

Understanding Your Potomac Edison Power Bill

**A Frederick County Homeowner's Guide to Where Your
Money Really Goes**

Prepared by Rocky Mackintosh

MacRo, LTD Commercial Real Estate Services

MacRo Report AI Corner – July 20, 2026

Table of Contents

1. Executive Summary	3
2. Why This Guide Was Written	4
3. The Sample Frederick County Bill	5
4. Where Every Dollar Went	6
5. What Actually Paid for Electricity	7
6. What Paid for Local Delivery	11
7. Maryland Programs, Taxes and Policy Charges	13
8. The Legacy PURPA Contract Charge	15
9. What Is Not Separately Disclosed	16
10. Where Data Centers Fit into the Bill	17
11. The Ratepayer Protection Pledge	19
12. Frequently Asked Questions	20
13. Conclusions	22
14. Glossary	24
15. Sources and Further Reading	25

1. Executive Summary

Electric bills are often discussed as though they represent one simple purchase: electricity used in the home.

They do not.

A modern residential electric bill combines the cost of producing electricity, transporting it over the regional grid, delivering it through local wires, reconciling wholesale-market costs, funding state programs, paying taxes and recovering expenses associated with prior regulatory decisions.

This guide examines an actual Potomac Edison bill for a Frederick County residence. The billing period covered 34 days and showed residential consumption of **1,342 kilowatt-hours**. The residential service charges totaled **\$229.19**. A separate outdoor-lighting service totaling \$20.03 was excluded from the main residential analysis because it includes fixture and maintenance costs not normally found on a standard household account.

Key findings

- **\$138.03, or 60.2%**, was identified as the Generation Charge. This is the closest visible measure of the cost of electricity supplied to the home.
- When generation, transmission, the Energy Cost Adjustment and the Administrative Credit are combined, **\$161.85, or 70.6%**, related broadly to obtaining power, moving it over the regional grid and reconciling wholesale costs.
- **\$36.69, or 16.0%**, paid for Potomac Edison's local distribution system and customer account costs.
- **\$18.68, or 8.15%**, funded separately identified energy-efficiency and environmental programs.
- **\$10.82, or 4.72%**, paid a surcharge related to the termination of the former Warrior Run PURPA power-purchase contract.
- The bill contains **no separate charge labeled "data centers."**
- Any current data-center impact would be embedded within broader supply, PJM capacity, transmission or future infrastructure costs.
- The Trump administration's **Ratepayer Protection Pledge** establishes the principle that participating data-center companies should pay for the additional generation and delivery infrastructure their facilities require rather than shifting those costs to existing households. ([The White House](#))

The most important conclusion is not that data centers have no effect on electric costs. It is that a residential bill does not provide enough detail to assign a defensible percentage of the bill to data-center growth.

2. Why This Guide Was Written

Debate over data centers and electricity costs has intensified throughout Frederick County and the broader PJM region.

The issue is often reduced to a simple claim:

Data centers use enormous amounts of electricity, so they must be responsible for higher household electric bills.

That argument contains an element of truth. Data centers are increasing projected electricity demand, and rapid demand growth can affect wholesale markets, PJM capacity prices, transmission planning and utility investment.

But a household electric bill reflects far more than recent electricity demand.

It also reflects:

- Wholesale electricity contracts
- Regional transmission costs
- Local distribution infrastructure
- Utility operating costs
- Energy-efficiency programs
- Taxes and public-benefit charges
- Environmental programs
- Historical power-purchase agreements
- Adjustments between estimated and actual market expenses

The purpose of this guide is to distinguish those components and answer three questions:

1. **What percentage of the bill actually paid for electricity?**
2. **What percentage supported Maryland energy and environmental programs?**
3. **How much can honestly be attributed to data centers?**

3. The Sample Frederick County Bill

The bill analyzed in this guide contained two electric services.

