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RETAIL ENERGY'S GREENWASHING

HOW FICTIONAL RENEWABLE ENERGY CERTIFICATES BECAME "100% RENEWABLE" ELECTRICITY

WRITTEN BY LAUREL PELTIER



For \$15, the author purchased this unbundled Renewable Energy Certificate (REC) from Terrapass, a subsidiary of the Canadian retail supplier Just Energy. This REC was purchased in 2021 from the Texas Champion Wind Farm, built in 2008.



Author Laurel Peltier is a Baltimore-based journalist and energy advocate. She co-wrote the [Abell Foundation Report](#) detailing Maryland's retail energy market. She chairs the Maryland Energy Advocates Coalition and volunteers weekly helping low-income families navigate their home energy utility bills. For more insight into Maryland's residential supplier results, visit www.energysupplierhelpdesk.org. Laurel attended UCLA and is a graduate of the Darden School of Business at the University of Virginia.

Graphic production by
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Does this situation sound familiar?

A salesperson catches you at a farmer's market, a big box store, or even on your front doorstep and pitches you an enticing idea: Help save the planet by switching to a "renewable" retail energy supplier.

Millions have enrolled in these retail "green energy" plans out of such a desire. But if you dig deeper, consumers are not paying for clean energy when they sign up. Instead, they're getting the same local utility grid electricity as their neighbors who didn't enroll with an energy supplier. They also don't know that the average \$320 "green" premium each of the 1.5 million families paid in 2020 went mostly toward energy supplier bottom lines, and not toward repairing our climate.

There are two things that allow this bait-and-switch to happen: a little-known market instrument called a [Renewable Energy Certificate](#), or REC; and the Federal Trade Commission's Green Guide, the agency's de facto rule book in which a mischaracterization of RECs provides legal cover for renewable marketing claims that are not only confusing, but also incorrect.

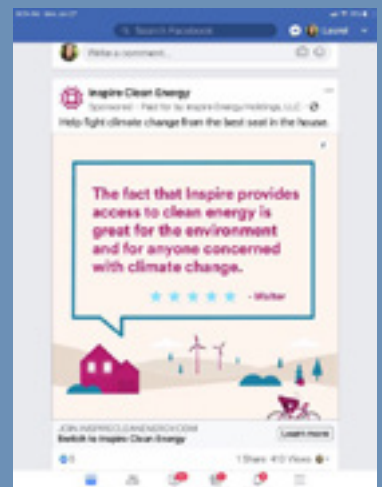
None of this would have been possible without promises from industry leaders that consumers would benefit from more competition in energy markets.

RETAIL ENERGY SUPPLIER BACKSTORY

Beginning in the 1980s and lasting throughout the 1990s, America experienced a wave of free-market deregulation. Many industries were forced to welcome new competitors, and among them were monopolistic electrical utility companies. Consumers were told that such retail competition for electricity would lead to cheaper, innovative, more reliable, and cleaner electricity.

In Texas and most northeastern states, regulated utility monopolies were required to sell off their power plants and purchase electricity and natural gas from wholesale markets. Further, they were required to allow retail energy suppliers to enter the consumer electricity and gas supply markets. This was supposed to let commercial, small business and residential consumers shop around, save money, and buy innovative energy products.

This report focuses on residential competitive energy markets, not competitive wholesale power markets. Called by different names in states – Energy Supplier Companies (ESCOs), Retail Energy Providers (REPs), Alternative Retail Energy Suppliers (ARES), and third-party energy suppliers - this report uses the term 'retail energy suppliers' to define an energy company that competes with regulated utilities for residential electricity and gas supply business in the states that deregulated their energy markets.



Eco-retail suppliers market heavily on social media.

RETAIL GREEN ENERGY

At first glance it appears the competitive retail energy markets boasts dozens, to hundreds, of different companies. Yet two Houston-based energy giants, NRG Energy and Vistra Energy, used their Texas-sized profits, and acquired many brands and own the residential market share in most states.

NRG owns: Direct Energy, Reliant, XOOM, Stream, Green Mountain, Discount Power, and Energy Plus.

Vistra Energy owns: TXU in Texas, Dynegy, Homefield in Illinois, Energy Services Provider, Ambit, Viridian, and Public Power.

STOP SHOPPING.

See How Your Special Offer Compares.

Popular Provider	Go Green Provider
BGE	clearview Energy Live Green
6.8¢ per kWh**	5.8¢ per kWh*

*Clearview rate subject to change
**Rate as of 09/01/2020

Houston-based Clearview Energy marketed lower teaser “Live Green” electricity rates as compared to Maryland’s regulated BGE utility electricity rate.

Two decades later, 13 states and Washington, DC have maintained deregulated energy markets where competitive energy companies supply electricity and natural gas for about 13 million residential accounts.

