# Energy Policies are Contributing to Housing Cost Increases

## Summary of Key Points

## 05-22-2024

- U.S. energy policy has reduced coal fired electrical generation by more than 50% since 2010
- Reduced coal fire baseload has been supplanted by natural gas fired baseload which has increased by over 100% since 2010.

- Renewable have increased to 12% of the U.S. generation mix since 2010

- During extreme weather events renewables are offline elevating demand burden on natural gas fired generation

- Constraints plus increases in demand on natural gas result in high volatility in gas pricing

- Manufacturing costs increase significantly, up 248% in 2023 due to energy cost increases

- Consumer prices on building materials have increased by 30% since 2020 due largely to energy costs increases

- Energy price volatility prompts manufacturers to buy insurance in the form of future energy contracts and/or to curtail production; both of which drive consumer prices higher

- Residential natural gas bans will cause additional cost increases:

    - Cost of new equipment
    - Lowered energy efficiency of electrical heating
    - Increase utility use of natural gas to produce electricity to heat homes
    - Utility gas purchases will further drive up costs

- Residential natural gas bans will also:
    - Further strain an over stressed electrical grid
    - Will create heating and environmental issues during electrical grid failures

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## 05-22-2024

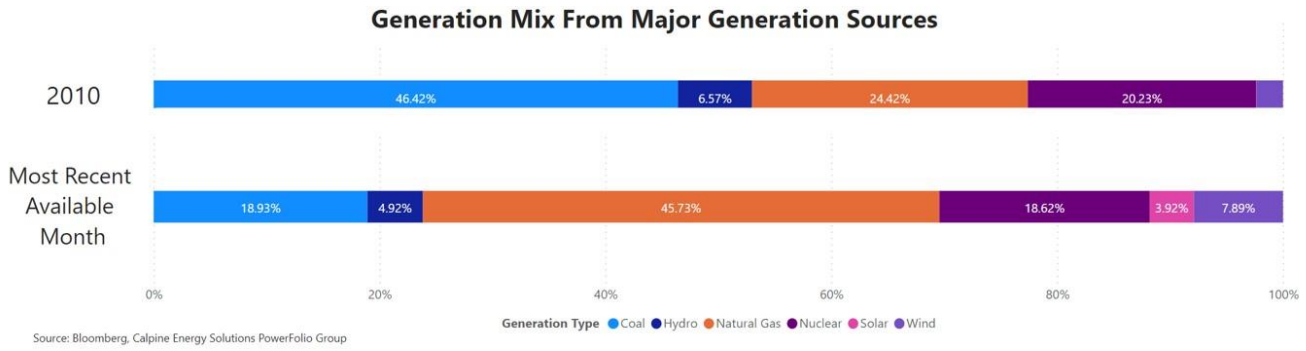
My name is Phillip Bonnell. I am the President of PABCO Building Products, a family-owned business headquartered in Sacramento California. PABCO manufactures and sells building products for the residential construction markets in eleven western states and western Canada. Our core product offering includes gypsum drywall and asphalt roof shingles. In addition, PABCO manufactures paper to produce our drywall products. We operate four manufacturing facilities located in Las Vegas, NV, Vernon CA, Newark, CA, and Tacoma WA. With 550 employees and approximately $400 million in annual net sales, we are the smallest producer of these products in the U.S., however we have a significant presence and market share on the west coast and the greater southwestern U.S.

I am here today to offer, for your consideration, information on the adverse impacts of green energy policy and, specifically to address proposals to ban natural gas in residential applications. Banning natural gas in residential use will adversely impact homeowners, manufacturers, and the most marginalized members of our society because it constricts energy diversity and drives up cost.

Over the course of the last five years, PABCO has seen significant increases in input costs, which in turn are driving up the selling prices of our products to residential consumers. While there are multiple contributing factors to these cost increases, energy related cost escalation is the most significant. The manufacturing process for our materials, like many manufactured products, has a strong energy component. Our plant operations are significant consumers of

electricity and natural gas. It is in our own best interest to minimize the use of expensive energy; we strive to be as efficient as possible and are constantly looking for alternative energy and product options to reduce this critical cost component.