Residential service

- Billing period: 34 days
- Residential use: 1,342 kWh
- Residential charges: \$229.19

Outdoor-lighting service

- Lighting charges: \$20.03
- Includes energy use, fixture charges and lighting-service expenses

Because the outdoor-lighting account includes utility-owned equipment and fixture costs, it is excluded from the primary percentage calculations.

The following analysis therefore uses the **\$229.19 residential total** as its base. The charges appear under the “Charges from Potomac Edison” section on page one of the bill.

4. Where Every Dollar Went

Detailed residential bill

Charge	Amount	Percentage of residential bill
Generation Charge	\$138.03	60.23%
Transmission Charge	\$5.31	2.32%
Customer Distribution Charge	\$6.00	2.62%
Distribution Charge	\$30.69	13.39%
Electric Universal Service Fee	\$0.32	0.14%
Energy Cost Adjustment	\$21.36	9.32%
Administrative Credit	-\$2.85	-1.24%
PURPA Termination Agreement Surcharge	\$10.82	4.72%
Franchise Tax	\$0.83	0.36%
EmPOWER Maryland Surcharge	\$18.47	8.06%
Maryland Environmental Surcharge	\$0.21	0.09%
Total	\$229.19	100%

A simpler five-part summary

Broader category	Charges included	Amount	Share
Power supply and regional market	Generation, transmission, Energy Cost Adjustment, Administrative Credit	\$161.85	70.62%
Local utility delivery	Customer Distribution Charge, Distribution Charge	\$36.69	16.01%
Maryland programs and taxes	Universal Service, Franchise Tax, EmPOWER, Environmental Surcharge	\$19.83	8.65%
Legacy power-contract obligation	PURPA Termination Surcharge	\$10.82	4.72%
Total		\$229.19	100%

This second table is easier to understand, but it must be used carefully. For example, some renewable-energy and carbon-policy costs may be embedded inside the broad power-supply category rather than appearing among the separately identified Maryland program charges.

5. What Actually Paid for Electricity?

The Generation Charge: \$138.03

The Generation Charge was the largest individual component of the bill.

It represented:

60.2% of the residential total

Potomac Edison defines this as the charge for the production of electricity. ([FirstEnergy](#))

For customers receiving Standard Offer Service, Potomac Edison purchases electricity under contracts approved and overseen through Maryland's regulatory system. Maryland utilities generally use overlapping supply contracts rather than purchasing all residential electricity at current short-term market prices. This approach is intended to reduce sudden price changes. ([Maryland Office of People's Counsel](#))

At 1,342 kWh, the \$138.03 charge equaled approximately:

10.29 cents per kilowatt-hour

The published Potomac Edison supply rate for July 2026 was 10.824 cents per kWh, although actual bills can differ because a billing period may cross rate-effective dates and may include separate adjustments. ([Maryland Office of People's Counsel](#))

Does generation mean only fuel?

No.

Although labeled "Generation," this category can reflect more than fuel burned or energy produced at a power plant.

The supply price may incorporate:

- Wholesale energy purchases
- PJM capacity obligations
- Supplier contract prices
- Market risk
- Renewable-energy compliance expenses
- Carbon-compliance costs
- Administrative procurement costs

The bill does not separately show how much of the Generation Charge went toward each of those components.

That is one of the central transparency limitations of the current bill.

Transmission Charge: \$5.31

Transmission covers the movement of high-voltage electricity from power plants across the regional bulk-power network before it reaches Potomac Edison's local distribution system.

It represented:

2.32% of the residential bill

Potomac Edison defines the charge as the cost of moving high-voltage electricity from generation facilities to distribution lines. ([FirstEnergy](#))

At 1,342 kWh, the charge equaled approximately:

0.396 cents per kWh

That matches Potomac Edison's published July 2026 transmission rate. ([Maryland Office of People's Counsel](#))

Transmission costs may include:

- High-voltage lines
- Regional substations
- Bulk-power transformers
- Reliability projects
- System upgrades
- Federally approved transmission-owner returns

PJM coordinates transmission planning, but PJM generally does not own the physical transmission system. The facilities are owned by utilities and transmission companies.

