BRILLIANT SOURCE ENERGY

CLEAN ENERGY, SMART STRATEGY: THE EFEC SOLUTION

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INTRODUCTION

In today's business environment, sustainability is no longer a buzzword; it's a competitive necessity. With Environmental, Social, and Governance (ESG) goals becoming central to corporate strategy, organizations are seeking more innovative, cost-effective ways to reduce their carbon footprint. Emission-Free Energy Certificates (EFECs) offer a streamlined path to carbon neutrality, allowing businesses to support clean energy without disrupting their current energy procurement models. This eBook will guide you through everything you need to know about EFECs and how they can help your organization reach its sustainability goals with ease.

CHAPTER 1: UNDERSTANDING EMISSION-FREE ENERGY CERTIFICATES (EFECS)

What is an EFEC?
An Emission-Free Energy Certificate (EFEC) is a market-based instrument that verifies that one megawatt-hour (MWh) of electricity was generated from a source that produces zero direct carbon emissions. EFECs are primarily associated with nuclear power but may also include hydroelectric and other emission-free sources. EFECs are a powerful tool in the clean energy marketplace, offering businesses a tangible and traceable way to claim the environmental benefits of carbon-free energy generation without having to directly purchase or install clean energy systems.

Why EFECs Matter
EFECs fill a critical gap in the clean energy transition. While Renewable Energy Certificates (RECs) have been the dominant tool for green electricity claims, they typically rely on intermittent sources such as wind and solar. EFECs, by contrast, emphasize 24/7 availability and grid stability—factors crucial to industries requiring constant, reliable power.
In essence, EFECs:

- Empower companies to claim carbon-neutral electricity usage
- Create demand for zero-emission energy generation
- Support clean baseload energy infrastructure
- Help bridge the gap between renewable intermittency and industrial-scale reliability

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How EFECs Work

EFECs are issued when a qualifying power plant, such as a nuclear facility, generates one MWh of electricity and feeds that electricity into the grid. Because electrons on the grid are indistinguishable, EFECs act as the tracking mechanism that assigns the environmental attributes of that clean electricity to the purchaser.

Here's how the process typically works:

1. A certified emission-free power plant generates 1 MWh of electricity.
2. A registry or tracking system issues a corresponding EFEC.
3. A business purchases the EFEC and retains it, or retires it, to claim the associated carbon-free benefit.
4. The EFEC can be used in sustainability reports and carbon accounting frameworks.

Most EFECs are managed through trusted tracking systems similar to REC platforms, ensuring legitimacy and transparency.

EFECs vs. RECs: A Side-by-Side Comparison

Feature	EFECs	RECs
Carbon Emissions	Zero	Zero
Energy Solutions	Nuclear, Hydro, Other Clean	Wind, Solar
Reliability	24/7 Baseload Support	Intermittent, Weather-Dependant
Cost	Generally more affordable	Often higher due to technology
Use Cases	Industrial, Manufacturing, Data centers	General use for green marketing
Carbon Offset Depth	Can offset natural gas (Via pairing)	Limited to electricity usage

Common Misconceptions About EFECs

Misconception #1: EFECs are just like RECs.
While both instruments verify clean energy generation, EFECs are unique in their reliability and use of zero-carbon baseload sources.

Misconception #2: You have to change your utility to use EFECs.

Not at all. EFECs are layered onto your existing procurement strategy and are completely provider-agnostic.

Misconception #3: EFECs aren't recognized by major ESG frameworks.
EFECs are gaining traction across ESG reporting standards, including CDP and GRESB, and are aligned with Scope 2 reduction strategies.

Industry Insight
"EFECs provide a new level of precision and credibility in corporate sustainability. They allow businesses to support always-on, clean energy while staying cost-efficient. In a world increasingly focused on ESG reporting integrity, EFECs are a smart strategic move."
— Dawn Paytosh, Energy Market Analyst, Brilliant Source Energy

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Real-World Example

A regional hospital system relying heavily on consistent electricity for 24/7 operations implemented EFECs in its procurement strategy. Rather than switching to solar (which would require additional investment), they purchased EFECs linked to a local nuclear plant. This allowed them to:

- Claim zero-carbon energy use
- Maintain uninterrupted power reliability
- Improve ESG scores for their investor disclosures

EFEC Lifecycle

Clean Energy Generation (e.g., Nuclear Plant)

⇩

EFEC Issuance

⇩

EFEC Sale and Purchase

⇩

Business Retires EFEC

⇩

Claimed in ESG / Sustainability Reports

In summary, EFECs are a highly credible, scalable, and affordable tool that allow businesses to accelerate their decarbonization strategies. They are not just a short-term solution—they are part of the long-term clean energy initiative.

