



# Generating Value with Improved Energy Management Strategies

POWERED BY:



# INTRODUCTION ABOUT DAN



## Dan Forgacs

*Vice President, Market Intelligence  
& Analytics*

***20 Years Experience in Deregulated Energy Markets***

***Certified Energy Procurement Professional***

***30+ Years in Business Development + Sales***

***Michigan Native      Lover of Fly Fishing & Boating***



Dan Forgacs is Vice President of Market Intelligence & Analytics for APPI Energy. He has an active role in the day-to-day management and professional development of the APPI Energy consulting team. Forgacs directly engages with clients and prospects in key U.S. markets, helping them to better understand and analyze industry trends, regulations and market drivers. He helps consultants develop new relationships and renew existing APPI Energy clients. Forgacs also works with the APPI Energy operations team to create higher-value interactions with clients and suppliers. With an extensive background working directly for two national energy suppliers prior to joining APPI Energy, he has more than 15 years of experience in deregulated energy markets.

Forgacs received a Bachelor of Arts in Marketing from Michigan State University, Certified Energy Procurement Professional credentials from the Association of Energy Engineers, and has more than 30 years of sales and business development experience. A native of southeast Michigan, he operates APPI Energy's Michigan office and enjoys fly fishing, boating and spending time outdoors with his wife and the family dog.

