



OH Conference on Clean Energy

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Vice President Sustainability Solutions

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Carbon-Free Generation Fleet:

- #1 generator of carbon-free energy in the United States
- Lowest carbon emissions and carbon intensity generator in the United States
- 31,685 MWs of total generating capacity
- ~124 million metric tons of CO₂e avoided through our nuclear fleet ⁽¹⁾
- 94.5% capacity factor at nuclear plants
- Ability to extend fleet to 80 years – providing 24/7 carbon-free power through 2050 and beyond



Industry Leading Customer Business:

- #1 in market share for C&I customers
- #2 retail electricity provider
- #3 in market share for mass market customers
- Top 10 natural gas provider in the U.S.
- Serves ¾ of the Fortune 100
- 2 million total customers
- 205 TWhs of load served
- Operates in 48 states and the District of Columbia



Supporting our Communities:

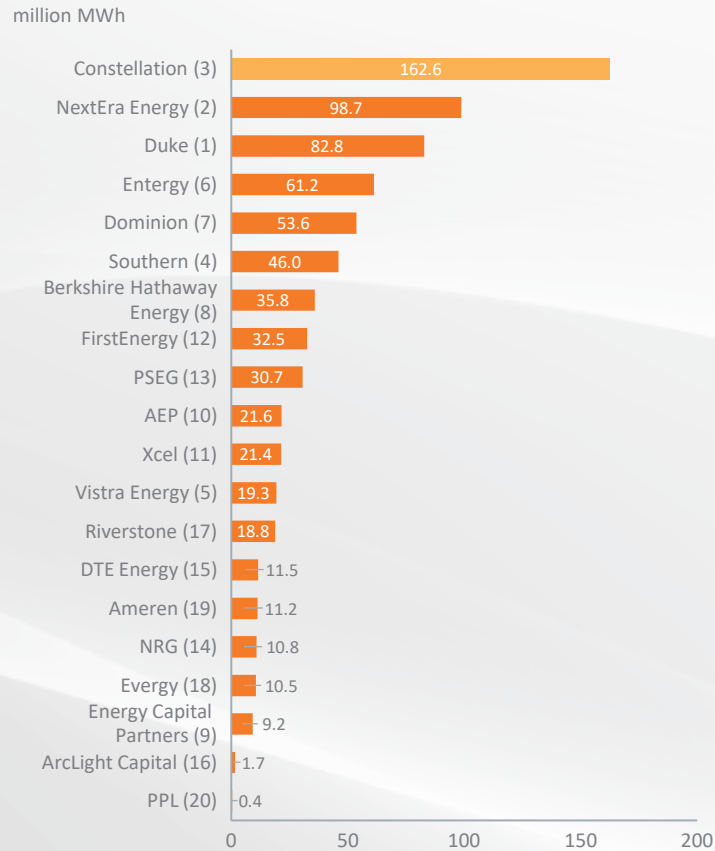
- Fortune 200 company, based on \$19.6 billion in operating revenues in 2021
- Approximately 12,000 employees nationwide
- Investing in local communities through \$215 million in local property taxes and \$93 million in state payroll taxes
- Employees volunteered over 64,800 hours in 2021
- Increasingly diverse workforce, with strong diverse hiring and promotion rates and community workforce development partnerships

Note: Numbers reflect year-end 2021

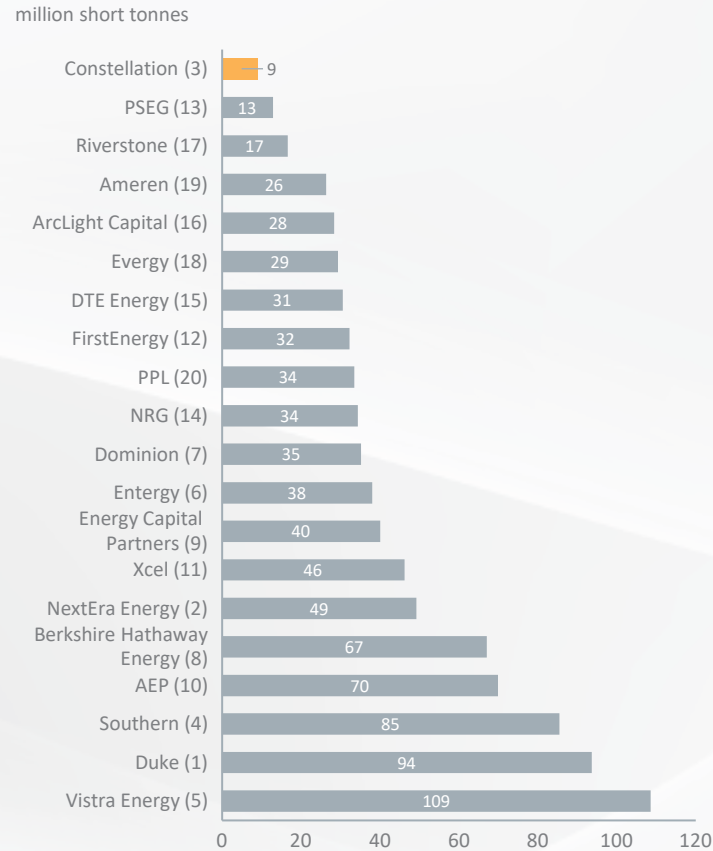
(1) Measured using the EPA Greenhouse Gas Emissions calculator <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Constellation is the Largest Producer of Carbon-Free Electricity in the United States

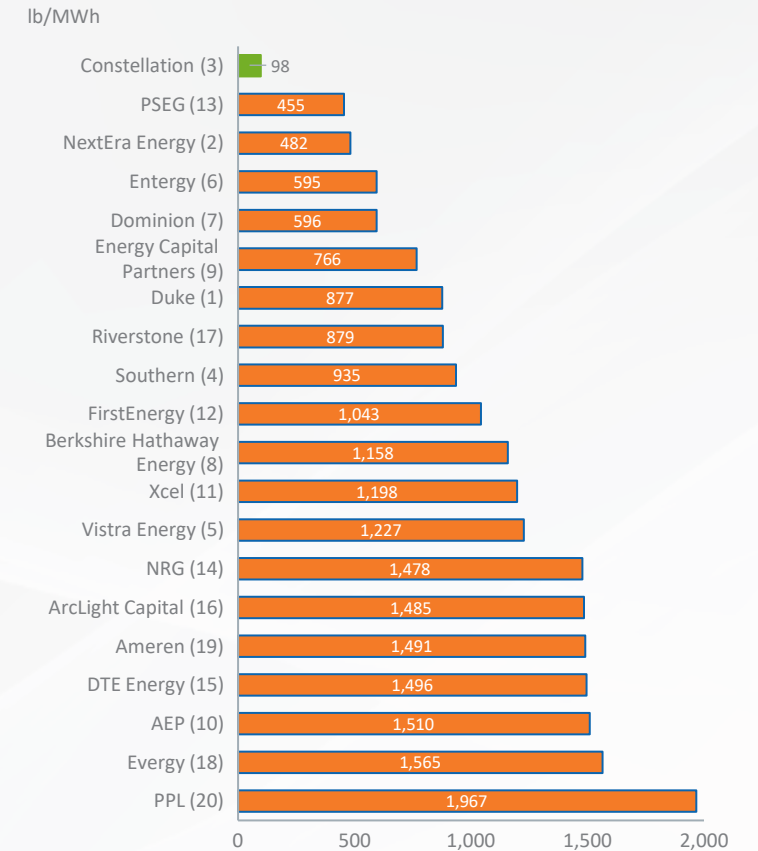
Largest Producers of Carbon-Free Generation^(1,2)



Lowest CO₂ Emissions Among Major Investor-Owned Generators⁽²⁾



Lowest Carbon Intensity Among Major Investor-Owned Generators⁽²⁾




Constellation produces 1 of every 10 MWh of carbon-free electricity in the United States

(1) Reflects 2019 regulated and non-regulated generation. Source: M.J. Bradley & Associates Benchmarking Air Emissions, July 2021; https://www.mjbradley.com/sites/default/files/Presentation_of_Results_2021.pdf


(2) Number in parentheses is the company's ranking among the 20 largest investor-owned producers (total MWh) in 2019, i.e. Constellation was the third largest generator in 2019