Energy deregulation has not paid off for residential consumers that switched from their regulated utility supply to retail energy supplier plans. Many have been lured in with incentives like gift cards, airline miles and reward programs. Initially, they saved with introductory price offers and short-term teaser rates that soon expired to be replaced with variable rate pricing. Many consumers were unaware they were about to pay more because of lengthy and inscrutable contracts.

Such dealings are made possible in part because competitive retail energy electricity and natural gas rates have little to no government oversight.

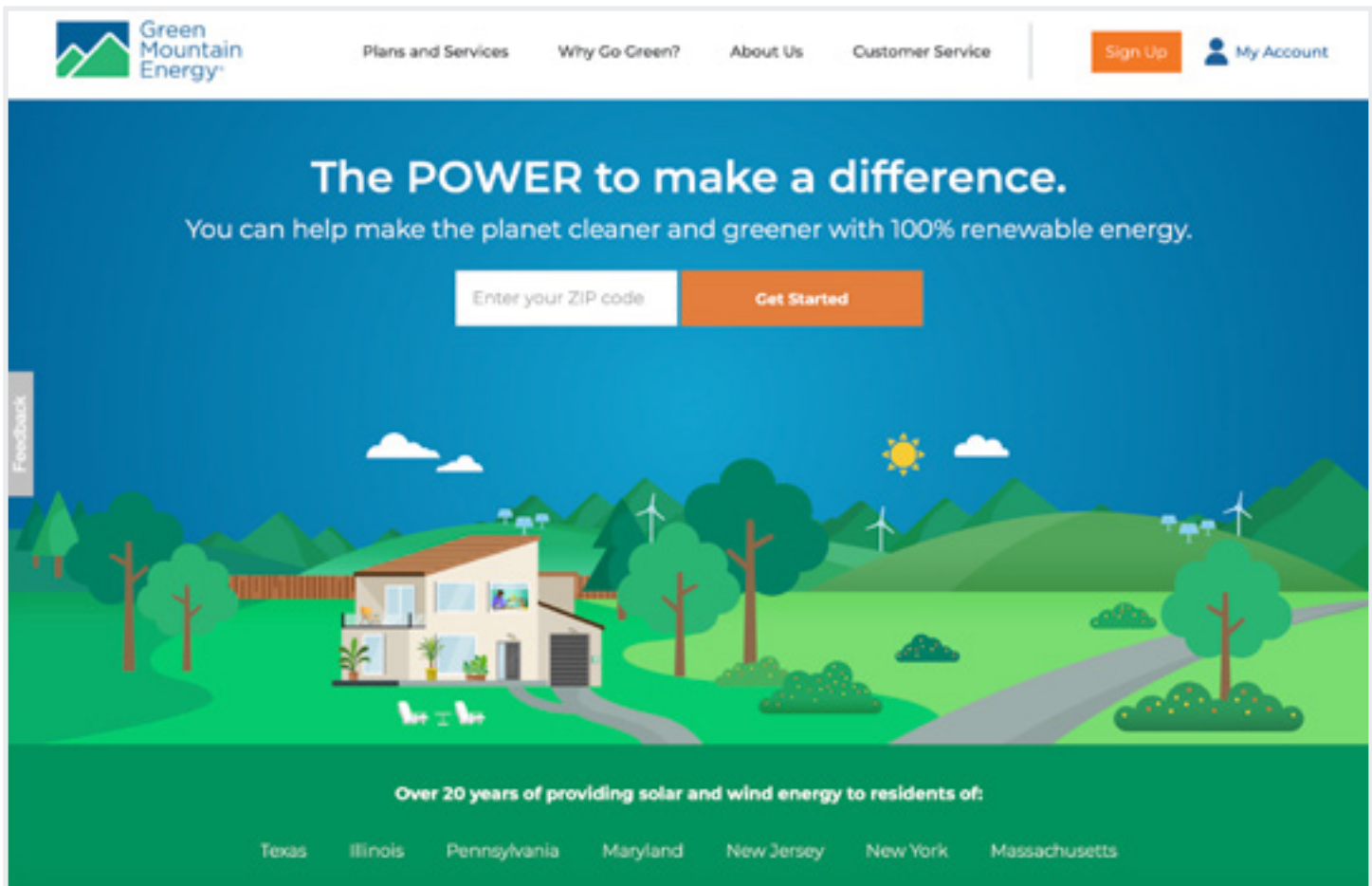
In March 2021, the Wall Street Journal [reported](#) that since 2010 retail energy suppliers have charged their customers \$19 billion more than incumbent regulated utilities offers. Concerning data has also revealed that a main retail energy supplier sales method — door-to-door sales — targets low-income ZIP codes in communities of color selling sky-high energy rates.

These states have residential competitive retail supplier energy markets for both electricity and natural gas.