CHAPTER 2: THE BUSINESS CASE FOR EFECS

Why Businesses Are Turning to EFECs
Corporate sustainability is no longer optional; it's an expectation from investors, customers, regulators, and employees. Businesses are under increasing pressure to demonstrate measurable climate action, and electricity is a major source of emissions for many. EFECs provide a flexible, cost-effective, and highly credible way to address this challenge.

Whether you're a Fortune 500 enterprise or a regional manufacturer, EFECs can help you:

- Meet ESG targets without heavy capital investment
- Claim zero-carbon electricity use without operational changes
- Position your brand as a leader in sustainability

Key Business Advantages

1. Support for Clean Energy Infrastructure
Purchasing EFECs supports clean energy projects that provide baseload electricity, such as nuclear and hydro power stations. These sources play a critical role in the grid's decarbonization while maintaining reliability, especially when renewables fall short during low wind or solar output.

2. Cost-Effective Carbon Neutrality

EFECs are typically more affordable than RECs and significantly less expensive than direct investments in on-site generation or energy storage. For businesses with budget constraints, EFECs offer an accessible path to significant carbon reductions.

Example: A food processing plant spending $300,000 annually on electricity reduced its carbon footprint by over 80% by integrating EFECs at a fraction of the cost of solar installations.

3. Seamless Integration with Current Procurement

There's no need to overhaul your existing supplier strategy. EFECs can be purchased and layered with your existing procurement contracts.

4. Transparency and Credibility in ESG Reporting

EFECs come with traceable certificates and unique serial numbers, ensuring accountability in emissions reporting. This is especially important for:

- CDP (Carbon Disclosure Project) scoring
- GRESB benchmarks for real estate and infrastructure
- Investor and customer-facing ESG disclosures

5. Grid Reliability and Risk Reduction

By supporting emission-free baseload power, businesses contribute to a more resilient energy system. This can translate to fewer outages, more price stability, and reduced exposure to energy market volatility.

Strategic Fit by Industry

Industry	EFEC Benefits
Manufacturing	Offsets high electricity loads while maintaining operational consistency
Healthcare	Ensures 24/7 clean power for critical infrastructure
Financial Services	Enhances ESG portfolios without compliance risk
Data Centers	Matches high reliability needs with carbon-free energy sourcing
Education	Aligns campus sustainability goals with measurable results

Business Leader Testimonial

"We wanted to reduce our Scope 2 emissions without reinventing our entire procurement process. EFECs offered the ideal solution—clean, affordable, and easy to report on." — Director of Sustainability, National Logistics Group

Checklist: Is Your Company a Good Fit for EFECs?

If you checked 3 or more, EFECs can likely deliver measurable value to your business.

- ☐ We track and report Scope 2 emissions
- ☐ We want to reduce our carbon footprint affordably
- ☐ We are looking for consistent, 24/7 clean power
- ☐ We currently use electricity and/or natural gas
- ☐ Our leadership supports sustainability goals
- ☐ We have ESG reporting requirements (CDP, GRESB, etc.)

Looking Ahead

In the next chapter, we'll explore how EFECs directly impact Scope 2 emissions and how they can be used strategically to offset not only electricity but natural gas usage as well. You'll also learn how EFECs fit within major reporting frameworks and compliance programs.

CHAPTER 3: REDUCING SCOPE 2 EMISSIONS WITH EFEC'S

What Are Scope 2 Emissions?
In greenhouse gas accounting, emissions are divided into three categories:

- Scope 1: Direct emissions from sources owned or controlled by a company (e.g., company vehicles, onsite combustion).
- Scope 2: Indirect emissions from the generation of purchased electricity, steam, heating, or cooling.
- Scope 3: All other indirect emissions in the value chain (e.g., supply chain, business travel, waste disposal).
-

Scope 2 emissions are especially important because they are often the largest and easiest to address through market-based instruments like EFECs.