Energy Cost Adjustment: \$21.36

This charge represented:

9.32% of the residential bill

It is not simply another generation charge.

Potomac Edison defines the Energy Cost Adjustment as a charge or credit reconciling the difference between generation and transmission amounts billed to customers and Potomac Edison's actual payments to PJM and wholesale suppliers. ([FirstEnergy](#))

At 1,342 kWh, the adjustment equaled approximately:

1.59 cents per kWh

It may rise or fall because of:

- Differences between forecast and actual costs
- Changes in wholesale invoices
- PJM charges
- Seasonal demand
- Under-collection or over-collection in prior periods

This line is important to the data-center discussion because some PJM market effects could flow through an adjustment mechanism such as this one. However, the bill does not disclose whether any particular portion resulted from data-center demand.

Administrative Credit: -\$2.85

This item reduced the bill.

Potomac Edison defines it as a credit for amounts collected in excess of the company's incremental cost of providing Standard Offer Service generation. ([FirstEnergy](#))

It represented a reduction of approximately:

1.24%

This credit illustrates that adjustment mechanisms can benefit customers as well as increase charges.

The broad power-supply total

When the following are combined:

- Generation: \$138.03
- Transmission: \$5.31
- Energy Cost Adjustment: \$21.36
- Administrative Credit: -\$2.85

the total is:

\$161.85, or 70.6% of the residential bill

This is the most defensible estimate of the portion broadly related to acquiring electricity, moving it across the regional grid and reconciling actual market costs.

It should not be described as pure electricity production because it includes transmission and market reconciliation.

6. What Paid for Local Delivery?

Electricity must still be delivered from the regional grid to the home.

Maryland's Office of People's Counsel explains that utility bills contain two main categories: supply and delivery. Delivery pays for the poles, wires, equipment and workers needed to operate the local system. ([Maryland Office of People's Counsel](#))

Customer Distribution Charge: \$6.00

This fixed monthly charge represented:

2.62% of the bill

Potomac Edison says it recovers customer-related distribution expenses such as:

- Meter reading
- Billing
- Service-line maintenance
- Customer-related equipment
- Account administration

The fee applies regardless of how much electricity the household uses. ([FirstEnergy](#))

The current published charge is \$6 per month. ([Maryland Office of People's Counsel](#))

Distribution Charge: \$30.69

This usage-based charge represented:

13.39% of the bill

It pays for local delivery infrastructure and utility operations, including:

- Neighborhood wires
- Poles
- Local substations
- Transformers
- Underground facilities
- Maintenance crews
- Storm restoration
- Vegetation management
- Meters and communications equipment

Potomac Edison defines it as the balance of local distribution costs not recovered through the customer charge. ([FirstEnergy](#))

At 1,342 kWh, it equaled approximately:

2.287 cents per kWh

That matches Potomac Edison's July 2026 published volumetric distribution rate. ([Maryland Office of People's Counsel](#))

Total local delivery

The two local-distribution charges totaled:

\$36.69, or 16.0% of the residential bill

This is the portion most directly associated with Potomac Edison's local wires, equipment, customer service and regulated distribution operations.

7. Maryland Programs, Taxes and Policy Charges

EmPOWER Maryland Surcharge: \$18.47

This was one of the largest non-supply charges.

It represented:

8.06% of the bill

EmPOWER Maryland funds utility-administered energy-efficiency, conservation and greenhouse-gas-reduction programs.