CONNECTICUT	MASSACHUSETTS	PENNSYLVANIA
DELAWARE	NEW HAMPSHIRE	RHODE ISLAND
ILLINOIS	NEW JERSEY	TEXAS
MAINE	NEW YORK	WASHINGTON, DC
MARYLAND	OHIO	

LET’S GO GREEN!

With the spotlight on high prices, the residential retail energy industry has pivoted to a new offering: Renewable energy. Texas-based Spark Energy even changed its corporate name to [VIA Renewables](#).



Green Mountain Energy was acquired in 2010 by Houston-based NRG Energy. From their website: It all started in Vermont in 1997. Our passion for protecting the environment led us to our mission: to use the power of consumer choice to change the way power is made.

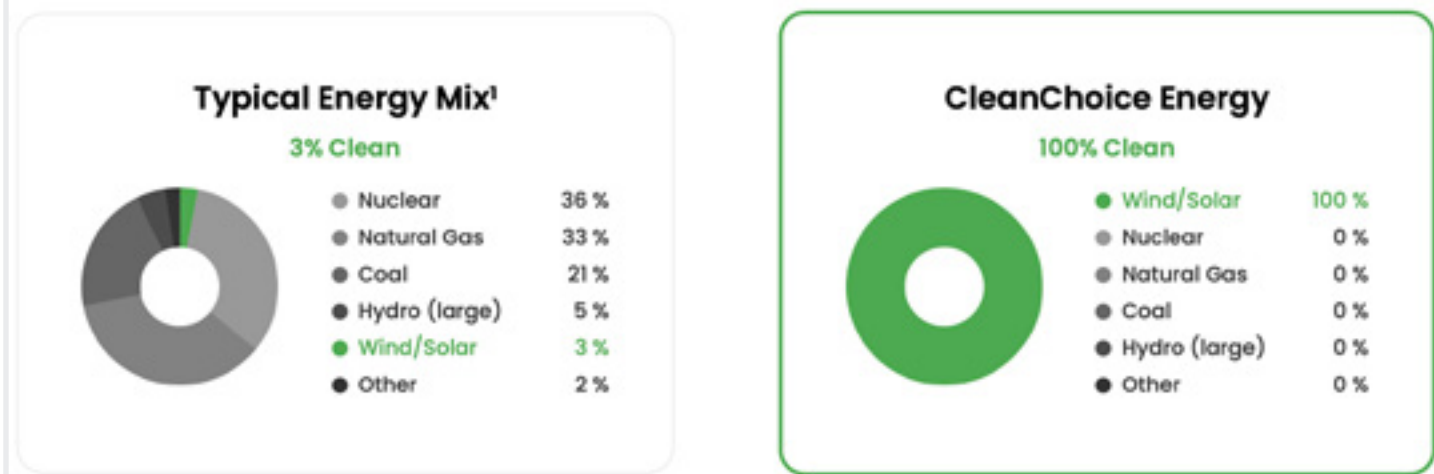
While market share leaders — NRG Energy, Vistra Energy, and Constellation — offer both renewable and standard electricity plans, there’s a host of companies that brand themselves as 100% renewable: NRG’s [Green Mountain Energy](#), Shell Energy’s [Inspire Energy](#), [CleanChoice Energy](#), Spark/VIA’s [Verde Energy](#), and [SmartEnergy](#) lead the pack with each servicing at least 100,000 residential customers, with a dozen smaller suppliers trail behind them.

Retail energy supplier green marketing claims are straightforward, using language that appeals to consumers desire to help the world.

[CleanChoice Energy](#) states, “In the US, most electricity comes from burning polluting fossil fuels. But with CleanChoice Energy, you can choose where your energy comes from.” Acquired by Shell Energy in 2021, Inspire Energy claims, “Power a brighter world with clean energy for your home. Access 100% renewable wind, solar and hydro power for your home at predictable price with no installations or hidden fees-ever.” The [Clearview Energy website](#) reads, “We’re providing power for a better world.” Companies also push the point home with images of wind turbines and solar panels and mention things like carbon emission reduction or the number of trees purchased.

You have the power to choose the cleaner option

Right now, the electricity that comes to your home likely includes dirty fossil fuels, which pollute our environment. But by choosing 100% wind and solar energy, you can help improve the air we breathe and the world we share.