How EFECs Apply to Scope 2
EFECs allow companies to reduce their Scope 2 emissions by verifying that a portion of their purchased electricity is backed by zero-emission energy generation. When an EFEC is retired on behalf of an organization, that organization can then claim the environmental benefit of one MWh of clean electricity.
This approach is increasingly accepted in frameworks such as:

- GHG Protocol Scope 2 Guidance (market-based method)
- CDP (Carbon Disclosure Project) scoring methodology
- GRESB (for real estate and infrastructure)
- Corporate Net-Zero Targets aligned with the Science-Based Targets initiative (SBTi)

Offsetting Natural Gas with EFECs

While EFECs were originally designed to address electricity-related emissions, some companies pair EFECs with natural gas use to offset the emissions profile of their overall energy consumption.

Example: A university with significant combined electricity and natural gas use implemented an "energy pairing" strategy:

- They procured EFECs to offset electricity.
- They calculated equivalent EFEC volumes to neutralize emissions from natural gas combustion.
- The strategy was included in their annual ESG report to show comprehensive carbon neutrality progress.

Advantages of Using EFECs for Scope 2 Reductions

- **Compliance Alignment:** Recognized by major ESG and reporting frameworks
- **No Infrastructure Changes:** Unlike on-site renewables or energy efficiency upgrades, EFECs require no physical modifications
- **Year-Round Consistency:** Offers consistent, 24/7 clean energy impact

Reporting Use Cases

Here's how different types of businesses might report EFEC-backed emissions reductions:

Business Type	Emissions Source	Reporting Statement Using EFECs
Tech Company	Data center electricity	"100% of electricity was matched with EFECs from nuclear sources."
Manufacturer	Grid + natural gas	"All Scope 2 emissions offset via EFECs; natural gas emissions paired and disclosed."
Retail Chain	Lighting and HVAC	"Emission-Free Energy Certificates retired for all purchased electricity."

Pro Tip: Combine EFECs with RECs for Comprehensive Coverage

Some companies strategically use both EFECs and RECs to:

- Maximize sustainability storylines
- Ensure 24/7 clean coverage while still supporting renewables
- Appeal to diverse stakeholders (environmental NGOs, investors, regulators)

Sustainability Officer Insight

"When our team looked at Scope 2, we realized EFECs were the fastest, cleanest, and most credible way to demonstrate impact. They gave us a huge win early in our ESG journey." — *Sustainability Officer, Regional Energy Cooperative*

In the next chapter, we'll break down how to integrate EFECs into your energy procurement strategy, including procurement partners, cost structures, and best practices for implementation.

CHAPTER 4: IMPLEMENTING EFEC'S INTO YOUR PROCUREMENT STRATEGY

Step 1: Assess Your Current Energy Profile
Before implementing EFECs, it's essential to understand how much electricity your organization consumes and what portion of that usage contributes to your Scope 2 emissions. Gather data such as:

- Monthly/annual electricity use (kWh or MWh)
- Energy source mix (from your utility or supplier)
- Natural gas consumption (if you plan to offset it)
- Existing green energy contracts (if any)
-

This baseline assessment provides the foundation for determining the volume of EFECs required and aligning your purchase with reporting standards.

Step 2: Set Procurement Goals
Determine what you want to achieve with EFECs:

- Offset 100% of Scope 2 emissions?
- Begin with a percentage (e.g., 25%, 50%) and grow annually?
- Complement existing RECs with reliable 24/7 EFEC coverage?

Define the budget, timeline, and internal decision-makers. For some businesses, sustainability officers lead the charge; for others, energy procurement or facilities management might own the process.

Step 3: Choose a Procurement Method
You can source EFECs through several channels:

- Retail Energy Provider (REP): Some REPs offer EFECs bundled with electricity contracts.
- Energy Broker or Consultant: Advisors like Brilliant Source Energy help identify the most cost-effective EFECs.
- Direct Purchase via Registry: Larger firms may purchase EFECs directly through emissions-free registries and retire them themselves.

Each option has pros and cons in terms of pricing transparency, tracking, and administrative ease.