Our Commercial Business: Who & What We Serve




Power
215 TWh
Load served across Wholesale, C&I and mass markets



Natural Gas
1.6 Tcf
Load served across C&I residential, Wholesale, LDC, and municipal customers



Renewable Supply
14 TWh/yr*
Contracted or owned capacity used to serve customers

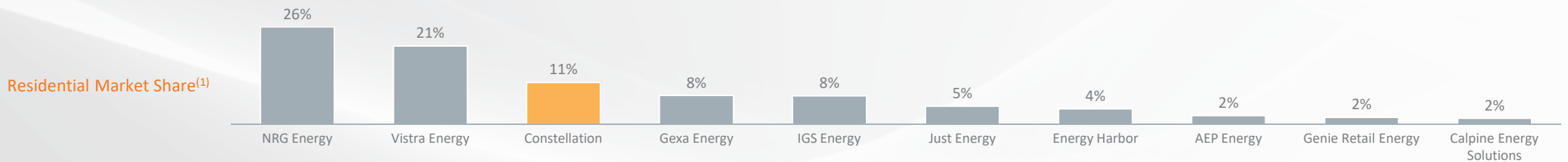
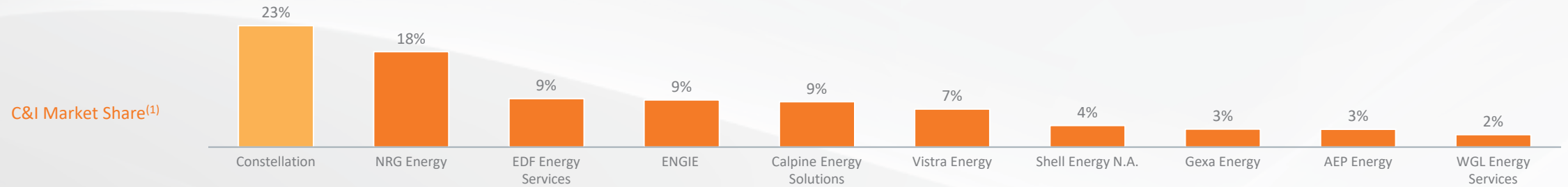
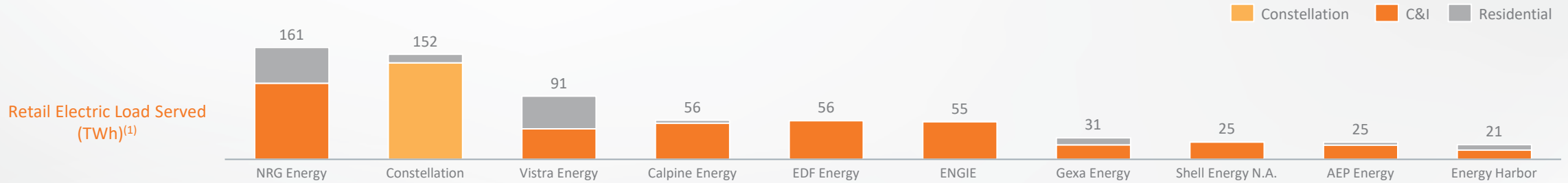


Energy Efficiency
270k Metric Tons
Annual CO2E reduction

	Wholesale		C&I		Mass Markets	
Our Customers	Power Cooperative	Municipal Power Authorities	Large Commercial	Industrial	Residential	Community Choice Aggregation
	Utilities	Financial Institutions	Public Sector	Small & Medium Commercial	Government Aggregation	Small Business
Our Competencies	<ul style="list-style-type: none"> Expertise in sourcing contracted generation to provide customized products Highly tailored products and solutions Commodity and risk management and hedging 		<ul style="list-style-type: none"> Strong direct customer and broker relationships High customer retention rates Industry-leading association relationships Scalable platform Bundled energy solution 		<ul style="list-style-type: none"> Broad suite of solutions to address supply and demand side needs Strong energy and services operating platform Proven partnership model 	

*2020 Data

Constellation is a Leading Provider of Retail Electricity



(1) Source: DNV GL Retail Landscape May 2021. Numbers reflect annualized Non-Residential customer load under contract.



Our C&I Concentration is a Core Strength

Financial Stability



- Predictable load and stable unit margins
- Repeatable business with high retention and win rates
- Insulation from weather-driven volatility
- Maximized cash flows from high customer satisfaction and win and renewal rates

Scalable Platform



- Broad suite of energy, sustainability, and analytics solutions for customers
- Lower customer acquisition and services costs allows for scalability

Strong Foundation for Growth



- Best positioned to sell sustainability and carbon-free products due to our strong customer relationships

Accelerating the Transition to a Carbon-Free Future



Note: Events prior to 2022 occurred prior to Constellation's separation from Exelon Corporation



Constellation's Climate Commitment

100%

Of our owned generation will be carbon-free by 2040

100%

Reduction of our operations-driven emissions by 2040 ⁽¹⁾

100%

Of C&I customers provided with specific information about how to meet GHG reduction goals

✓ Clean Energy Supply:

- **Clean Electricity Supply:** We commit that our owned generation supply will be **100% carbon-free by 2040**; with an interim goal of **95% carbon-free by 2030** subject to policy support and technology advancements.
- **Operational Emissions Reduction Goal:** We aspire to reduce operations driven emissions by 100% by 2040 subject to technology and policy advancement
 - Interim target to reduce carbon emissions by 65% from 2020 levels by 2030 and reduce methane emissions 30% from 2020 by 2030
 - Constellation commits to reducing methane emissions 30% from 2020 by 2030, aligned with the Administration's global methane pledge
- **Supply Chain Engagement:** Partner with our key energy suppliers on their GHG emissions and climate adaptation strategies

✓ Clean Customer Transformation:

- Commit to providing 100% of C&I customers with customer- specific information on their GHG impact for facilities contracting for power and gas supply from Constellation including mitigation opportunities that include 24/7 clean electric use
- Commit to support reductions in customers' gas emissions and a transition to low carbon fuels

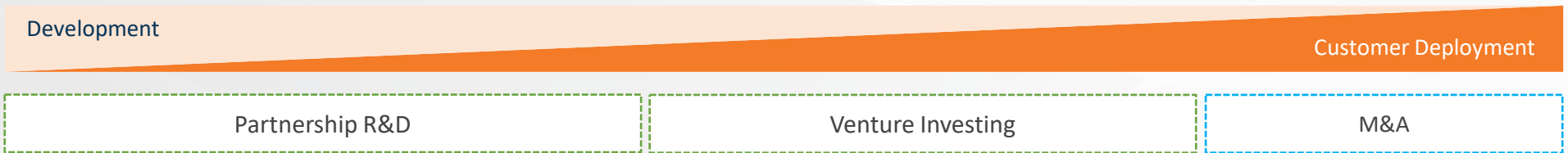
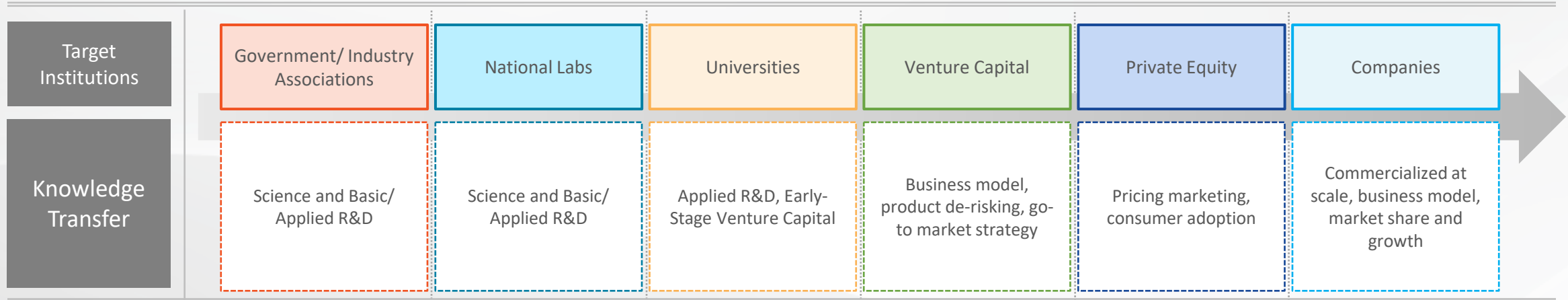
✓ Technology Enablement and Commercialization:

- Commit to **enable the future technologies and business models needed to drive the clean energy economy** to improve the health and welfare of communities through **venture investing and R&D**. We will **target 25% of these investments to minority and women led businesses** and will require investment recipients to disclose how they engage in equitable employment and contracting practices, using performance as a factor when considering investments

(1) Any emissions that cannot be technologically reduced by that time will be offset; includes all GHGs except methane which is addressed in separate methane reduction goal

Constellation is Committed to Enabling Technology Development to Drive Value

Constellation's culture of innovation is advancing the energy transition by enabling new technology, forging strategic partnerships, investments and acquisitions to bring the next innovative product to our customers

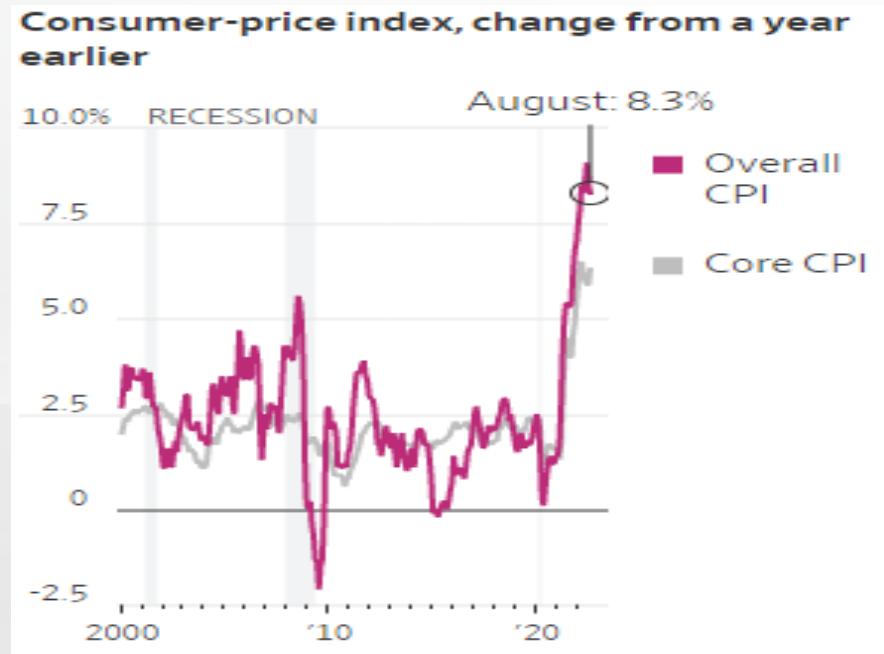




Supply & Demand Fundamentals

What is Driving Gas & Power Prices?

Inflation Stays Persistently High and Weighs on Equities

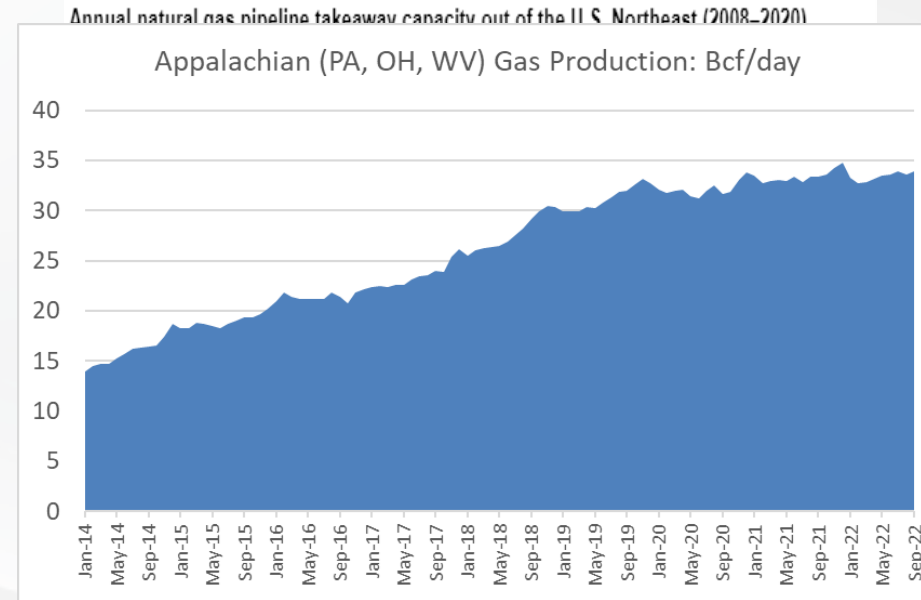
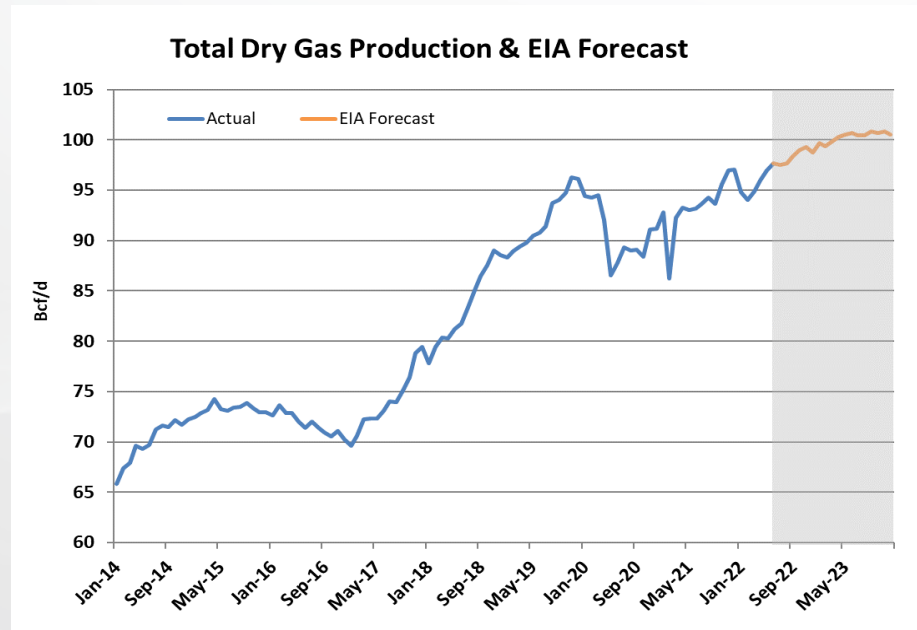


- The **Consumer Price index (CPI)**, which measures what consumers pay for goods and services, rose 8.3% in August from a year ago but was down from the previous month's 8.5% and June's 9.1%.
- The **Core CPI**, which excludes both food and energy, rose by 6.3% in August from a year earlier but also rose sharply from the 5.9% rates in both June and July of this year.
- Policymakers tend to follow the Core CPI more closely has a broader predictor of future underlying inflation due to the more volatile components of energy and food being left out.

- Despite a -10.6% decline in gasoline prices this past month, most other items such as food (+0.8%), new vehicles, medical, education, electricity and natural gas all rose at a faster pace than in July. Housing costs were up +0.7% m-m.
- The figures keep the Fed on track to raise interest rates by either 0.5 or 0.75 percentage point at its meeting later this month to combat high inflation.

Customer Takeaway: Persistently high inflation is weighing on the US economy, despite relatively strong numbers, and will force the federal reserve to continue to walk a tightrope between raising rates to cool down prices and potentially being a catalyst for a deeper recession. The war in Europe and Covid-19 lockdowns in China are dampening the strength of the global economy which may exacerbate the situation in the U.S.

