	(0.58)	(0.62)	(0.62)
Total EPS	**$2.88**	**$3.10**	**$3.34**	**$3.60**

Source: Wolfe Utilities & Power Research

Exhibit 4: Modeling Assumptions

Assumptions	2022E	2023E	2024E	2025E
Total CapEx by Segment ($M)				
Electric Capital	$1,500	$2,108	$2,108	$1,500
Gas Capital	1,100	1,200	1,300	1,400
Total Capex	**$2,600**	**$3,308**	**$3,408**	**$2,900**
Financings ($M)				
Total Equity Issued/(Repurchased)	$0	$493	$0	$250
Total Debt Issued/(Repurchased)	1,350	1,650	1,650	1,250
Sales Forecast				
Electric	1.0%	1.0%	1.0%	1.0%
Gas	0.8%	0.8%	0.8%	0.8%

Source: Wolfe Utilities & Power Research

Company Description:

CMS Energy is based in Jackson, MI. Its vertically integrated regulated utility, Consumers Energy serves electric/gas customers in the 68 Lower Peninsula counties in MI. NorthStar Clean Energy owns unregulated generation primarily in the Midwest. CMS recently sold Enerbank.

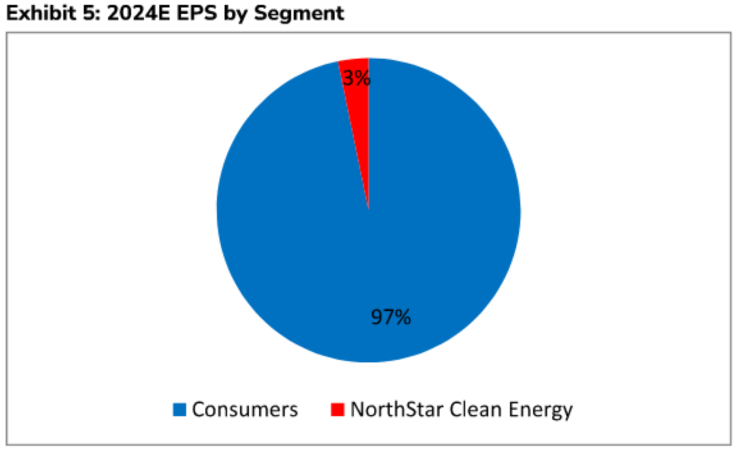
Investment Thesis:

CMS targets 6-8% EPS growth and 7% dividend growth long-term, which requires consistent rate relief in the well-balanced jurisdiction of Michigan. CMS is 95%+ regulated with an average balance sheet. Covert in the IRP is an upside, but also required more equity. The company's track record of executing on financial targets is among the best.

Valuation:

We use a 10% premium multiple on 2024E EPS to come to a $61-64 fair value range. This is warranted given a track record of execution, stability, and solid regulatory relations. Risks include rate fatigue, an increasing percentage of gas LDC earnings, and equity needs.

Exhibit 5: 2024E EPS by Segment



Source: Wolfe Utilities & Power Research

From:	Rejji P. Hayes
To:	Scripps, Daniel (LARA); Tremaine Phillips (phillips.tremaine@gmail.com); Peretick, Katherine (LARA); Byrne, Michael (LARA)
Cc:	Brandon J. Hofmeister; Michael A. Torrey; Srikanth Maddipati
Subject:	October 2022 Equity Research Reports
Date:	Monday, November 7, 2022 5:37:42 PM
Attachments:	Oct. 2022 Equity Reports.pdf

Dan, Tremaine, Katherine and Mike,

I hope this note finds you well. Attached you'll find the sell-side equity research reports for October for your perusal.

As always, please don't hesitate to reach out if you have any questions.

Best,

Rejji P. Hayes
Executive Vice President & Chief Financial Officer
CMS Energy Corporation | Consumers Energy Company
One Energy Plaza
Jackson, MI 49201
He/His/Him
M: 312.399.3403

From:	Krause, Kevin (LARA)
To:	Proudfoot, Paul (LARA); Baldwin, Julie (LARA)
Cc:	Revere, Nicholas (LARA); Duell, Jessica (LARA); Harlow, Jesse (LARA); Simpson, Naomi (LARA); Kindschy, Lisa (LARA)
Subject:	Palisades - you won''t believe this.....
Date:	Friday, September 9, 2022 5:35:00 PM

So, Palisades is in the news this afternoon.

Holtec, the Company that took over the license in order to decommission the plant, filed with the DOE for grant money to keep it operational. The Governor also put out a press release in support of the application.

I talked to a few people this afternoon, and we are in uncharted territory. It is not even clear that keeping the plant open is possible from a licensing perspective.

I just wanted to make sure you heard about the buzz and will keep you posted best I can.

Kevin Krause

From: Kudelko, Karen
To: Scripps, Daniel (LARA); Peretick, Katherine (LARA)
Cc: Cook, Kara
Subject: Palisades letter
Date: Friday, September 9, 2022 10:23:34 AM
Attachments: Whitmer Letter to Granholm re Palisades Sept 2022 FINAL.pdf

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Happy Friday all!

Please find attached the letter that just went to Sec. Granholm from Gov. Whitmer re Palisades. Thanks as always for your partnership and help with this and all things Palisades!

Best,
Karen

Karen Kudelko
Senior Deputy Director, Federal Affairs
Office of Governor Gretchen Whitmer
444 N. Capitol Street, NW, Suite 411
Washington, D.C. 20001
M: (517) [redacted]
KudelkoK@michigan.gov