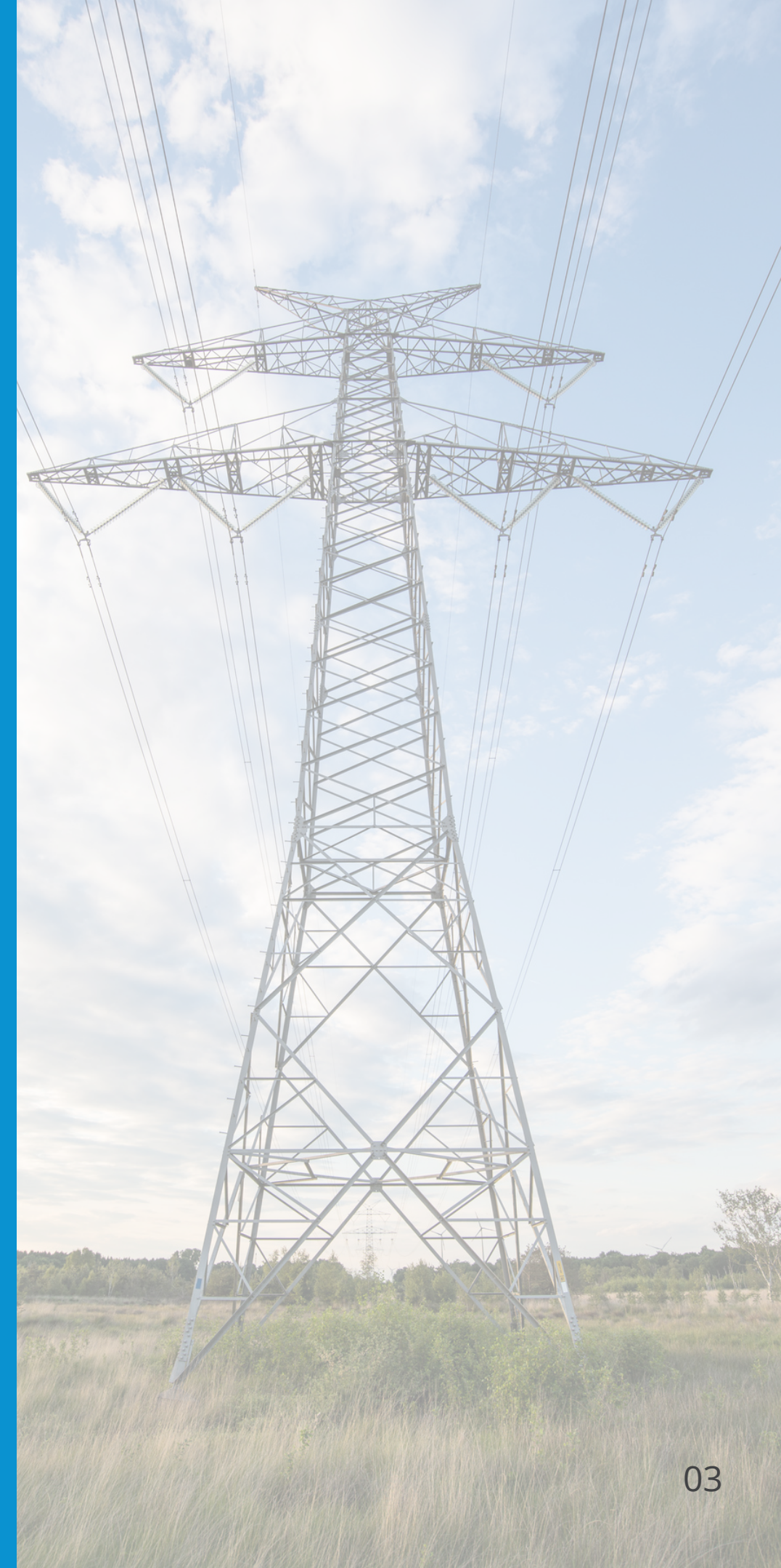




# WHO IS APPI ENERGY?

APPI Energy provides our clients with a comprehensive way to reduce energy expenses and minimize budgetary risks. Through our procurement services, we negotiate with suppliers to ensure you are provided with ideal pricing and contract terms to fit your needs. Our holistic energy services provide financially and functionally vetted solutions to decrease energy costs, reduce demand, and improve resiliency and sustainability.