Since 2010, green energy policies have been a significant driver of energy cost increases, particularly in the Western U.S. In 2010, the U.S. electricity generating mix was dominated by coal fired power plants which produced over 46% of U.S. electricity. Electricity generated by natural gas was a distant second at approximately 24%. By 2022 U.S. coal fired electricity generation had dropped to 19% as green energy mandates either forced coal plant closures or rendered them financially unattractive. In that same time, renewables (wind & solar) grew to 12% of electricity generation while natural gas climbed to a 46% share. Particularly in the west, where almost 5,000 megawatts of baseload coal electricity generation were retired, natural gas became the de facto baseload energy source.




While renewables contribute, they remain a small player in overall electricity generation and have at least one problematic flaw: they only generate when the wind blows or the sun shines. The interruptible nature of these energy producers has contributed significantly to the overall

energy cost run up, particularly in the southwestern U.S. which has very challenged access to natural gas supply pipelines.

The mandated retirement of western coal baseload generating capacity has tied natural gas, inextricably to, electricity generation. The resulting decrease in western energy generation diversity has created highly volatile market conditions over the past five years. In the last 18 months alone, PABCO has seen natural gas costs as low as $1.03 per MMBTU and as high as $54.00 per MMBTU (the highest cost on the planet in January 2023). Three times since 2021, western energy consumers have seen market volatility for natural gas accelerate pricing by 5X-12X or more. The result is a significant 4-year energy cost increase for or our Las Vegas drywall plant:

| **FY 2020**<br>**Gas + Electricity Cost** | **FY 2023**<br>**Gas + Electricity Cost** | **% Change** |
|---|---|---|
| **$11.5 MM** | **$29.3 MM** | **+248%** |

How does this happen? Severe weather knocked out renewable production, persistent drought limited hydro generation, and freezing weather drove up demand for electricity and gas heating. The result: large western utilities acquired massive quantities of natural gas to meet baseload demand from their customers to keep the lights on and houses warm. This, in combination with market speculation drove natural gas prices to all-time highs. Lack of diversity in electrical generation sources and lack of storage for renewables is placing increased pressure on natural gas as a resource.

Although energy markets have settled since the severe natural gas price spike in January of 2023, cost volatility still exists. To offset this volatility, manufactures like PABCO engage in multiple tactics to minimize total cost impacts including:

- Reducing energy inputs through process and product development
- Purchase of future energy strips (usually at a premium to spot pricing)
- Curtailment of production during high-cost volatility periods

Apart from new product/process development (which comes slowly), the other two activities add cost to our finished products and drive consumer prices on these items upward. Since our FY 2020 year, our average net selling price has increased by approximately 30% to cover these added costs. This has a direct impact on the cost of new home construction. PABCO's products represent a small subset of manufactured products which have a significant energy component: lumber, concrete, windows, flooring, insulation, paint, and more are experiencing similar energy cost increases. All of this adds to the cost of a new home.

While constraints on energy sourcing for electrical generation have already increased the cost of building materials for homes, a future residential natural gas ban will also impact the cost of living in a home. Residential natural gas bans will require most homes to convert to electrical heating systems at a significant cost to the owner. These systems are much less energy efficient than natural gas. When renewables are offline, often during severe weather events, more baseload gas will be burned by the utilities to generate the electricity to run these systems. Sudden demand events and limited non-interruptible supply will drive a high degree of future price volatility.

Lastly, converting residential property to all electric will put further stress on an already strained electrical grid. With anticipated growth in zero emission EV's, the development of massive data server farms and the forecasts for electrical requirements from new A.I. technologies, the existing electrical grid will be unable to meet demand. When electricity is not available people will be forced to heat their homes by whatever option(s) they have available further adversely impacting the environment.

In summary, residential gas bans will bring higher costs to build, higher costs to live and will deliver lower reliability with increased adverse environmental impacts. For those looking to own their part of the "American Dream," and for those who are just trying to heat their homes, banning natural gas will raise costs.