Production Growth to be Constrained? Example Appalachia



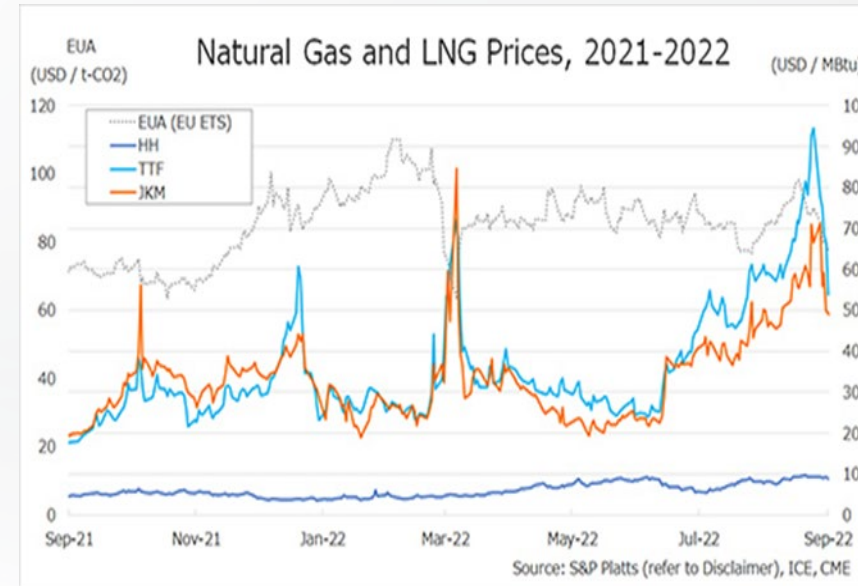
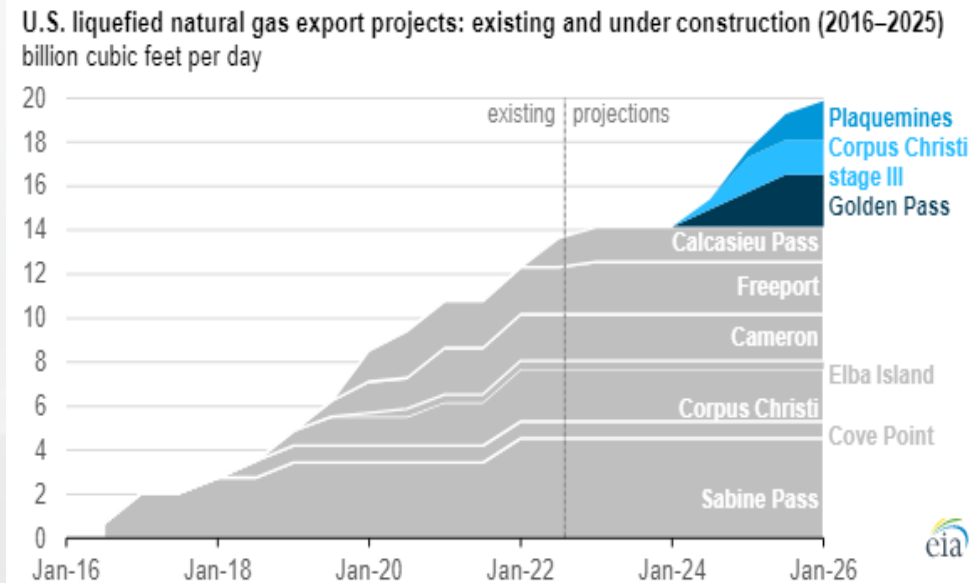
- Natural gas production in September has risen to 98-99 Bcf/day per EIA and 98.4 Bcf/d per 3rd party.
- Shale gas ushered in periods of rapid growth in gas production (see 2018-'19) and prices declined.
- The Appalachian shale was a major driver and new pipeline capacity supported it along with demand for new gas fired generation to displace coal units. There is 25 Bcf/d of pipeline capacity and ~10 Bcf/d of regional demand.
- New pipelines out of Appalachian basins have been abandoned (Penn East, Atlantic Coast) and so drillers are limiting growth plans and budgets.

Customer Takeaway: Production surged with the shale revolution, but producers lost money and now are limited in moving additional output to new markets by a lack of new pipelines just as LNG exports are accelerating their growth.

Source: EIA



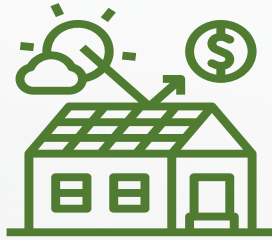
U.S. LNG Continues to Drive Demand Post 2023



- Liquefied natural gas (LNG) exports from the U.S. Lower 48 states began in Feb'16 and since then both LNG export capacity and LNG exports have expanded to become the world's largest as of July 2022.
- The seventh and latest U.S. LNG export project - [Calcasieu Pass LNG](#) - has placed in service all of its liquefaction trains as of August, ahead of the originally announced schedule.
- Two more projects in the U.S. Gulf Coast have recently reached a final investment decision (FID) and began construction.

Customer Takeaway: The US is the world leader in LNG exports and as expansion of LNG facilities continue to be incentivized by historically high global prices that will likely stay that way as Europe deleverages itself away from Russian energy. Natural gas production must keep pace to keep domestic prices stable.

Intended energy & environment sector benefits of the Inflation Reduction Act of 2022



Lower American's energy costs



Fortify American energy security



Invest in disadvantaged communities



Help decarbonize all sectors of the economy



Support rural communities



40% reduction in emissions by 2030

Key climate and energy funding provisions

Provision	Funding Source (FY22-FY31)
Solar panel, wind turbine, battery, and critical minerals processing manufacturing tax credits	\$30 B
Defense Production Act funding for heat pumps and critical minerals processing and additional Federal procurement of American-made clean technologies	\$9.5 B
Low-income consumer energy efficient technology home energy rebate programs	\$ 9 B
Tax credits for EVs (\$7,500 new and \$4,000 used)	\$8.9 B
Zero-emission Nuclear Power Production credits	\$30 B
New EV manufacturing and existing vehicle facility retooling loans; to make more EVs	\$22 B
Advanced Industrial Facilities Deployment Program, to reduce emissions from industrial manufacturing	\$6 B
Residential clean energy consumer tax credits; making consumer solar panels, electric HVAC, water heaters, and heat pumps more affordable	\$20 B
The Greenhouse Gas Reduction Fund and Methane Emissions Reduction Program	\$28.5 B
The purchase of US Postal service zero-emission vehicles and clean heavy-duty vehicles like school buses and garbage trucks	\$4 B
Disadvantaged community Environmental and Climate Justice Block Grants	\$3 B
Funding for climate-smart agriculture practices	\$20 B