**We are here as a true extension of your team.**





# Providing energy management solutions to **PA Chamber of Business & Industry** members since **2002**

21

Years working with  
PA Chamber Members

61

Current  
PA Chamber Clients

971

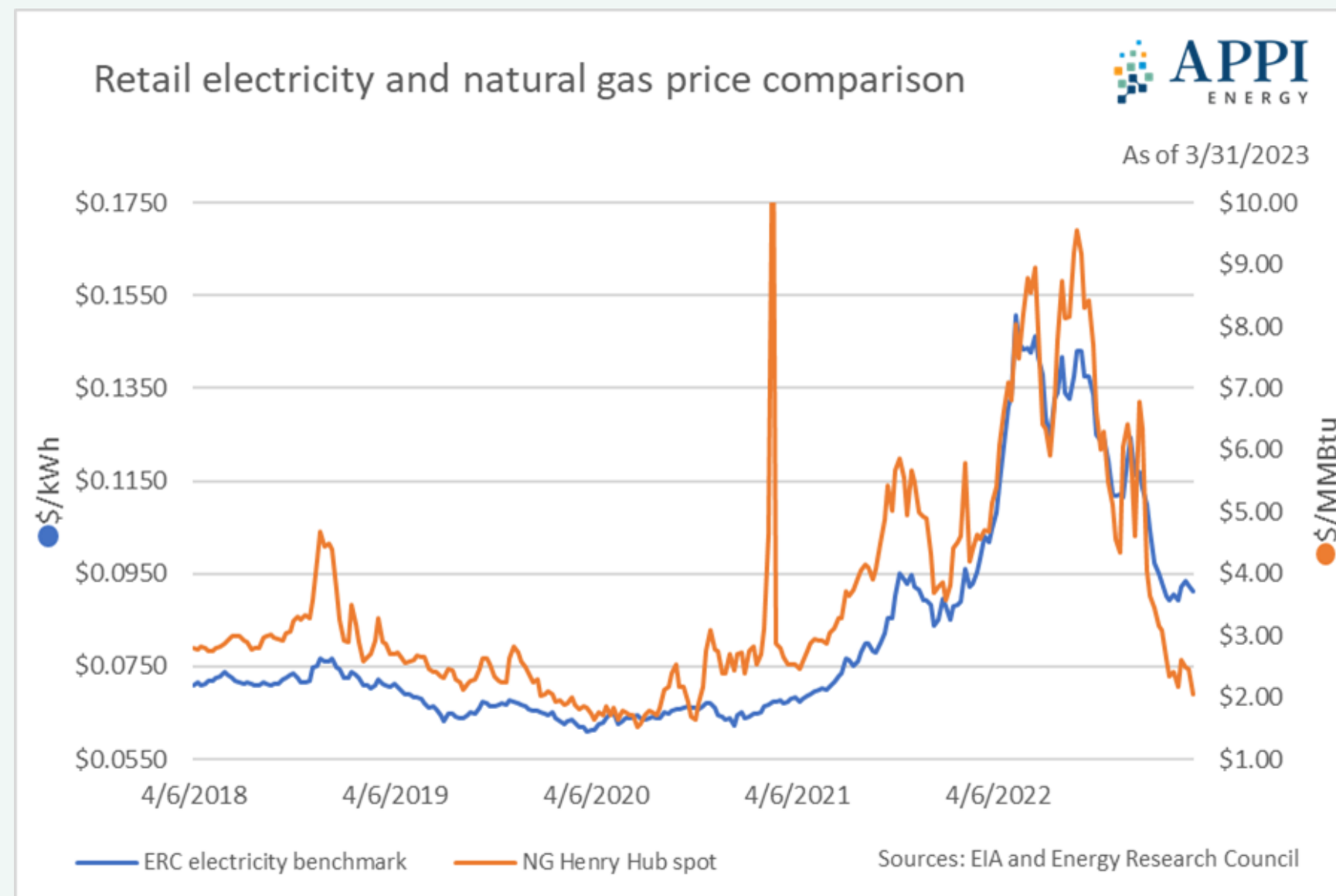
Current clients in  
Pennsylvania





# MARKET OVERVIEW - VOLATILITY: YEARS IN THE MAKING

In 2022, domestic energy markets were significantly impacted by international events as increased economic activity and demand for relatively inexpensive U.S. natural gas caused Henry Hub spot prices to increase over 400% from the historic lows of 2020 before falling to current levels as warm winter temperatures, combined with increased gas production, helped to improve natural gas storage inventories.



Major impacts to energy markets:

- Pandemic
- Winter Storm Uri
- Liquefied Natural Gas & Exports
- War in Ukraine
- Freeport fire
- Energy Transition
- Weather