Programs may include:

- Home energy audits
- Weatherization
- Heat-pump incentives
- Efficient-appliance rebates
- Commercial efficiency projects
- Demand-reduction initiatives

The Office of People's Counsel describes EmPOWER programs as supporting efficiency measures for households and businesses. ([Maryland Office of People's Counsel](#))

The charge equaled approximately:

1.376 cents per kWh

That matches Potomac Edison's July 2026 published EmPOWER rate. ([Maryland Office of People's Counsel](#))

Maryland Environmental Surcharge: \$0.21

This small charge represented:

0.09% of the bill

Potomac Edison identifies it as funding Maryland's Power Plant Research Program. ([FirstEnergy](#)) - The program evaluates power-plant and transmission impacts, environmental conditions and other energy-system issues.

Electric Universal Service Fee: \$0.32

This fee represented:

0.14% of the bill

It supports state programs assisting eligible low-income utility customers. Potomac Edison identifies it as a charge for Maryland's electric universal-service program. ([FirstEnergy](#))

Franchise Tax: \$0.83

The franchise tax represented:

0.36% of the bill

Potomac Edison identifies it as a state tax based on the amount of electricity delivered. ([FirstEnergy](#))

Separately identified environmental and efficiency charges

If the EmPOWER and Environmental surcharges are combined:

- EmPOWER: \$18.47
- Environmental surcharge: \$0.21

the total is:

\$18.68, or 8.15% of the bill

This is the amount clearly labeled for efficiency and environmental programs.

It is **not necessarily the complete cost of Maryland's green-energy policies.**

Other policy costs may be embedded in:

- Generation contracts
- Renewable-energy-credit compliance
- RGGI allowance costs
- Transmission investments
- Future offshore-wind obligations

Therefore, the accurate statement is:

At least 8.15% of this bill was separately identified as energy-efficiency or environmental-program charges.

8. The Legacy PURPA Contract Charge

PURPA Termination Agreement Surcharge: \$10.82

This charge represented:

4.72% of the residential bill

It is one of the most revealing items because it does not relate directly to electricity used during this billing period.

Potomac Edison explains that the surcharge recovers costs associated with terminating its former Warrior Run cogeneration power-purchase agreement. The Maryland Public Service Commission approved termination of that agreement in June 2023. ([FirstEnergy](#))

The contract originated under the federal Public Utility Regulatory Policies Act, known as PURPA, which encouraged utilities to purchase power from qualifying independent facilities.

Over time, some older long-term contracts became more expensive than prevailing market alternatives. Ending such an agreement can require a settlement or termination payment.

The surcharge therefore represents:

- A historical regulatory obligation
- A legacy power-purchase contract
- A cost approved for recovery from present customers

At approximately 0.806 cents per kWh, this charge exceeded:

- The transmission charge
- The customer charge
- The universal-service fee
- The environmental surcharge
- The franchise tax

This is a useful reminder that today's electric bills can reflect decisions made many years earlier.

9. What Is Not Separately Disclosed?

The bill does not contain separate lines for:

- PJM capacity costs
- Data-center-related expenses
- Renewable Energy Credits
- RGGI carbon allowances
- Offshore wind
- Grid modernization
- Climate Solutions Now Act compliance
- Natural-gas fuel
- Nuclear generation
- Wholesale supplier margins

Those costs may exist, but the customer cannot identify them from the bill.

Some may be incorporated within:

- Generation
- Transmission
- Energy Cost Adjustment
- Distribution
- Future rate-base investments

This is the core transparency problem.

A customer can determine the amount charged for broad categories but cannot determine the detailed policy, market or industry-related cost inside those categories.

10. Where Data Centers Fit into the Bill

The defensible answer

The bill does not provide enough information to calculate a data-center percentage.

No line item identifies:

- Data-center demand
- Data-center transmission
- Data-center generation
- Data-center capacity costs
- Data-center infrastructure

Any current data-center impact would most likely occur through:

1. **PJM capacity prices**
2. **Wholesale electricity prices**
3. **Transmission planning**
4. **Future generation requirements**
5. **Future utility infrastructure**
6. **Cost allocation under large-load tariffs**

What can be said

Data centers are an increasingly important source of projected electricity demand.