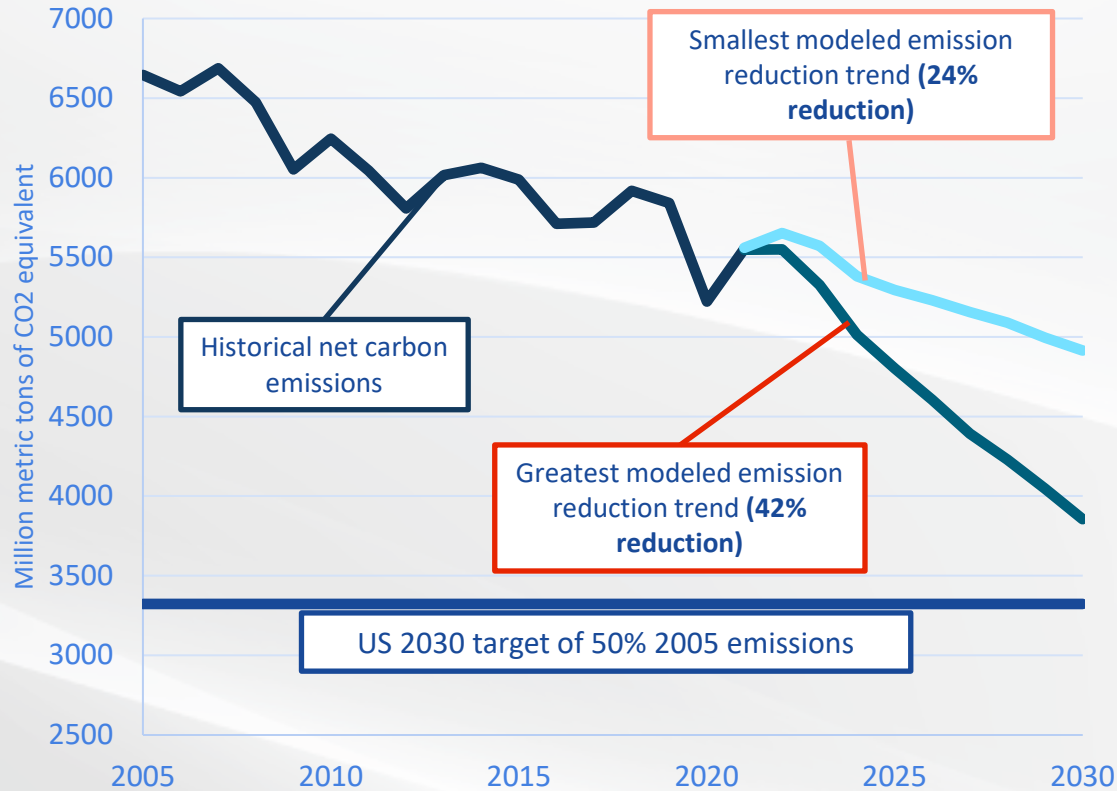
Source: CBO, Senate Democrats

PRESENTATION CENTER 8/9/2022



Carbon emission reduction potentials of the Inflation Reduction Act of 2022

The IRA's annual impact on US emission trends (2005-2030) Climate Action Tracker



ADDITIONAL IRA EMISSION REDUCTION MODELS

The Rhodium Group: 31-44% reduction from 2005 levels by 2030

Energy Innovation: 37-41% reduction from 2005 levels by 2030

The REPEAT Project: ~42% reduction from 2005 levels by 2030

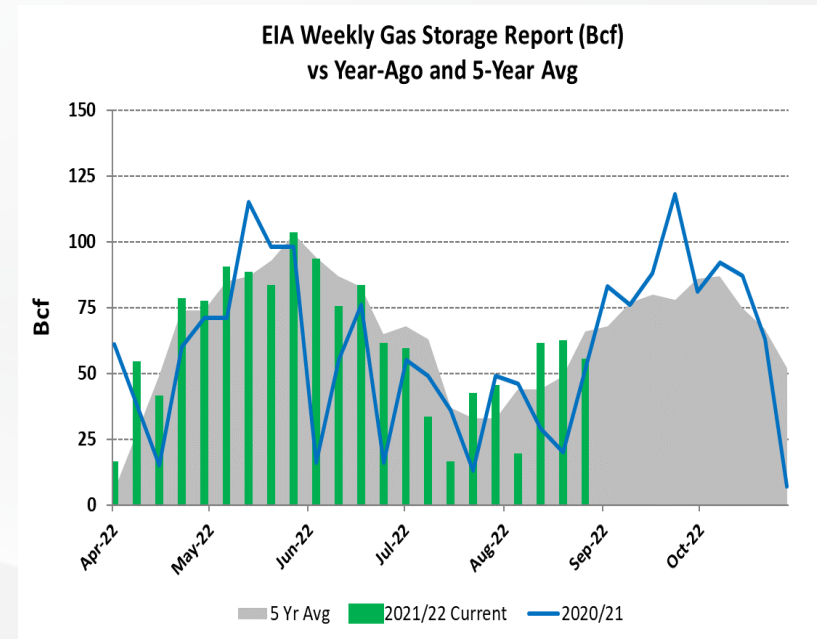
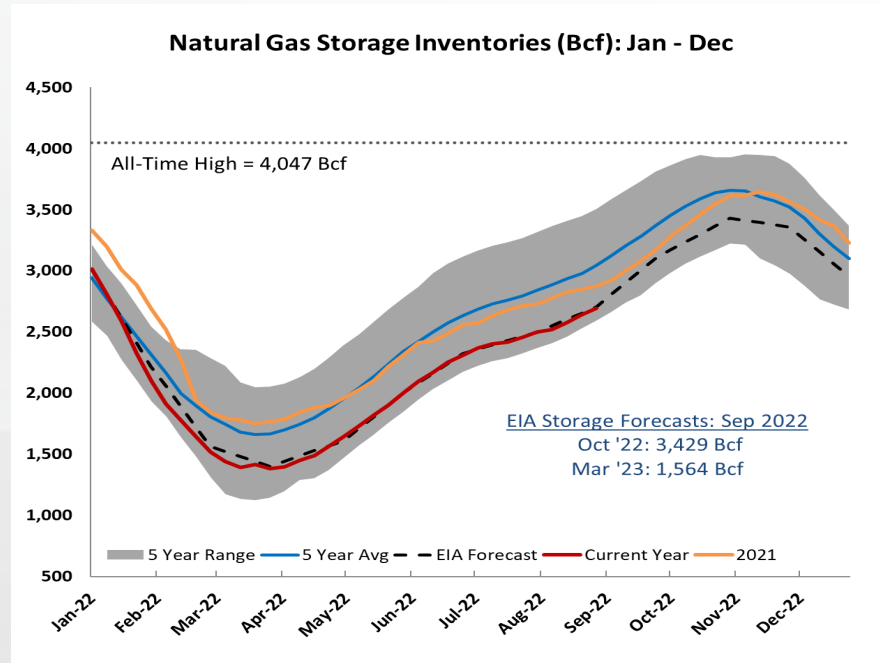
*Data incorporates estimated historical forestry emission reductions and modeled future forestry emission reductions calculated in line with the Climate Action Tracker's final IRA emissions trend estimates

Source: Climate Action Tracker, E&E News

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Cooler Temps: EIA Reports Above Average Injection for 2nd Week in a Row



- The EIA reported an injection of 54 Bcf for the week ended Sept 2nd within the estimate of 56 Bcf.
- Current inventories are 2,694 Bcf, 222 Bcf or -7.6% less than the same period last year and 349 Bcf or 11.5% less than the 5-year average.
- The EIA's latest STEO has increased end of March '23 storage by 23 Bcf to 1,564 Bcf and has October 2023 storage is projected to be 3,862 Bcf.

Customer Takeaway: Storage injections are entering the final phase of the annual April to October term as summer power burns diminish and injections need to rise to the 5-year average of ~75 Bcf/week from mid September to mid October.