Step 4: Execute and Track Your EFECs
Once EFECs are purchased, track them in your sustainability records. You'll receive certificates with unique identifiers that can be retired in a registry. Documentation should include:

- Certificate type and source
- Volume (MWh)
- Retirement date and ID
- Associated reporting year

Include this data in internal ESG dashboards and external sustainability disclosures.

Step 5: Communicate Internally and Externally
Educating internal teams about EFECs ensures alignment across departments, from operations to marketing. Additionally, leverage your EFEC strategy for external credibility:

- Feature EFEC usage in ESG reports
- Highlight in investor presentations
- Promote on websites, press releases, or product labels

Best Practices for Successful Integration

- Start with a pilot project (e.g., one facility or region)
- Bundle EFECs with procurement renewals for seamless onboarding
- Use third-party advisors to navigate EFEC sources and ensure compliance
- Incorporate EFECs into Scope 2 emissions calculations for all relevant locations
- Schedule regular reviews to reassess goals and expand impact

Sample Timeline: Implementing EFECs in 90 Days

Week	Milestone
1-2	Internal assessment and goal setting
3-4	Review supplier/broker options and pricing
5-6	Execute EFEC purchase and retire certificates
7-8	Add to ESG reporting tools
9-12	Begin promotion and employee education

Implementation Partner Insight

"We help clients navigate the EFEC landscape without getting lost in the weeds. The key is making it easy and cost-effective—and that's what drives lasting sustainability results." — *Senior Procurement Advisor, Brilliant Source Energy*

Coming up: In Chapter 5, we'll explore how EFECs go beyond simple compliance and contribute to meaningful climate leadership, brand value, and stakeholder trust.

CHAPTER 5: BEYOND COMPLIANCE – BUILDING BRAND VALUE AND CLIMATE LEADERSHIP WITH EFEC'S

From Check-the-Box to Strategic Differentiator
While EFECs help meet compliance and disclosure requirements, their true value lies in strategic brand-building and climate leadership. Companies that integrate EFECs into broader ESG narratives often experience benefits that extend far beyond regulatory boxes.
EFECs can:

- Signal environmental responsibility to investors
- Strengthen brand perception among sustainability-conscious customers
- Differentiate products or services in competitive markets
- Support partnerships with organizations prioritizing ESG alignment

Enhancing ESG Scores and Investor Confidence
Institutional investors are increasingly screening portfolios based on ESG performance. Demonstrating proactive decarbonization—especially through transparent instruments like EFECs—can:

- Improve ESG ratings from third-party assessors
- Build trust in long-term environmental stewardship
- Increase access to sustainable financing or lower borrowing costs

Investor Perspective: "We look for climate action that goes beyond intentions—EFECs show operational follow-through on net-zero goals." — ESG Analyst, Global Asset Manager

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Public Relations and Marketing Applications

Incorporating EFECs into your brand story can generate positive publicity and stakeholder engagement. Examples include:

- “This product was made using 100% emission-free electricity.”
- “Our company achieved Scope 2 neutrality through verified EFECs.”
- “Supporting a 24/7 clean energy future with EFECs.”

Engaging Employees and Customers

Employees increasingly want to work for companies that reflect their values. EFEC-backed sustainability efforts can:

- Boost employee pride and retention
- Inspire cross-departmental engagement with sustainability initiatives
- Influence customer loyalty and buying decisions

Employee Engagement Tip: Create an internal campaign showcasing your EFEC impact and invite staff to participate in broader clean energy efforts.

Supporting National and Global Climate Goals

Every EFEC purchased contributes to the demand signal that emission-free generation is needed. This supports:

- Grid decarbonization goals in your region
- Clean energy innovation and infrastructure investment
- International climate targets such as the Paris Agreement

Climate Policy Insight: "Corporate demand for clean energy solutions like EFECs plays a vital role in scaling low-carbon technologies." — Senior Advisor, Clean Energy Policy Institute

Real-World Impact Snapshot

Business Type	EFEC Outcome
National Retailer	Enhanced CDP score by 12 points in 1 year
Tech Startup	Won major client citing sustainability alignment
Healthcare Network	Highlighted EFECs in patient-centered values campaign

Measurable Benefits Recap

- ESG compliance & disclosure
- Investor relations
- Brand differentiation
- Employee & customer loyalty
- Grid and climate impact

Supporting National and Global Climate Goals

The United States rejoined the Paris Climate Agreement in 2021. However, as of January 2025, a new executive order initiated the country's withdrawal. This withdrawal will become effective in January 2026. Despite this, many U.S. companies continue to align with international sustainability standards, and tools like EFECs play a key role in that effort.