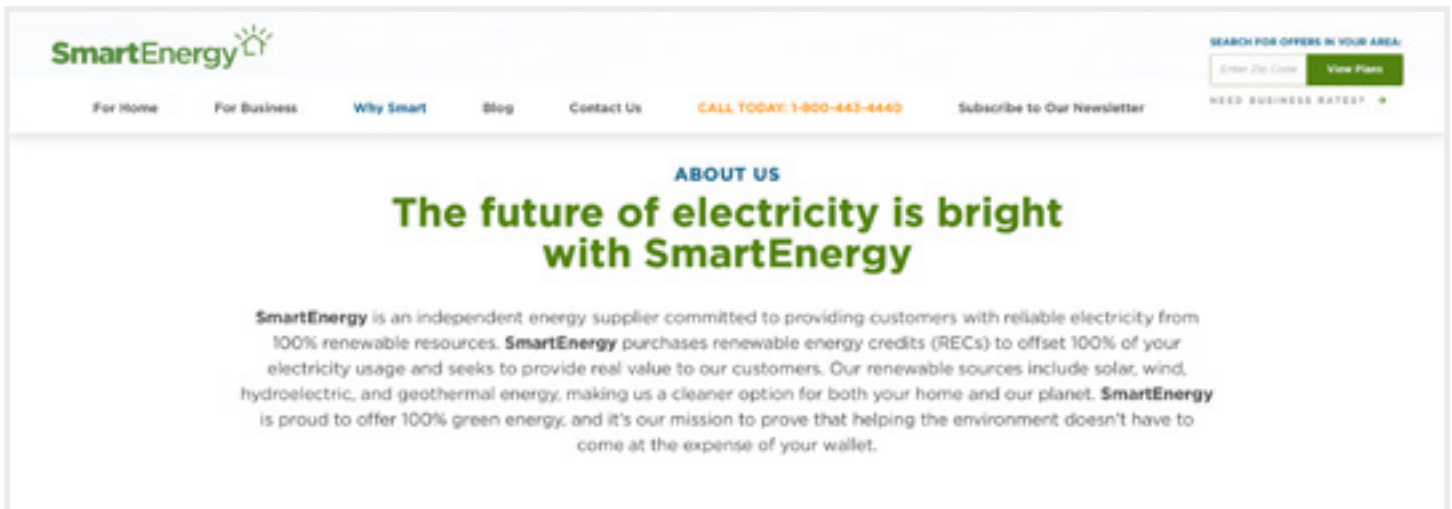
CleanChoice Energy lists a 100% Wind/Solar electricity mix compared to a “typical,” presumably local grid, dirtier electricity mix.

“I wanted to power my home with 100% renewable energy. I was willing to pay more for this. I saw it as my obligation to do so. By choosing a renewable retail energy supplier offer, I was told that my ‘surcharge’ payment would bring more wind and solar farms online and eventually put coal and methane power plants out of business. I sold renewable retail energy to my friends, colleagues, really, anyone I could.” said Dave Arndt, Maryland.

BUYING “RENEWABLENESS”

It takes a bit of digging to discover what undergirds claims about retail renewable energy, but a financial instrument known as a renewable energy certificates allows these businesses to claim their power products as “renewable.”

While the marketing and [videos](#) make it seem that retail energy suppliers are buying actual wind and solar energy that’s fed into a grid somewhere and is mixed together with all types of electricity (nuclear, gas power, coal power), that’s not the case. Inspire Energy describes the process on its [website](#).



SmartEnergy's eco-message is appealing Value pricing for reliable solar, wind, hydroelectric and geothermal electricity. Clean and 100% green energy. This supplier mentions offsets, an entirely different concept. Shell Energy is an investor.

“With our 100% Clean Energy plans for your home, Inspire matches every kWh of your electricity usage with clean, renewable energy from sources like solar, wind and hydro. This is measured and tracked through renewable energy certificates, which helps ensure your home’s carbon footprint from electricity consumption is that much closer to net-zero,”

The top green retailer pitches [green power](#) this way: “Green Mountain will purchase and retire renewable energy certificates representing the environmental attributes associated with the applicable amount of renewable energy produced from wind and solar energy generation facilities in the US. You will not have electricity from a specific generation facility delivered directly to your service address, but your purchase ensures that renewable energy equal to 100% of your paid electricity usage is produced using renewable resources and delivered to the US power grid on an annual basis.”

A quick Google search shows further explanation of RECs, one being a well-produced US Environmental Protection Agency video with 143,000 views, “[RECs: Making Green Power Possible.](#)” The voiceover says, “With RECs, you can purchase renewable power and help the renewable energy market to grow.” Later, it says, “If you buy the REC, you are now the owner of that green power and RECs allow you to claim that the electricity you use came from renewable resources with low or zero emissions.”

Before they were touted by the EPA, RECs were developed in the 1990s and based on the theory that a tradable financial instrument could represent the environmental property rights of the attribute, described by the [EPA](#) as “[renewable-ness](#),” presumably of solar and wind-generated electricity.

The aim was that RECs could be bought and sold on markets and that electricity generators would use the proceeds to fund renewable energy projects. Strong demand for RECs would signal consumer preferences for clean energy and support further renewable energy infrastructure.

RETAIL GREEN ENERGY

A megawatt hour (MWh) is 1,000 kilowatt hours of electricity, about what the average US household uses each month.