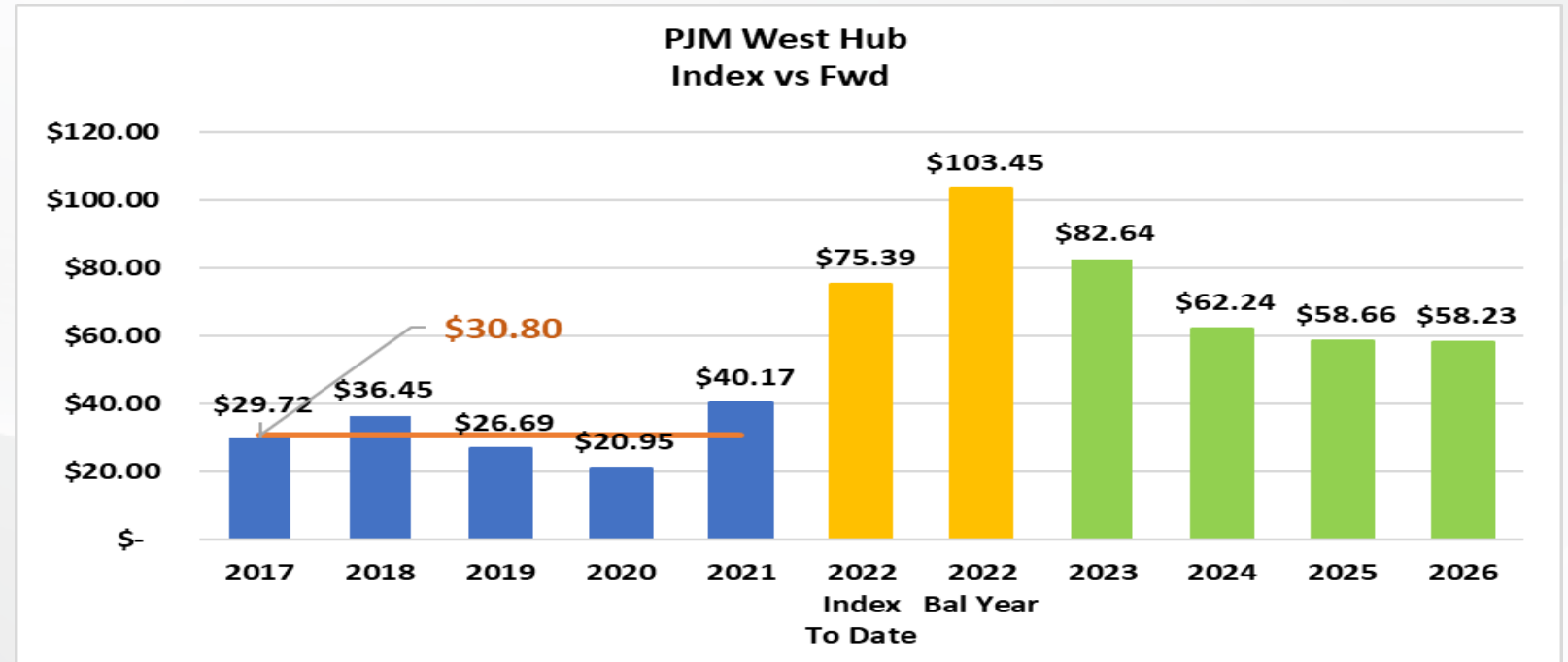




Impact on PJM Power Prices

Historical Index vs. Forward ATC Calendar Strips – PJM

- The blue bars represent the annual DA index average; yellow represents 2022 and green bars are current PJM West Hub forward annual averages.
- The index average of 2017-2021 represented the abundant growth in gas supply from shale.
- What is Backwardation? Near term (prompt) prices are at a premium to forward prices. This indicates the market is concerned more about supply in the near term vs. the long term.



Customer Takeaway: Going forward, the market is concerned about supply for winter 2023, a cold winter with tight gas supplies would likely increase forward pricing for 2024 if gas growth remains slow. Procuring some percentage of 2024-'26 load now could lead to better budget certainty vs. reacting to market events closer to flow.



Sustainability Trends
Transforming the Industry at an
Accelerating Pace

U.S. is Rapidly Decarbonizing



25 STATES

Have GHG targets or clean energy goals



40 MILLION PEOPLE OR **12% OF THE POPULATION**

Live in cities with climate action plans


Federal government will procure

100% carbon pollution-free 24/7 electricity by



2030

2/3 of car sales will be electric by **2040**



600 local governments have developed climate action plans



60% of **FORTUNE 500** companies have set climate and energy goals



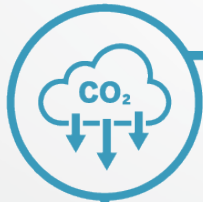
\$100B per year needed in clean energy investment to reach

90% clean energy by **2035**

U.S. GHG Reduction Target of **50-52%** by **2030**



Businesses are Demanding Carbon-Free Energy Products and Solutions



60% of the Fortune 500 have set a target related to GHG emission reduction, a 12% increase since 2017, according to World Wildlife Fund



JP Morgan created a methodology called Carbon CompassSM which establishes Paris-aligned targets to reduce carbon intensity in Oil & Gas, Electric Power and Auto Manufacturing portfolios by 2030



“A Fifth of World’s Largest Companies Committed to Net Zero Target”
– Forbes



Bloomberg targets to become the first one-stop-shop for sustainability data



The State Department’s Clean Energy Demand Initiative (CEDI) is “bringing corporations and countries together in pursuit of their climate and energy goals”



Over 200 Companies have signed The Climate Pledge to reach the terms of the Paris Agreement 10 years early



“Given how central the energy transition will be to every company’s growth prospects, we are asking companies to disclose a plan for how their business model will be compatible with a net zero economy.”
– Larry Fink, CEO Blackrock

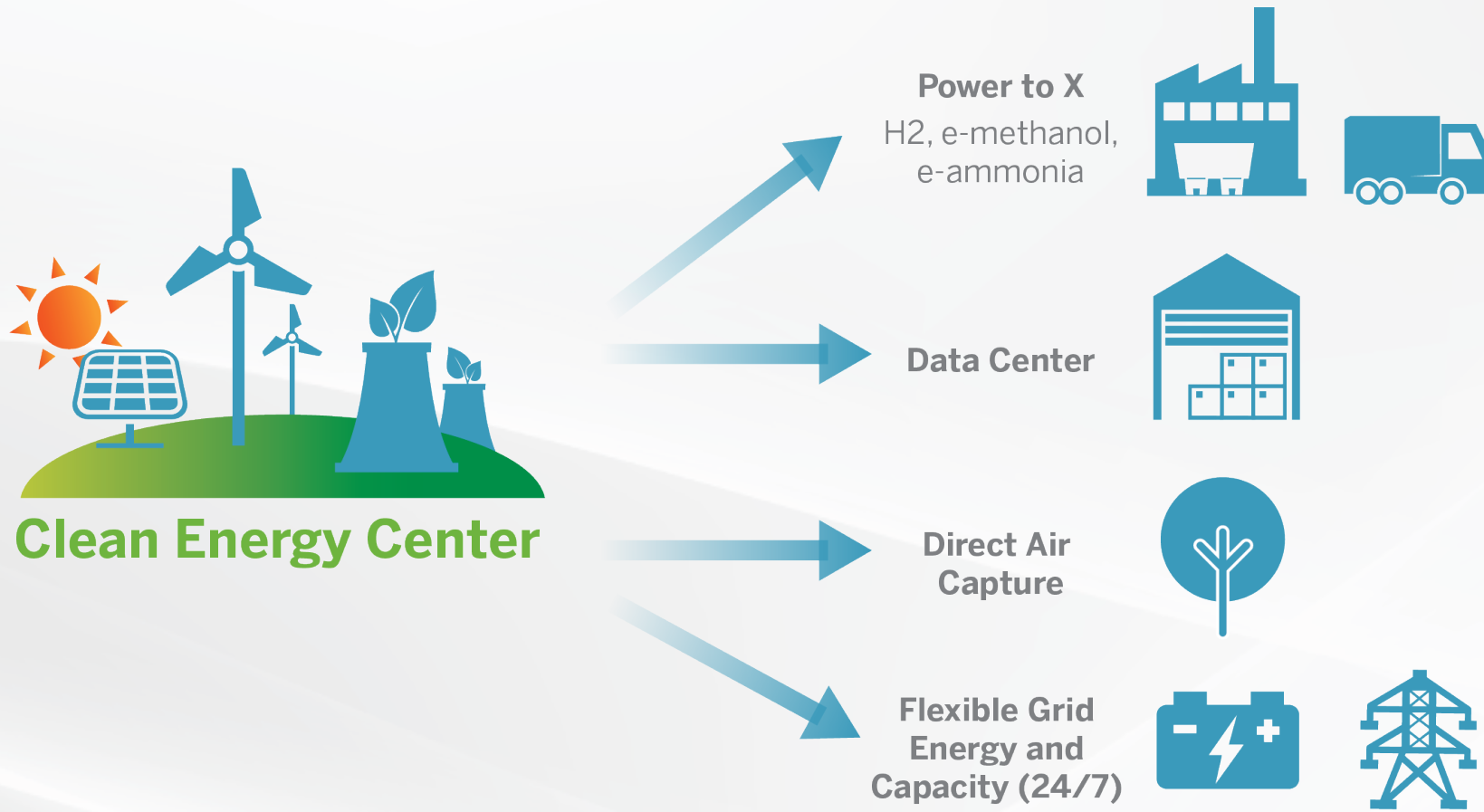


Clean Energy Buyers Alliance, which is comprised of nearly 300 members, has committed to achieving a 90% carbon-free U.S. electricity system by 2030



The Ceres Ambition 2030 initiative is working to decarbonize six of the highest-emitting sectors

Clean Energy Centers



Our nuclear assets serve as Clean Energy Centers to not only produce 24/7 clean power for our customers, but, in a number of instances, to use that clean power to decarbonize other sectors through the production of clean fuels and the direct capture of CO2 from the atmosphere.