Final Thought

EFECs are more than a certificate; they're a symbol of credible climate commitment. Companies that leverage EFECs thoughtfully unlock not only environmental benefits but also long-term business value.

Next: Chapter 6 will walk you through how to get started with EFECs, evaluate suppliers, and take the first steps toward building your own carbon-neutral roadmap.

CHAPTER 6: GETTING STARTED WITH EFEC'S

Is Your Business Ready to Begin?
Whether you're just starting your sustainability journey or expanding an existing program, EFECs offer a flexible, powerful tool for reaching carbon neutrality. Here are signs your business is ready:

- You use grid electricity and/or natural gas
- You report or plan to report Scope 2 emissions
- You need reliable, affordable offsets for emissions
- You're aiming to enhance ESG credibility and compliance

If this sounds like your organization, you're well-positioned to start exploring EFECs.

Key Steps to Get Started

1. Define Your Objectives

Start by identifying what you want EFECs to help you achieve. Common goals include:

- Offset 100% of Scope 2 emissions
- Improve ESG ratings or meet investor expectations
- Support specific energy sources (e.g., nuclear)
- Balance affordability with climate action

2. Engage Stakeholders

Bring key departments into the conversation:

- Sustainability teams to align goals and reporting
- Procurement teams to integrate EFECs into supplier contracts
- Finance to evaluate cost and ROI
- Marketing/PR to communicate the impact externally

3. Evaluate Partners and Suppliers

Work with an experienced energy procurement partner like Brilliant Source Energy to:

- Assess your energy footprint
- Recommend EFEC volume and type
- Source certificates aligned with your budget and goals

Consider asking suppliers:

- What emission-free sources do your EFECs support?
- Are the certificates tracked through a registry?
- What is your pricing model (fixed vs. market-based)?

4. Develop an Implementation Plan

Use a timeline-based approach to roll out your EFEC program. Start small, track progress, and scale up. Example rollout model:

- Q1: Pilot EFECs for one site
- Q2: Expand EFECs portfolio-wide
- Q3: Integrate EFECs into CDP/ESG reporting
- Q4: Launch public-facing sustainability campaign

5. Monitor, Report, and Evolve

Ongoing success requires:

- Regularly retiring and tracking EFECs
- Updating internal dashboards and public reports
- Reassessing volumes, pricing, and supplier options annually

Getting Started with Brilliant Source Energy

We make the EFEC process simple. Our advisory team works with you to:

- Map your current emissions and energy use
- Design a tailored EFEC procurement plan
- Provide third-party verification and reporting support
- Help you tell your sustainability story to the world

Let's Start Your Carbon-Neutral Journey

You're just a few steps away from a more sustainable energy strategy. With EFECs, your business can:

- Offset emissions without disrupting operations
- Meet ESG and net-zero goals affordably
- Contribute to a cleaner, more resilient energy future

Ready to take action? Reach out to Brilliant Source Energy to speak with a clean energy advisor, request pricing, or receive a free consultation.

📞 Call us: 1-866-603-1462

✉️ Email us: info@mybrilliantsource.com

🌐 Visit: mybrilliantsource.com

Next up: We'll wrap things up with a downloadable toolkit to support your EFEC journey.

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Frequently Asked Questions (FAQ)
Below are some of the most common questions businesses ask when exploring Emission-Free Energy Certificates (EFECs).

Q1: How do EFECs differ from RECs?
EFECs and RECs both represent 1 MWh of clean energy, but EFECs specifically come from emission-free sources like nuclear and large hydro, offering 24/7 baseload reliability. RECs are tied to renewables like wind and solar, which are intermittent and may require storage solutions.

Q2: Can I use EFECs and RECs together?
Yes. Many companies use both to balance reliability with renewable sourcing. EFECs can provide consistent power coverage that complements variable renewable energy from RECs.