# **WHAT'S HAPPENING IN PENNSYLVANIA?**



# WHAT'S HAPPENING IN PENNSYLVANIA?

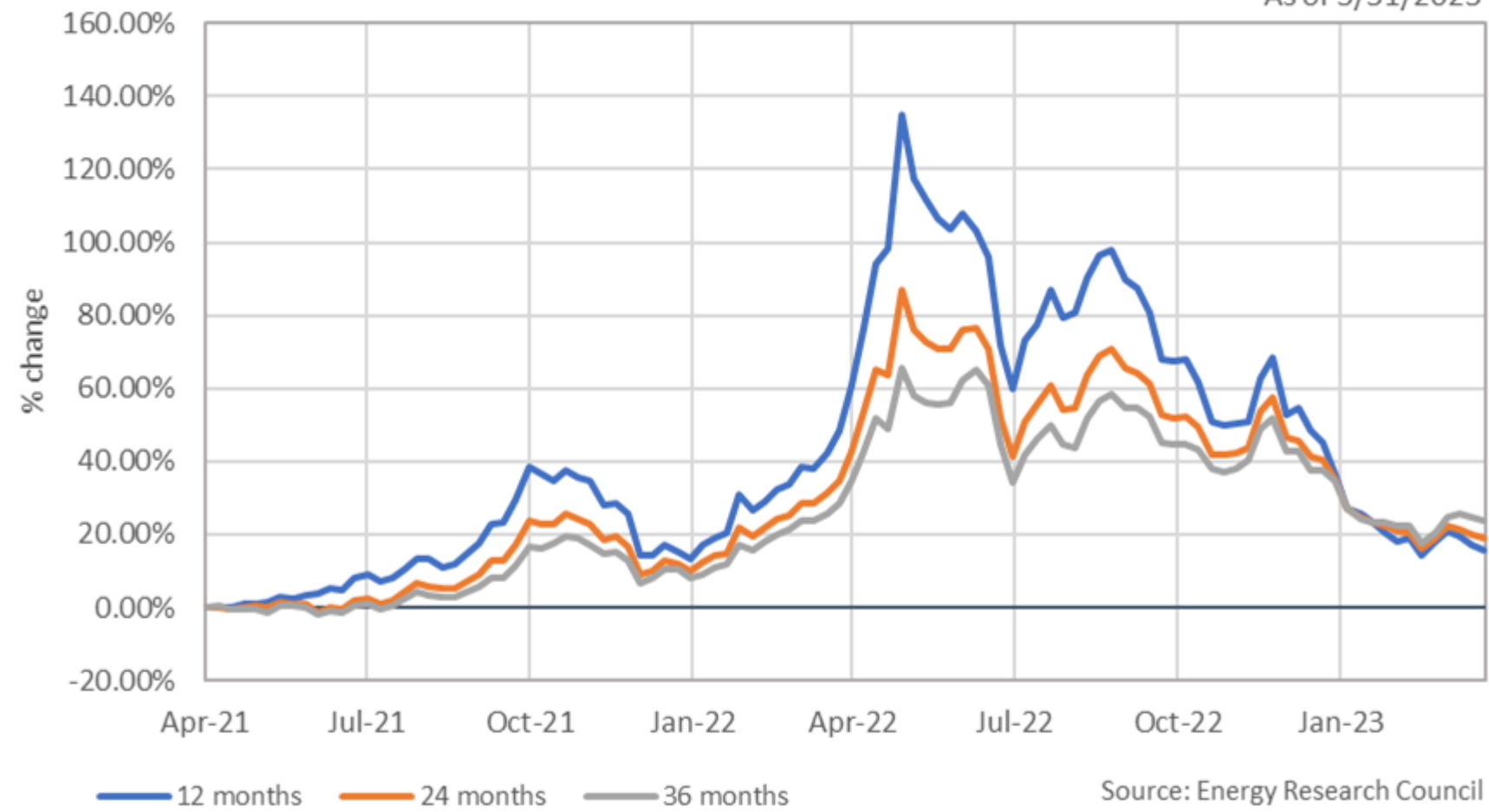
---

- Pennsylvania's marketed natural gas production, primarily from the Marcellus Shale, reached a record 7.6 trillion cubic feet in 2021, and the state is the nation's second-largest natural gas producer after Texas.
- Natural gas surpassed nuclear in 2019 as the state's largest source of generation and the Commonwealth had the second-highest level of nuclear generation among states in 2020, after Illinois.
- In 2021, Pennsylvania ranked second in the nation after Illinois in electricity generation from nuclear power. However, since 2019 natural gas has surpassed nuclear energy as the largest source of in-state electricity generation.
- Coal, which was Pennsylvania's leading source of electricity generation until 2015, accounted for nearly half of the state's electricity generation in 2010. But by 2020, coal accounted for 10% of Pennsylvania's electricity generation.
- Renewable electricity, including wind, hydro, biomass, and solar, accounted for 4% of Pennsylvania's electricity generation in 2020, up from 3% in 2010. Renewable generation increased by nearly 50% from 2010 to 2020.
- Pennsylvania's wind power generation more than doubled from 2010 to 2020. Solar power generation doubled from 2015 to 2020. Over the past decade, wind power and hydroelectricity have alternated as the state's leading renewable generation source because hydroelectric output fluctuates with rainfall.