The first RECs created in the US were generated by Texas wind farms in 2001 during the state's massive wind energy buildout.

A REC is a theoretical product created when one megawatt hour of electricity is delivered from a renewable electricity generator to a local electricity grid. Once delivered to the grid, that renewable electricity legally becomes two separate products — one megawatt hour of electricity and one Renewable Energy Certificate (REC).

The REC is unbundled from the electricity. Each REC gets a unique serial number so that it can be tracked in a network of electronic databases to be sold and retired only once. Some RECs are [Green-e certified](#) by the nonprofit Center for Resource Solutions, a policy group that advocates for the advancement of renewable energy through the free market.

While RECs are associated with solar panels, wind turbines, and hydroelectric dams, they can also be generated from a variety of other sources, some of them not so clean. These include electricity plants that burn wood, chicken manure or trash.



Explaining a theoretical financial concept (unbundled RECs) layered on top of an esoteric US electricity grid system, is daunting. If the REC concept is still fuzzy, check out this short [Youtube video](#) produced by the author hoping that a few hand-drawn pictures will convey 3,000+ words.

REALITY MEETS THEORY

As early as 2008, [data](#) showed that RECs were not performing as expected.

The researchers who shined a light on misrepresented RECs and renewable energy were [Michael Gillenwater](#), executive director of GHG Management Institute, and [Matthew Brander](#) at the University of Edinburgh's business school. Gillenwater and Brander developed a comprehensive collection of research in their [Green Power FAQ](#).

Gillenwater's research found that unbundled REC revenues did not fund renewable infrastructure as promised. To finance large renewable wind projects, developers required consistent capital sources because wind farm cash needs are front-loaded, even before the turbine cranks out its first energy. Long term power purchase agreements — where an entity commits to buying the electricity over a long period of time — and big federal production and investment tax credits were instead responsible for financing new wind farms.

Another early clue to the failure of voluntary unbundled RECs was their rock-bottom wholesale price range between \$1 to \$2 each, just \$0.002 per kilowatt hour.

Since 2008, [many](#), [many](#), [many](#) reports reveal that unbundled voluntary RECs are simply small subsidies for renewable generators with no influence on renewable energy investments. In reality, they represent a small transfer of money from the REC purchaser to the owners of wind farms, landfills with methane capture systems and waste-to-energy incinerators that had already built renewable electricity generation.

“From the early days of renewable energy certificates until now, almost everyone has pretty much got it wrong,” said Gillenwater.

WHO'S ON FIRST?

How a virtual certificate legally can morph into “100% renewable electricity” resembles Abbott and Costello's old-time comedy skit [“Who's on First?”](#) In their brilliant routine the comedians go round and round trying to figure out who's where. In the end, Costello says, “I don't give a darn.”

Compliance vs. voluntary RECs: Thirty-eight states and DC have set Renewable Portfolio Standards ([RPS](#)) that require electricity utilities and retailers to purchase specific percentages of eligible renewable energy. States define renewable energy differently. Many states tightened their RPS “compliance” REC standards and require higher quality, usually newer, more local, and emission-free sourced RECs. Compliance RECs, especially solar RECs, cost more than voluntary RECs because there is a lower supply of higher quality renewable energy, and fewer Compliance RECs. Voluntary RECs are used by corporations and energy retailers to claim they are powered by, or sell, renewable energy. The oversupply of voluntary RECs is one reason they're so cheap

RETAIL GREEN ENERGY

It's unclear what official body regulates the voluntary unbundled REC market. What is clear is that the collective system — the [Center for Resource Solutions](#), the [EPA](#), and retail energy suppliers— eventually points to the 2012 [Federal Trade Commission's Green Guides](#) and the 2015 [guidance from the Greenhouse Gas Protocol](#), a nonprofit and business collaborative, as legal justifications of RECs.

And both sources are wrong.

The 2012 FTC Green Guide [summary](#) is crystal clear: Marketers shouldn't make unqualified renewable energy claims based on energy derived from fossil fuels **unless they purchase renewable energy certificates (RECs) to match the energy use.**

The GHG Protocol is less clear. This may be due to the collective voice of researchers who in 2015 wrote an [open letter](#) to the body stating that RECs encourage “companies to believe and communicate to their stakeholders that they are purchasing electricity from renewable generation, when in fact they are only purchasing a claim to a ‘renewable attribute.’ The physical electricity they consume remains unchanged, as do the emissions associated with it. Therefore, claims of emissions avoided are also baseless.”



The image shows a screenshot of the Verde Energy USA website. At the top left is the logo "verdeenergyusa" with a green swoosh. To the right are the links "WHY VERDE" and "SERVICE TYPE". The main content area features a background image of wind turbines in a field. A dark blue semi-transparent box contains the text: "GREEN ENERGY IS SMART, SUSTAINABLE AND COST-EFFECTIVE". Below this, it says: "Join over 250,000 residential and business customers who have already switched to Verde Energy USA. New customers are eligible for special promotions on select plans!". At the bottom of the box are three input fields: "Promo Code(if any)", "Zip Code", and a red "ENROLL" button.