Growing demand can increase costs when:

- Supply does not expand fast enough
- Older generation retires
- Transmission is constrained
- Utilities build infrastructure that is not paid for by the customer creating the need
- Capacity markets anticipate tighter reserve margins

What cannot be said from this bill

It would be unsupported to state:

- “Ten percent of this bill is caused by data centers.”
- “The Energy Cost Adjustment is entirely attributable to data centers.”
- “The transmission charge is primarily for local data centers.”
- “Data centers have no effect on this bill.”

The evidence available to the homeowner is insufficient for any of those conclusions.

The most accurate statement is:

Data centers may be affecting some embedded regional supply and capacity costs, but the residential bill does not disclose enough detail to quantify that effect.

11. The Ratepayer Protection Pledge

The most legitimate data-center concern is not merely that the facilities consume large amounts of electricity.

It is whether existing residential customers will be required to pay for:

- New generation
- New transmission lines
- New substations
- Reserved capacity
- Infrastructure that becomes stranded if a project is delayed or canceled

The Trump administration's Ratepayer Protection Pledge addresses that issue directly.

Under the pledge, Amazon, Google, Meta, Microsoft, OpenAI, Oracle and xAI agreed to:

- Build, bring or buy the additional power required for their facilities
- Pay for new delivery-infrastructure upgrades
- Negotiate separate utility rate structures
- Pay for committed power and infrastructure whether or not they use all of it
- Support grid resilience and local workforce investment

The White House states that the purpose is to prevent data-center energy and infrastructure requirements from being transferred to ordinary households. ([The White House](#))

The principle is straightforward:

The customer creating the new infrastructure need should bear the measurable cost of that infrastructure.

Whether this principle fully protects Maryland customers will depend on:

- Maryland Public Service Commission decisions
- Potomac Edison tariffs
- PJM cost-allocation rules
- Large-load service agreements
- Interconnection requirements
- Enforcement of financial commitments

The pledge establishes a policy direction. Implementation will determine its practical value.

12. Frequently Asked Questions

Does Potomac Edison generate all the electricity I use?

No. Potomac Edison distributes electricity and procures Standard Offer Service power for customers who have not selected another supplier. Supply is purchased through wholesale contracts and the PJM market structure. ([Maryland Office of People's Counsel](#))

Can I choose another electricity supplier?

Yes. Maryland allows retail electricity choice. The local utility still delivers the electricity, maintains the wires and sends the bill unless another arrangement applies.

Will changing suppliers eliminate distribution charges?

No. Potomac Edison remains the local distribution utility.

Does the bill show the cost of renewable mandates?

Not separately. Some renewable-compliance costs may be embedded in the Generation Charge or supplier contract price.

Does the bill show RGGI costs?

No. Generator carbon-allowance costs may affect wholesale prices but are not itemized on this bill.

Does the bill show offshore-wind costs?

No separate offshore-wind charge appears.

Is EmPOWER Maryland a green-energy charge?

It is more accurately described as an efficiency, conservation and greenhouse-gas-reduction program charge. It funds programs such as audits, weatherization and equipment incentives. ([Maryland Office of People's Counsel](#))

Does Potomac Edison profit from the Generation Charge?

Standard Offer Service supply costs are generally passed through, although authorized administrative compensation and adjustments may apply. The utility's traditional regulated return is associated more directly with qualifying distribution investment.

Why is the Energy Cost Adjustment so large?

It reconciles billed generation and transmission charges with actual payments to PJM and wholesale suppliers. It may be positive or negative. ([FirstEnergy](#))

Why am I paying for a terminated PURPA contract?

The PSC approved recovery of costs associated with ending the former Warrior Run contract. ([FirstEnergy](#))

How much of this bill was caused by data centers?

The bill does not provide enough detail to calculate that amount.

13. Conclusions

The sample Frederick County electric bill demonstrates that a household does not receive one simple charge for electricity.