## Change in Electricity Competitive Benchmark by Term PA | PECO | Small-medium general service



As of 3/31/2023

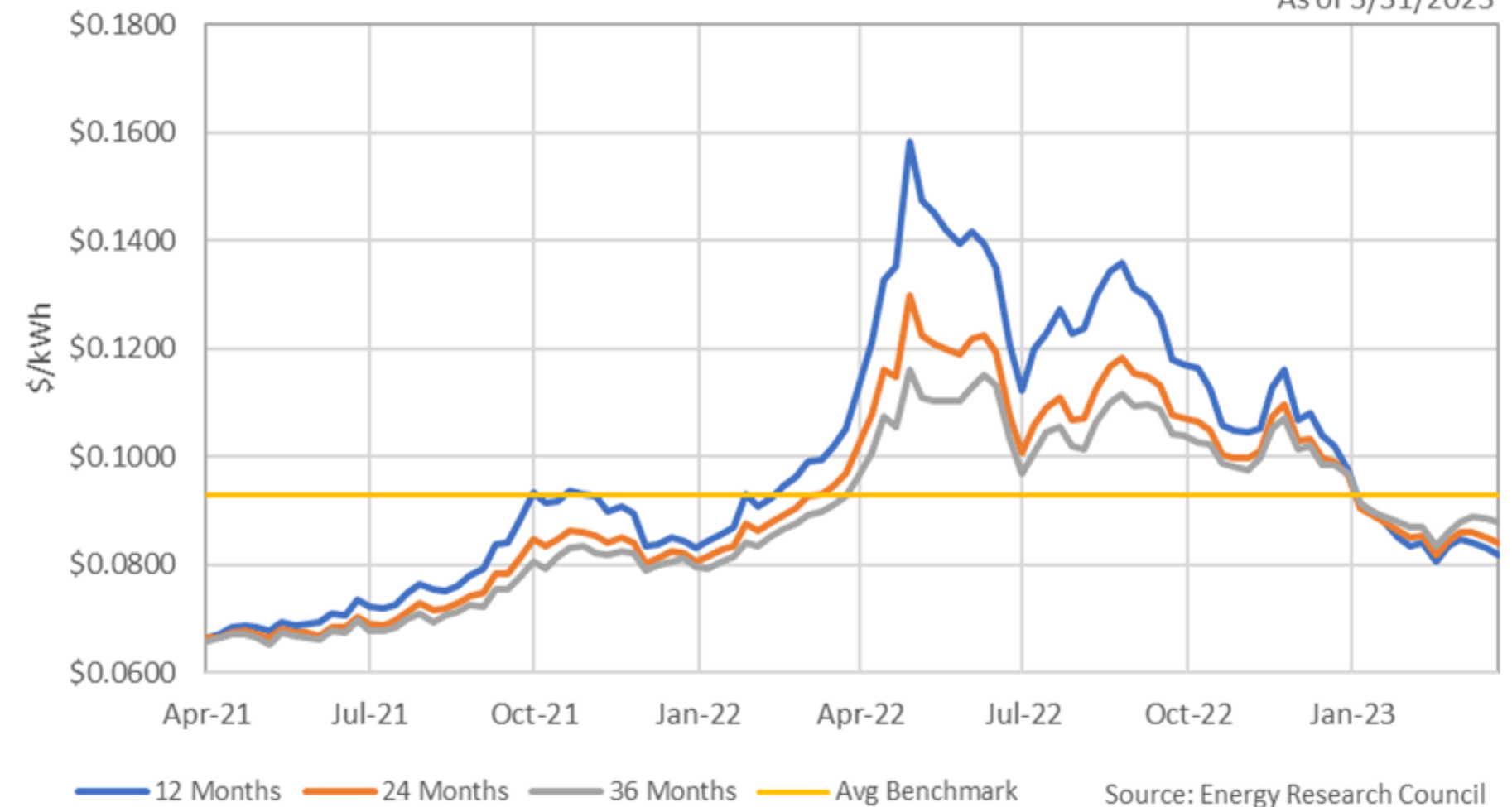


# WHAT'S HAPPENING IN PENNSYLVANIA?

## Electricity Competitive Benchmark by Term PA | Met-Ed | Small-medium general service



As of 3/31/2023







# UTILITY PRICES ON THE RISE – AT A GLANCE

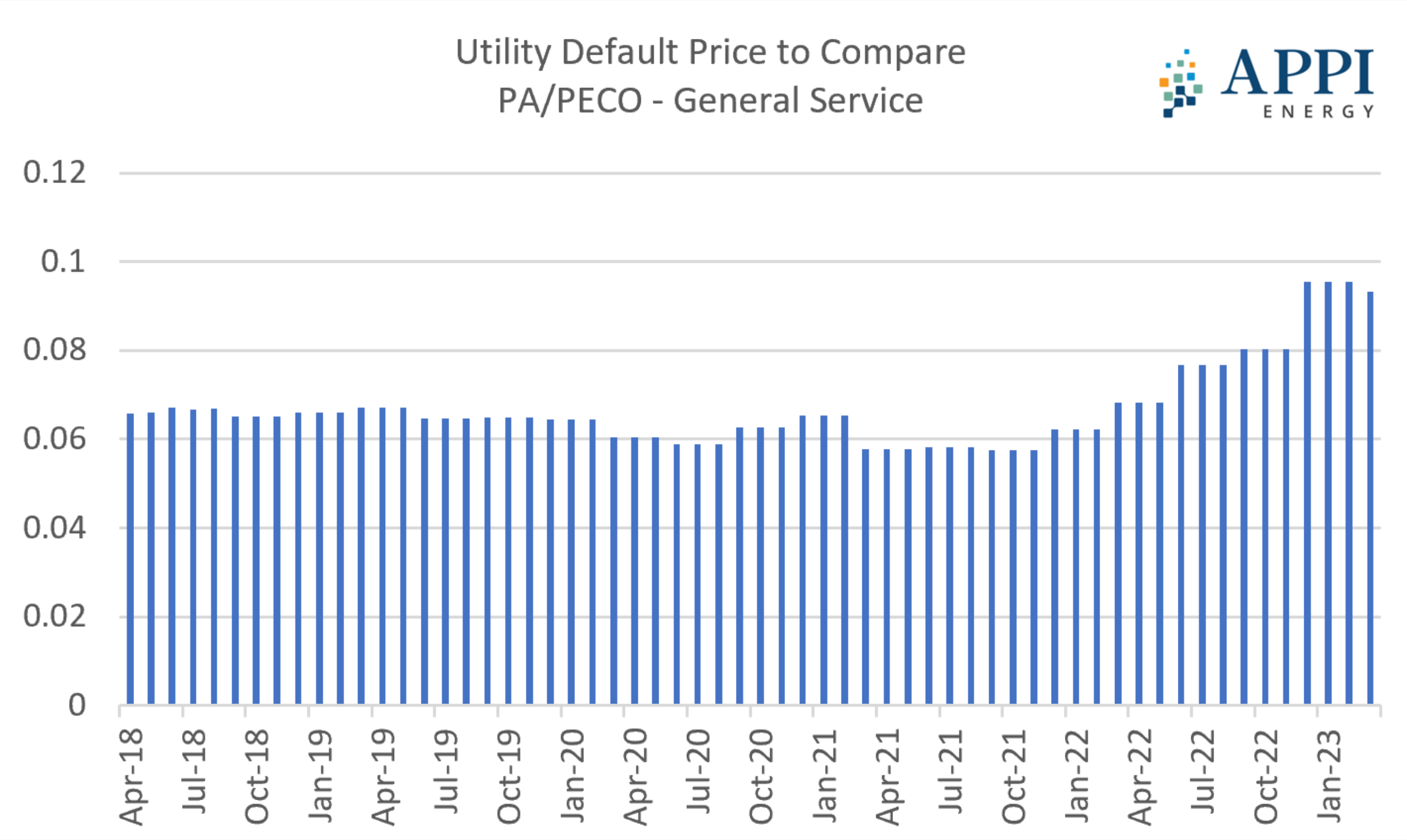
- Current utility pricing is generally based on power purchases from 2022.
- Many utility companies provide a Price to Compare for default energy supply but often reflect rate class averages and allow for market-based price adjustments.
- As a general rule of thumb, where natural prices go, electricity prices follow:

*Even though your system operator is procuring power from all different types of sources—hydroelectric, wind, solar, nuclear, gas—the amount you pay per kWh is determined largely by the current price of natural gas in your region as well as how and when the utility procures the power.*

## KEY TAKEAWAY

Utility prices generally lag the broader energy markets due to the regulatory approval process and often change every 3 - 6 months. Competitive energy supply agreements can stabilize your energy-related operating expenses for up to 7 years, blend in lower cost months/years and offer creative approaches that allow you to hedge (fix) some costs while allowing access to potentially lower market-based prices.

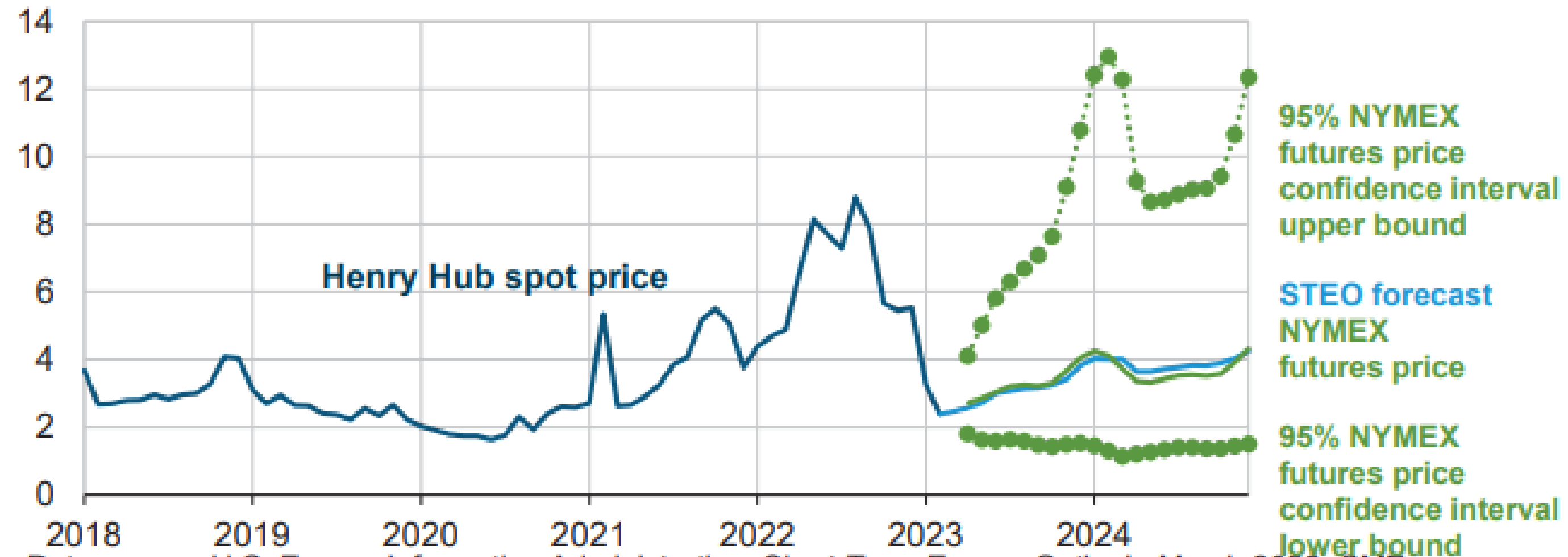
# UTILITY PRICES ON THE RISE – AT A GLANCE