Constellation Provides Industry-Leading Sustainability Solutions

Providing solutions for our customers to –

- Support carbon-free energy generation
- Simplify complete energy solutions
- Manage customer price risk



Constellation's Customer Platform Provides Tools to Help Communities, Families and Businesses Meet Their Sustainability and Carbon Reduction Targets



Carbon Footprint

Measures customers' carbon footprint across all locations to develop a plan to lower emissions factors



Carbon-Free Power

Reduce emissions associated with electricity use through the purchase of renewable energy certificates (RECs) sourced from solar or wind generation and emission-free energy certificates (EFECs) sourced primarily from nuclear generation



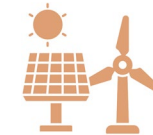
Carbon Reduction

Reduce Scope 1 emissions associated with natural gas use through Renewable Natural Gas (RNG), Carbon offsets can be used to indirectly reduce Scope 1, 2 or 3 emissions



Renewable On-site

Install renewable energy generation on-site to reduce energy costs and carbon emissions



Renewable Projects

Off-site renewable energy and REC products for customers help them meet their clean energy goals



Energy Efficiency

Building automation, lighting improvements, electrification solutions, and water conservation

Constellation Provides an Integrated Value Proposition to Meet Sustainability Goals

Develop customized **Power and Natural Gas** Supply solutions for our customers



Integrate **Carbon-free options (Renewables, RECs, EFECs, Bio-Gas, carbon offsets)** into a customer's supply

Deploy and manage **On-Site Generation**

Add **Energy Efficiency Upgrades**

Leverage **Market Expertise, Monitoring and Reporting**

Commodity Risk Management



Manage Consumption & Overall Spend

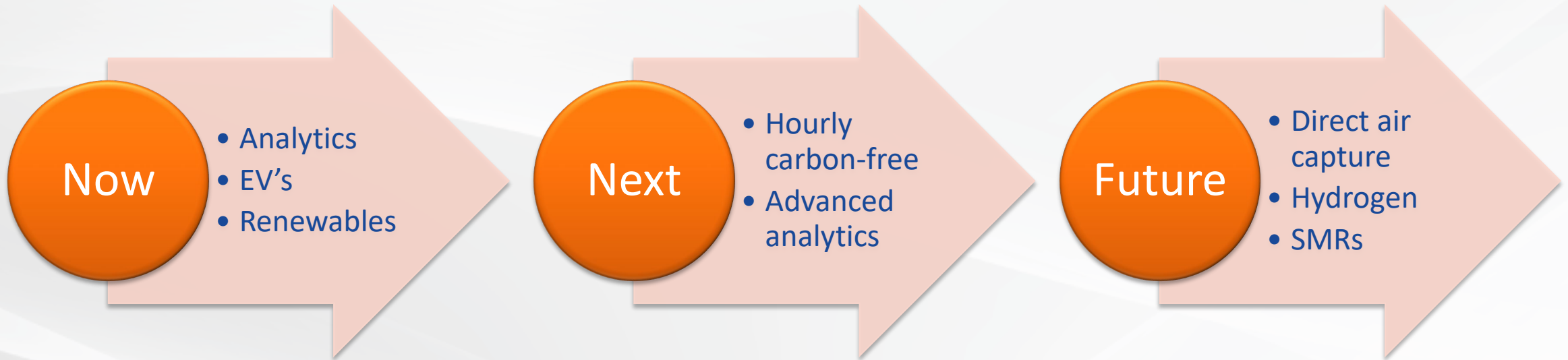


Support Customer Goals including *sustainability goals and budgetary needs*



Compounded benefits that deliver real business value

Roadmap will Continue to Evolve over time





Examples of Evolving Market Trends,
Products and Technologies – Evolving
Roadmaps and Strategies

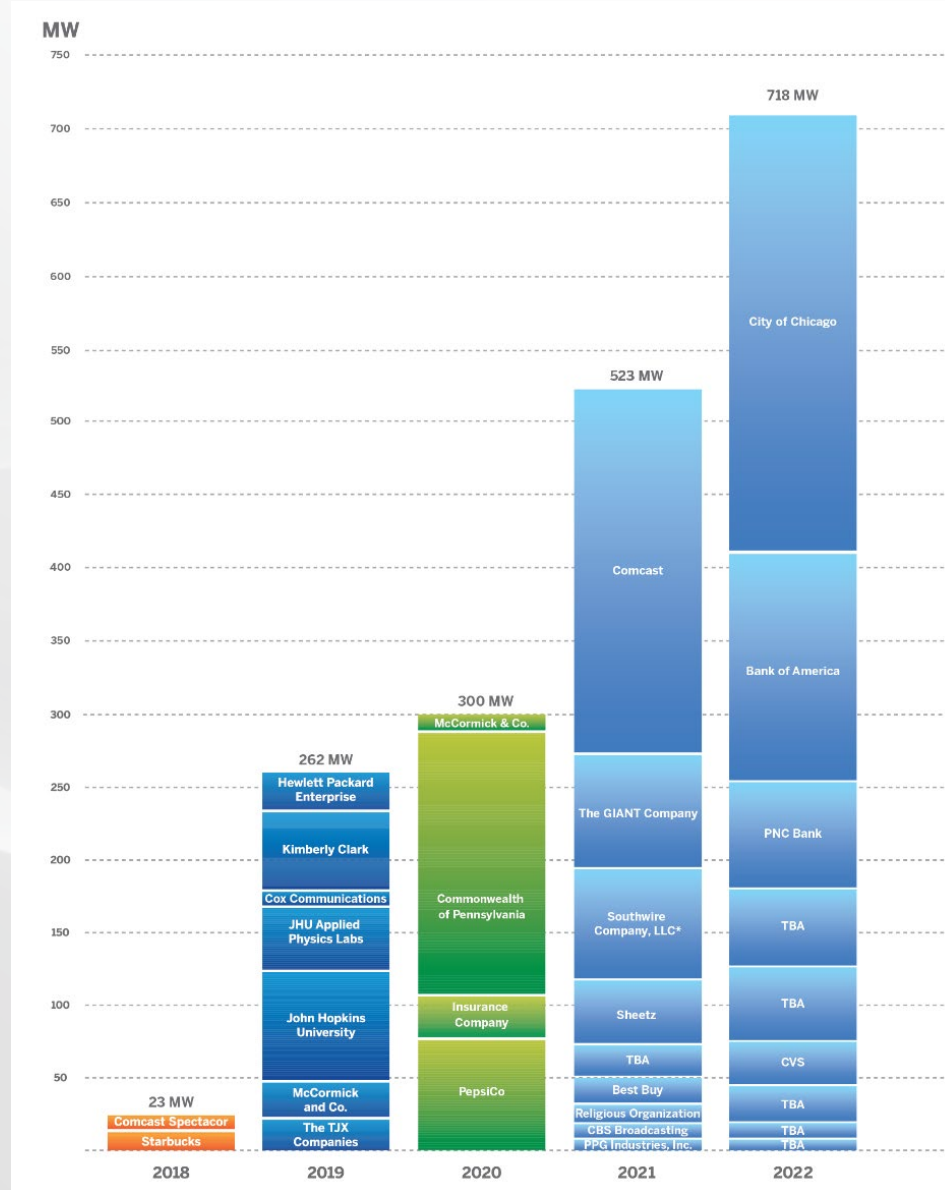
Positive Trends in Renewable Energy Market

31.1 GW: Demand for corporate renewable energy supply continues to grow with a record 31.1 GW of clean power contract commitments in 2021.

Inflation Reduction Act: Investments in clean energy production should continue to grow with government incentives.

First Solar: only US-headquartered solar manufacturer expansion in Ohio brings significant supply components to the market.

Constellation Offsite Renewable Product: Meeting Customer's Evolving Needs



Key Customer Announcements

- 2018 new product offer
- 2019 Johns Hopkins University and Physics Lab
- 2020 Commonwealth of Pennsylvania, Pepsico
- 2021 Comcast, The GIANT Company, Southwire
- 2022 City of Chicago , Bank of America, PNC Bank



Headwinds in the Renewable Energy Market

Interconnection: PJM Queue reform slowing new PPA projects.

Supply and Demand: Renewable energy inventory is tight, driving prices higher.

Regulatory: Renewable project permitting considerations with the Ohio Power Siting Board (OSPB).

Driving the Customer and Grid Transition to Carbon Free with an Hourly- Matched Product



Constellation is developing an hourly-matched carbon-free energy solution that is optimized around customer decarbonization goals and affordability.