Instead, the bill combines:

- Power generation
- Regional transmission
- Market reconciliation
- Local delivery
- Customer service
- State efficiency programs
- Low-income assistance
- Environmental programs
- Taxes
- Legacy contract costs

The Generation Charge accounted for approximately **60.2%** of the residential total.

Broader supply, transmission and market reconciliation accounted for approximately **70.6%**.

Local distribution and account costs accounted for approximately **16.0%**.

Separately identified environmental and efficiency charges accounted for approximately **8.15%**.

A legacy PURPA termination surcharge accounted for approximately **4.72%**.

What the bill did **not** reveal was equally important.

It did not show how much was attributable to:

- Data centers
- PJM capacity
- Renewable-energy requirements
- RGGI
- Offshore wind
- Other embedded public-policy costs

That lack of detail makes it difficult for consumers to evaluate competing claims about why their bills are increasing.

Data centers should pay the measurable cost of generation, transmission and infrastructure required specifically to serve them. The Ratepayer Protection Pledge reflects that principle.

But consumer protection also requires transparency.

Before policymakers, advocates or opponents blame one industry for the full cost of electricity, Maryland customers should be given a clearer accounting of what is already included in their bills.

1

4. Glossary

Capacity: Payment for generation resources to remain available when needed, separate from payment for the electricity actually produced.

Distribution: The local network of poles, wires, transformers and substations delivering power to homes.

Generation: Production or wholesale purchase of electricity.

Kilowatt-hour: A unit measuring electricity use.

PJM Interconnection: The regional transmission organization coordinating wholesale electricity markets and grid reliability across Maryland and parts of 12 other states and the District of Columbia.

PURPA: The Public Utility Regulatory Policies Act, a federal law encouraging utility purchases from certain independent generators.

Rate base: The value of qualifying utility investment on which a regulated utility may earn an authorized return.

RGGI: The Regional Greenhouse Gas Initiative, a carbon-allowance program involving Maryland and other participating states.

Standard Offer Service: Utility-procured electricity supply provided to customers who do not choose a competitive supplier.

Transmission: High-voltage movement of electricity from generation facilities to local distribution systems.

15. Sources and Further Reading

- Potomac Edison, **Maryland Bill Explanation of Terms**. ([FirstEnergy](#))
 - Potomac Edison, **Maryland Bill Sample and Charge Definitions**. ([FirstEnergy](#))
 - Maryland Office of People's Counsel, **Potomac Edison Current Rates**. ([Maryland Office of People's Counsel](#))
 - Maryland Office of People's Counsel, **Utility Rates and Bill Basics**. ([Maryland Office of People's Counsel](#))
 - Maryland Office of People's Counsel, **Standard Offer Service Rates**. ([Maryland Office of People's Counsel](#))
 - Maryland Office of People's Counsel, **EmPOWER Programs**. ([Maryland Office of People's Counsel](#))
 - White House, **Ratepayer Protection Pledge**. ([The White House](#))
 - White House, **Ratepayer Protection Pledge Fact Sheet**. ([The White House](#))
 - White House, **Ratepayer Protection Pledge Proclamation**. ([The White House](#))
-

Author's Note

This guide analyzes one actual residential bill and publicly available utility and government information. Rates, surcharges and program costs change over time. The percentages shown apply to the sample bill and should not be interpreted as identical for every Potomac Edison customer or every billing period.

About the Author

Rocky Mackintosh, is a licensed commercial real estate broker and owner of MacRo, LTD. He has been advising regional landowners, investors, and institutions since 1972. Mackintosh has been an active member of the Frederick community for over five decades and has served on a number of community organization boards, including Frederick Health as board chairman, The Community Foundation of Frederick County, Goodwill Industries of Monocacy Valley as board chairman, several public and private educational entities, the Capital Funding Advisory Committee for Frederick County Government, as well as a member of the Frederick County Charter Board from 2010 to 2012. In his lengthy real estate career, he has firsthand experience supporting nationally recognized hyperscalers with site search and selection services throughout the Mid-Atlantic.