Owned by Spark Energy's VIA Renewables, Verde Energy's "cost-effective" electricity cost at least 125,000 families \$480 more than their regulated rates in 2020.

Today, voluntary unbundled RECs are big business. By 2020, the National Renewable Energy Lab [reported](#) that 1,537 competitive suppliers bought 22 million unbundled RECs. Utilities, corporations, and municipalities bought 180 million unbundled RECs in 2020.

The [Center for Resource Solutions](#), the non-profit that runs the REC Green-e Certification program, [reported](#) that the majority of voluntary unbundled RECs were generated by Texas, Oklahoma and Kansas wind farms built within the last 15 years.

SO WHAT?

Misrepresented REC-based electricity leads to multiple problems.

First, there is false advertising, which can cause consumers to think they are buying 100% renewable energy, when they are not. It also misses the opportunity to fund new emission-free electricity because the premiums paid to retail energy suppliers are not funding new renewable generation. Finally, it encourages price gouging — retail energy consumers are paying significant retail markups for the same electricity generated by their local utilities.

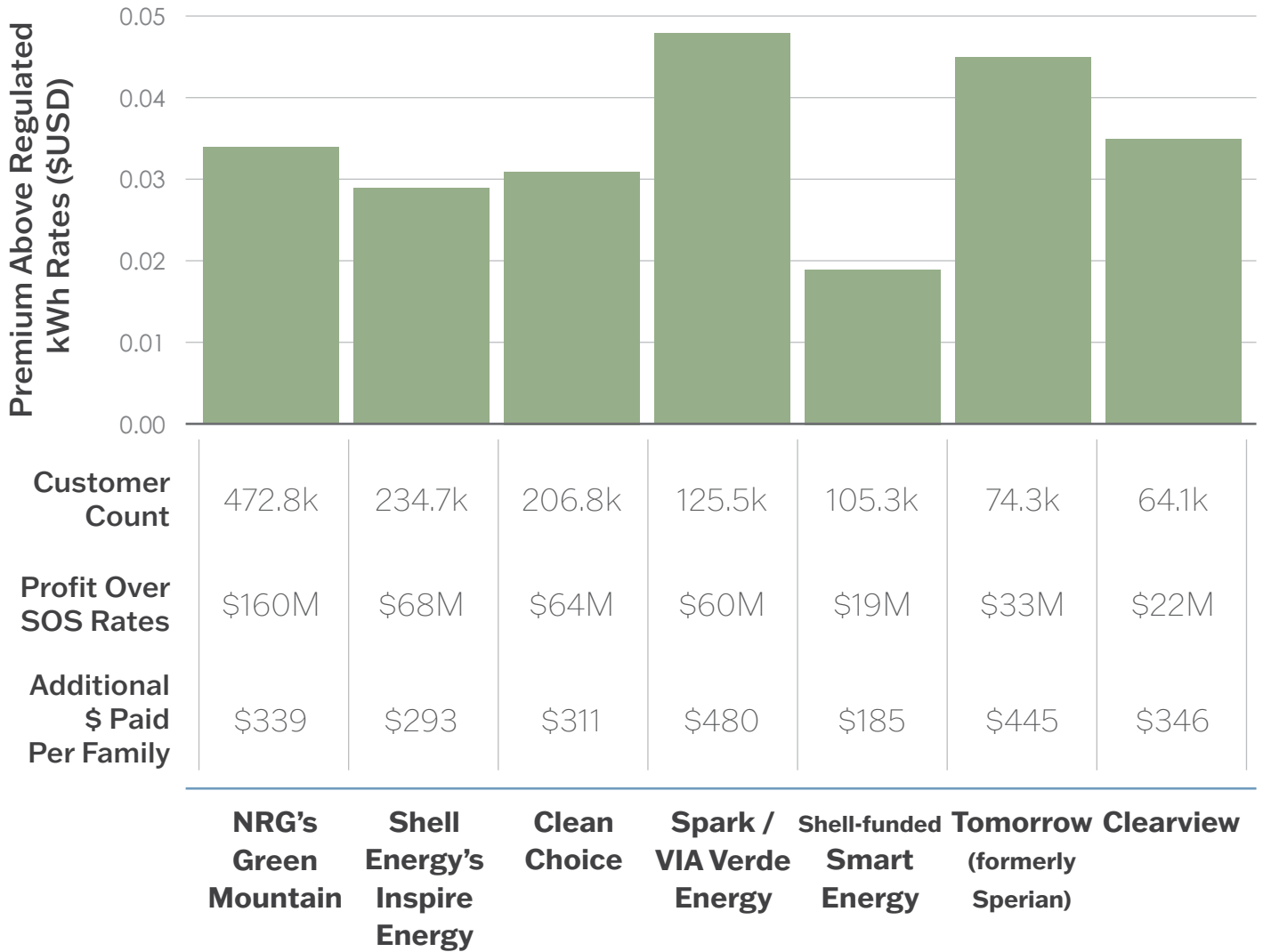
According to [federal data](#), in 2020 about 13 million residential accounts had switched their electricity supply to a competitive energy supplier and paid **\$3.2 billion** more than their neighbors who stayed with their local regulated utility's electricity offers.