# ENERGY INFORMATION ADMINISTRATION - STEO

**Henry Hub natural gas price and NYMEX confidence intervals**  
dollars per million British thermal units



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, March 2023, CME

Group, and Refinitiv an LSEG Business

Note: Confidence interval derived from options market information for the five trading days ending March 2, 2023. Intervals not calculated for months with sparse trading in near-the-money options contracts.



# WHAT IS THE IMPACT TO PA BUSINESSES?

1

BUDGETARY RISK

2

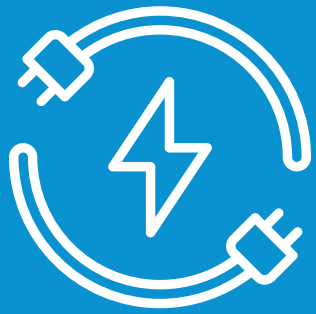
INCREASING NEED TO REDUCE ENERGY USAGE

3

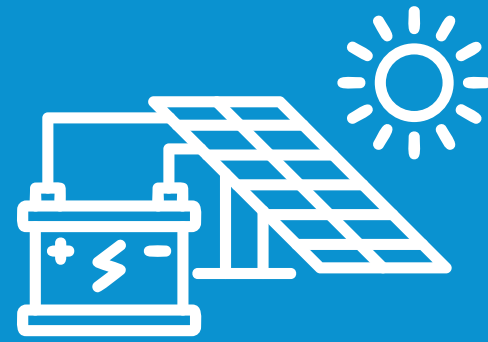
MOUNTING PRESSURE TO REDUCE EMISSIONS & IMPROVE SUSTAINABILITY PLANS



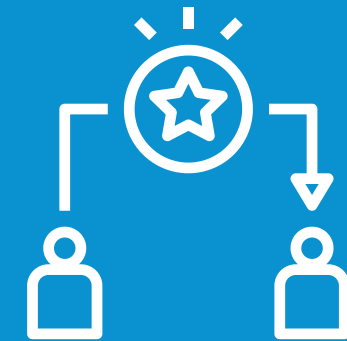
# ENERGY STRATEGIES & SOLUTIONS:



**ELECTRICITY &  
NATURAL GAS  
PROCUREMENT**



**EFFICIENCY &  
SUSTAINABILITY  
SOLUTIONS**



**A TRUSTED  
ADVISOR**



# THE SOLUTIONS

## PROCUREMENT STRATEGIES

As an organization in a deregulated state with energy choice available to you, the first place to start is by assessing your current power supply contract and pricing

- 1 Are your terms favorable?
- 2 Are you seeing unexpected charges or line items on your invoice?
- 3 Are you hedging against market volatility?
- 4 Have you secured the best pricing and/or contract length?
- 5 Regardless of energy choice, gaining a better understanding of your utility bills is the first step to reducing demand and usage.





## THE SOLUTIONS

# PROCUREMENT STRATEGIES

Be Proactive: APPI Energy generally recommends actively considering new positions and reviewing current energy market conditions 12 – 24 months prior to the current contract end date.

Consider All of Your Options: Review supplier pricing models, from fixed price products to block and index, as well as opportunities to procure “green” power via RECs. Contract terms & conditions should also not be overlooked.

Leverage a Trusted Source: By utilizing a trusted source, your team can save time and feel empowered to make well-informed decisions.