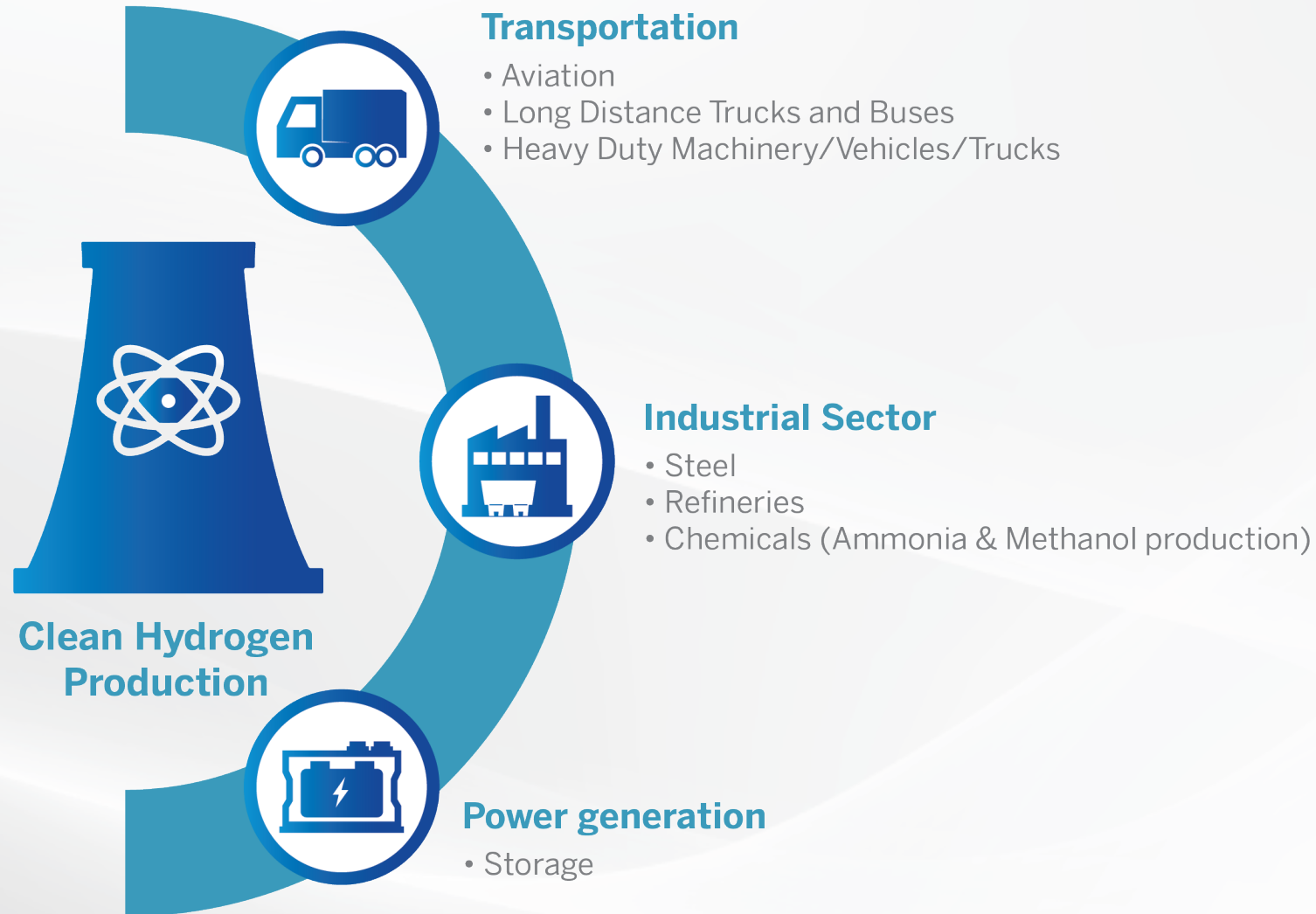
Benefits of Hydrogen



- Drop-in fuel in transportation
- Fly friendlier skies
- As back-up power for a clean grid
- Make the buildings blocks of our economy
- Feed the planet, sustainably

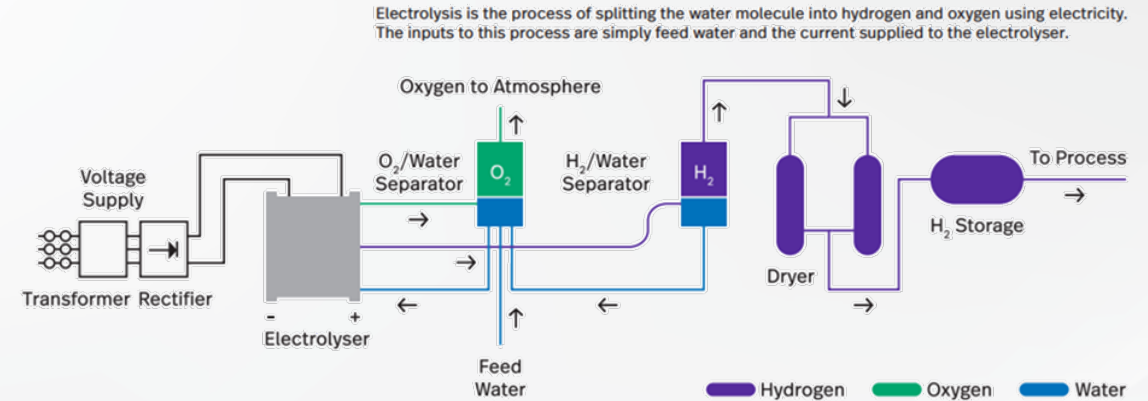
Through a U.S. Department of Energy (DOE) grant, Constellation is exploring the potential for clean hydrogen production at Nine Mile Point in upstate New York leveraging a Proton Exchange Membrane (PEM) electrolyzer.

Clean Hydrogen will enable decarbonization of hard to decarbonize sectors



Nine Mile Point Hydrogen Pilot

- Constellation has been awarded a DOE grant in partnership with Nel Hydrogen and 3 national laboratories to demonstrate an integrated hydrogen production strategy
- Nine Mile Point was selected as the site to install a Proton Exchange Membrane (PEM) electrolyzer
- Budget Period 1 concluded in August 2021



<p>Budget Period 1:</p> <p>Complete 30% Design</p> <p>Demonstrate dynamics operation</p>	<p>Year 1 (April 2020 – March 2021)</p> <ul style="list-style-type: none"> • Site selection and 30% engineering design • Engineering specification for electrolyzer • Environmental review • Regulatory review • Installation cost estimate and plan
<p>Budget Period 2:</p> <p>Finish 100% design, install, operate at steady state</p> <p>Demonstrate dynamic operation, simulate scaleup</p>	<p>Year 2 (April 2021 – March 2022)</p> <ul style="list-style-type: none"> • 100% engineering design • Complete manufacture, test of electrolyzer <p>Year 3 (April 2022 – March 2023)</p> <ul style="list-style-type: none"> • Start of steady state operation of electrolyzer • Simulation of scale-up electrolyzer operation • Demonstration of dynamic operation on site

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Raj Bazaj

Vice President, Sustainability Solutions, Constellation

Profile

Raj leads a business group at Constellation that works with a diverse group of customers assisting them in implementing a wide range of solutions to help them achieve their sustainability objectives. Key focus areas include data analytics, renewables and energy efficiency. The primary goal is to create a customized decarbonization strategy while effectively managing risk and costs.

Professional History

Raj has worked in the chemical and energy industry across a wide range of roles. He began his career in the chemical industry working with multi-national companies Bayer, Cytec Industries and American Cyanamid. Roles included R&D, marketing and sales before being promoted to the Director of Marketing for NAFTA where he also managed the Export and Resale sales channels. Responsibilities included managing the P&L and developing short- and long-term strategy including production of chemicals manufactured in the U.S for export overseas.

Raj started his energy career with WPS Energy Services (later Integrys) in 2005 as the Managing Director for retail power and gas sales. The business was acquired by Constellation in 2014. Most recently Raj led the effort to develop a multi-year partnership agreement with the Johnson Controls Hall of Fame Village. The agreement recognizes Constellation as the official energy provider and provides exclusive naming rights for the Constellation Center for Excellence, a key component of the development project under way in Canton, OH.

As a member of the White House Initiative on Asian American and Pacific Islanders (AAPI), Raj has attended Leadership summits at the White House under both the Obama and Trump administration. The initiative focuses on several key areas including education, career development, business, jobs, immigration, health care, housing and workforce leadership.

Education

Raj holds a B.S. in Chemical Engineering from the University of Arizona and an Executive MBA from the University of Connecticut.