And pennies matter when it comes to residential home electricity.

About 10 percent of these retail energy customers, at least 1.54 million accounts, were enrolled with a “green” branded retail energy supplier and paid 3.2¢ more per kilowatt hour than regulated utility rates. That's roughly \$320 more per account netting nearly \$500 million for these eco-brands above regulated rate levels. Spark Energy's Verde and Tomorrow Energy charged their combined 200,000 residential customers more than 4¢ extra per kWh on average.

Another set of terms used, which can cause confusion, is a bundled REC and an unbundled REC. A “bundled” REC is a transaction where the REC and the renewable electricity are sold together. If the energy and RECs are “unbundled,” as most voluntary RECs are, the facility owner sells the renewable electricity to one party and the RECs to another. Some entities, like Maryland, allows utilities and suppliers to purchase and retire bundled or unbundled RECs for its RPS.

2020 U.S. RETAIL ENERGY RESIDENTIAL PRICING RESULTS
 COMPARED TO REGULATED RATES



Source: EIA 861 2020 for states: TX, IL, PA, NY, MD, ME, CT, MA, DC, NJ, OH

More “renewable” accounts are serviced by the other retail energy suppliers, but that data isn’t publicly available.

Today’s retail energy REC-based renewable products are similar to the [World Wildlife Fund’s Adopt-a-Polar Bear](#) gift program. Animal lovers can make a symbolic donation to the nonprofit and get a plushy gift with the proceeds going to the WWF, presumably to protect Polar Bears.

The difference with today’s green retail energy here is that the added “green” revenues didn’t buy green power and didn’t fund new solar and wind farms, that cash flowed to the middleman energy marketers.

“This is plain wrong”

2020 U.S. RETAIL ENERGY RESIDENTIAL PRICING RESULTS COMPARED TO REGULATED RATES



Source: EIA 861 2020 for states: TX, IL, PA, NY, MD, ME, CT, MA, DC, NJ, OH

While the “The [Commission](#) issued the Green Guides, 16 CFR Part 260, to help marketers avoid deceptive environmental claims under Section 5 of the FTC Act, 15 U. S. C. 45.1,” the FTC Green Guides are enabling marketers to legally claim that certificates representing “renewableness” are renewable energy.

And consumers rightly presume “green power” is renewable energy.

“Imagine by shock and horror when I found out that I was not offsetting the negative impact of my electricity. And then learned that the surcharge wasn’t funding new renewables. This is plainly wrong. Clean energy companies are using deceptive marketing campaigns and getting away with it. In fact, they get passive approval to do this from the FTC and from state regulators, like the Maryland Public Service Commission, to do so. All I can say now is choose Community Solar.


[How It Works](#)
[Energy Rates](#)
[Carbon Calculator](#)

How renewable energy works

The traditional way of making electricity is by burning fossil fuels but there are cleaner ways to generate energy from sources such as wind.

Tomorrow Energy's residential customers paid 4.5¢ more per kilowatt hour than the average regulated standard electricity rate in the top 10 retail energy states. About double.

Maryland must change regulations to make sure that people who want clean energy, get clean energy. And the extra money they choose to pay truly helps to build out more wind and solar farms," said David Arnt of Baltimore, Maryland.

When retail suppliers are pressed by consumers about their high prices charged, some energy suppliers will use "renewable energy" as justification. This [audio story](#) is a low-income client and energy counselor asking a "green" supplier's phone agent why the account was charged \$600 more during their contract period than regulated electricity rates. The phone agent provided two reasons: variable rates were in the agreement [contract] and that the energy was from "clean and renewable sources."

UNDER THE ENERGY MICROSCOPE

In recent times, the convoluted REC subject has attracted more scrutiny.

In April 2022, the Wall Street Journal [reported](#) that climate reporting rules will be examined as "current standards let companies say their power is green when technically it is not." The article said that the GHG Protocol is under revision, including Scope 2, the section that RECs fall under. The GHG Protocol issued a timeline stating that, "The [GHG Protocol Scope 2] update process will begin in early 2023 through a multi-stakeholder process."