## THE SOLUTIONS

# REDUCING ENERGY USAGE THROUGH EFFICIENCY PROJECTS



**LED Retrofit or  
LED Upgrade**



**Lighting Controls**



**HVAC Upgrades**



**Smart Thermostat**





## THE SOLUTIONS

# REDUCING ENERGY USAGE THROUGH EFFICIENCY PROJECTS

### LED RETROFIT



- Long-hanging fruit, but with funding, incentives/rebates, and the right vendor, it's a cost-effective solution that carries savings and improved operations.
- In addition to energy savings, with our program all the LEDs are guaranteed for at least five years, eliminating ongoing maintenance costs. Reduce costs with no operational disruption, and in many cases, no upfront capital.
- **Depending on the type of facility, an LED retrofit project can reduce kWh consumption by as much as 25%.**

### ON BILL FUNDING



- On-bill funding helps businesses to identify, implement, and fund efficiency improvements and energy infrastructure that can:
  - **Reduce energy costs**
  - **Modernize facilities (through technology upgrades)**
  - **Meet sustainability goals**
- On bill funding provides an opportunity for funding when there is:
  - A lack of CapEx spend for projects and initiatives
  - Not enough funds budgeted
  - No upfront capital available

# THE SOLUTIONS

## MEET YOUR SUSTAINABILITY GOALS

### RECs



- A REC is produced when a renewable energy source generates one megawatt-hour (MWh) of electricity and delivers it to the grid. RECs are certificates that then transfer the legal rights to the environmental attributes of that renewable energy to the purchaser (you).
- Benefits include:
  - **Procure Up to 100% Green Power**
  - Meet Sustainability & Efficiency Energy Goals
  - Strengthen Stakeholder Relationships
  - Differentiate Your Branding/Messaging

### EMISSIONS BENCHMARKING



Through our best-in-class utility bill administration services, our team can:

- Establish Scope 1 and Scope 2 carbon emissions data reports; reports are benchmarked and tracked monthly.
- Establish a baseline to work from to set and ultimately reach GHG goals.
- **Provide a turnkey solution that requires minimal input from organizations to produce third party auditable carbon emissions reports, seamlessly transferable to any interested partner or entity requiring carbon emissions data.**
- Automate utility data services for building and fleets.

## THE SOLUTIONS

# MEET YOUR SUSTAINABILITY GOALS - SOLAR

---

Benefits include:

- Decreased energy bills
- **New incentives, ranging between 30-70%**
- High internal rate of return on a long-term warranted asset
- Hedge against rising energy costs and rising electricity rates
- Reduced risk of blackouts and lost product
- Lower carbon footprint, PLUS, PR opportunities related to sustainability efforts





## THE SOLUTIONS

# MEET YOUR SUSTAINABILITY GOALS - SOLAR

---

### PA State Solar Incentives

- **Pennsylvania Solar Renewable Energy Certificates (SRECs)**
  - Enables organizations to sell the SRECs that their panels generate.
  - The rates paid for SRECs varies based on market conditions; during 2022 the market price for PA-sourced SRECs ranged between \$30 - \$47/MWh
- **Net Metering in Pennsylvania**
  - Net metering allows home and business owners get financial credit applied to their electric bills when they produce excess solar energy. Unlike most states, Pennsylvania requires utility companies to send you an additional check for your energy, if you produced a surplus for the full year.
- **Solar Energy Program (SEP)**
  - The Solar Energy Program (SEP) provides financial assistance in the form of grant and loan funds to promote the use of solar energy in Pennsylvania.
  - Available to Businesses, Economic development organizations, Political subdivisions, including municipalities, counties and school districts

# HOW CAN WE HELP YOU REACH YOUR GOALS?

## INTRODUCTORY CONVERSATION

---

We learn about your organization, its operations and energy profile: energy consumption, costs, demand, objectives and issues.

## USAGE ANALYTICS

---

Our team compiles and analyzes key data points to gain a complete view of your current energy usage profile.

## ENERGY ASSESSMENT

---

We conduct an holistic energy assessment and present solutions which are financially and functionally vetted to reduce demand, and improve resiliency and sustainability.

## CUSTOMIZED SOLUTIONS

---

Our team implements projects as part of an overall energy management portfolio of solutions and services to generate value.



## NEXT STEPS

A no cost, no obligation call will only take a few minutes of your time and will allow our team to assess the options available to your organization to reduce energy costs and minimize budgetary risk.

---

**Dan Forgacs, CEP, EMP**  
VICE PRESIDENT,  
MARKET INTELLIGENCE & ANALYTICS

e: [dforgacs@appienergy.com](mailto:dforgacs@appienergy.com)  
d: 667.330.1165