Q3: Do I have to change my electricity provider to buy EFECs?
No. EFECs can be layered onto your existing electricity service without changing suppliers. They're a flexible add-on to your energy procurement strategy.

Q4: Are EFECs recognized in major ESG reporting frameworks?
Yes. EFECs are accepted in frameworks like CDP, GRESB, and under the GHG Protocol's market-based accounting method for Scope 2 emissions.

Q5: Can EFECs offset natural gas emissions?
Not directly. However, some companies use EFECs to offset their overall energy footprint by pairing electricity use with natural gas emissions to achieve a net-zero strategy.

Q6: How are EFECs tracked and verified?
EFECs are issued and tracked by third-party registries with unique certificate identifiers. Once used, they are retired and cannot be resold.

Q7: What does it mean to "retire" an EFEC?
Retiring an EFEC means removing it from the market so that no one else can claim its environmental benefit. This is done in a certified registry and is required for ESG reporting.

Q8: Are EFECs only available in the U.S.?
EFECs are currently most accessible in the U.S., particularly tied to domestic nuclear and hydro generation. However, demand for similar clean energy certificates is growing globally.

Q9: What's the cost of EFECs?
Costs vary based on market conditions, volume, and source type. Generally, EFECs are more affordable than RECs and dramatically cheaper than on-site renewable installations.

Q10: Can small or mid-sized businesses use EFECs effectively?
Absolutely. EFECs are scalable and ideal for organizations of all sizes looking to reduce emissions cost-effectively without infrastructure investments.

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Glossary of Key Terms

Below is a list of key terms to help you navigate the EFEC landscape with clarity.

Baseload Power: Electricity generation that provides a consistent, continuous supply of energy to meet minimum demand.

CDP (Carbon Disclosure Project): A global nonprofit that runs a system for companies to disclose environmental data.

EFEC (Emission-Free Energy Certificate): A certificate representing one megawatt-hour (MWh) of electricity generated from a source that produces zero direct carbon emissions, such as nuclear or large-scale hydro.

GHG Protocol: The internationally recognized accounting standard for measuring and managing greenhouse gas emissions.

GRESB: A leading ESG benchmark for real estate and infrastructure investments.

REC (Renewable Energy Certificate): A certificate representing one MWh of electricity generated from renewable sources like wind or solar. Often used to claim green energy use.

Registry (Energy): A trusted platform that issues, tracks, and retires certificates like EFECs or RECs.

Retirement (of Certificates): The process of permanently removing a certificate from circulation to claim its environmental benefit.

Scope 1 Emissions: Direct emissions from owned or controlled sources (e.g., company vehicles, on-site fuel combustion).

Scope 2 Emissions: Indirect emissions from the generation of purchased electricity, heating, and cooling.

Scope 3 Emissions: All other indirect emissions in a company's value chain, including purchased goods, transportation, and employee commuting.

SBTi (Science-Based Targets initiative): A partnership that helps businesses set climate goals aligned with climate science.

EFEC Readiness Toolkit
Use this toolkit to assess your organization's preparedness and take action on your EFEC implementation strategy.

✔️ EFEC Readiness Checklist

If you checked at least 3 boxes, EFECs can be a high-impact solution for your organization.

🛠️ Quick Action Steps

1. Identify your annual energy consumption (kWh or MWh)
2. Calculate your current Scope 2 footprint
3. Define offset goals (25%, 50%, 100%)
4. Reach out to EFEC providers or advisors
5. Develop an implementation plan with internal stakeholders

📥 Bonus Resource: Sample ESG Reporting Statement
"In 2025, our company purchased and retired Emission-Free Energy Certificates equivalent to 100% of our Scope 2 electricity usage. These EFECs support zero-emission nuclear generation and reflect our commitment to a sustainable energy future."

🔗 Need Help?

Contact Brilliant Source Energy for:

- One-on-one advisory support
- Custom procurement strategies
- Verified EFECs matched to your goals

📧 info@mybrilliantsource.com
📞 1-866-603-1462
🌐 mybrilliantsource.com

Thank you for reading. You're now equipped to take the next step toward a cleaner, carbon-neutral energy future with confidence.