In June 2022, a Nature Climate Change peer-reviewed [analysis](#) headline said, "Renewable energy certificates threaten the integrity of corporate science-based targets." The data report that voluntary unbundled RECs are skewing emission reduction by corporations.

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RECOMMENDATIONS:

1. Redefine FTC Green Guides: Address section 260.15a to accurately describe consumer products that utilize unbundled RECs as REC-based energy products. Reclassify and clarify that marketing claims can be legally made and disallow the legal use of “renewable energy” claims when there is no renewable energy involved. Collaborate with GHG Protocol Scope 2 teams to ensure these ‘de facto’ guidance documents match. Do RECs have a role in voluntary green energy consumer claims?

2. FTC legally defines consumer marketing energy terms. Examples include Eco, green, climate-friendly, clean, renewable, carbon-free and emission-free. Specifically, what can and cannot be labeled with these generic terms. These terms are generically used in a variety of ways to greenwash products when clear definitions will reduce deceptive marketing claims.

3. Build a Better REC labeling system & require public reporting by REC: Renewable Energy Certificates tracking data should be expanded to clearly label the type, what electricity, if any, RECs bundled with, the generator’s state of operation, generator’s opening date, and REC purchase date.

a. A more descriptive and public REC labeling system will provide greater transparency for customers, corporations, regulators, and auditors. RECs are confusing and come in multitude of types. Legally calling all RECs the same definition, a renewable energy certificate, has contributed to massive market and consumer confusion.

b. **Labeling format:** REC type-REC/paired with electricity type - state built - date built - date REC purchased or a PPA purchase

c. **Generation Labels:** Wind, Biomass (non-debris fuels), Landfill Methane Capture, Trash Incinerator, Solar, Offshore Wind, Hydroelectric dams, Geothermal, R-Regional Grid electricity, NG Natural Gas RECs.

d. **Examples:**

I. **W-REC/ZERO-TX-2008-2021.** (Terrapass REC in graphic on pg. 1)

II. **H-REC/RGRID-NY-1961-2019.** REC from hydroelectric NY dam built in 1951. REC purchased in 2019 and held for a few years before it was retired. Paired with regional grid electricity.

III. **S-REC/SPPA-MD-2016-2022.** Solar REC purchased in 2022 from Maryland solar built in 2016 paired with solar-generated electricity purchased through a PPA.

4. Develop REC Greenbank - Create a regulated and transparent “green bank” lending platforms where REC proceeds can fund loans or Power Purchase Agreements. These platforms would offer consumers visibility into their REC purchases and which projects are utilizing the REC funding.

5. Require the EPA to review and clarify its REC web pages and videos which incorrectly support the notion that unbundled voluntary “green power” RECs are electricity, reduce emissions and buildout emission-free generation. Coordinate with revised FTC and GHG Protocol guides.

6. Choose a regulatory body: Determine what agency should regulate the voluntary unbundled renewable energy certificate markets because there is no agency regulating this energy market.

7. For states, regulate Truth-in advertising:

a. Require retail energy suppliers to clearly market to consumers that retail energy offers are REC-based offers.

b. Disallow the use of marketing claims that REC-based offers: are renewable energy, reduce emissions, and equate to specific emissions reduced (number case on road, equivalent trees planted, etc.).

c. Clearly state in consumer marketing materials that retail price markups are paying for unbundled voluntary RECs.

d. Accurately label compliance emission electricity mix charts sent to retail customers and report actual RTO grid mix, not a supplier’s version of renewable energy.

e. Require energy retailers make available to consumers what RECs they purchased on behalf of consumers using new REC labeling system.

FURTHER REC RESEARCH

Offset Guide: Frequently Asked Questions: [Green Power Purchasing Claims and Greenhouse Gas Accounting](#).

https://www.offsetguide.org/wp-content/uploads/2022/05/FAQ-Green-Power-Purchasing-Claims-and-GHG-Accounting_05262022.pdf

Center for Resource Solutions:

[Legal Basis for RECs](#).

[CRS How RECs Make a Difference](#).

2012 Federal Trade Commission's Green Guide. (pg. 11, section 260.15a).

<https://www.ftc.gov/news-events/topics/truth-advertising/green-guides>

<https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-issues-revised-green-guides/greenguides.pdf>

[Greenhouse Gas Protocol](#) Scope 2 Guidance. (Ch. 10 and 11).

[Gillenwater's response](#) to 2015 GHG Protocol's 2015 approval that RECs are renewable electricity.

EPA Guidance doc: <https://www.epa.gov/climateleadership/ghg-inventory-development-process-and-guidance>

Vox's 2-part article series:

#1: RECs, which put the "green" in green electricity, explained:

<https://www.vox.com/2015/11/9/9696820/renewable-energy-certificates>

#2: It's Easy to Buy Green Power, Making a Difference is Harder:

<https://www.vox.com/2015/11/16/9744620/support-renewable-energy>

