

Climate Corps Foundations Week: Building a Clean Energy Procurement Strategy

May 18 – 22, 2026



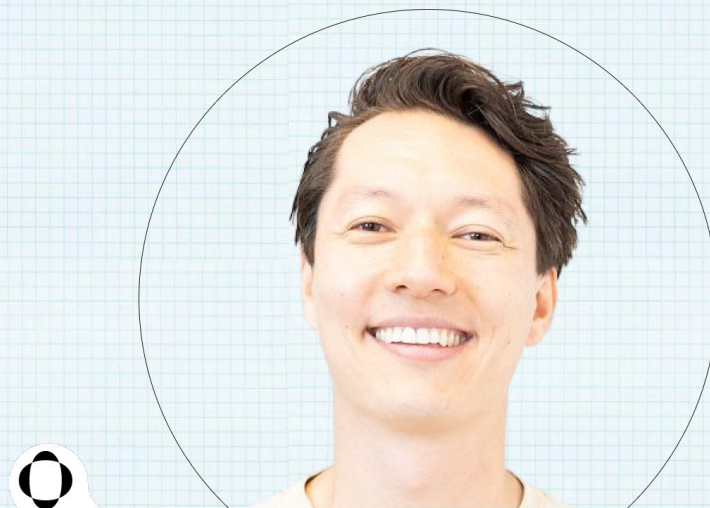
#EDFCC



CLIMATE CORPS

Instructor

Title	COO & Co-Founder, OnePointFive
Pronouns	he/him/his
Passion	Rewilding nature, pasta-making, surfing, enterprise decarbonization, unsubscribing from mailing lists



Matthias Muehlbauer

OnePointFive

Learning Objectives

1. **Identify** the main renewable energy procurement strategies and how they differ at a high level.
2. **Match** the right procurement strategy on a facility-by-facility basis, considering its characteristics and utility context.
3. **Weigh** the tradeoffs and / or benefits between cost and emissions reductions to support a procurement decision.
4. **Establish** a cost and emissions baseline and evaluate how the chosen procurement strategy affects these.
5. **Monitor** evolving reporting frameworks and accounting rules which may affect viability of the strategy over time.



Building a Clean Energy Procurement Strategy

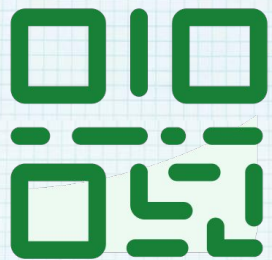
(Agenda & Learning Objectives)

Energy Procurement Review | 15 mins

- Review the current landscape of energy procurement trends
- Revisit key takeaways from energy procurement webinar with EDF

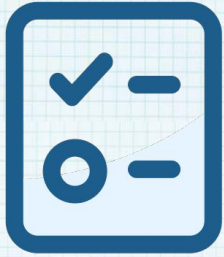
Interactive Lab | 60 minutes

- Apply the concepts through a hands-on case study, practicing how to analyze the feasibility of energy procurement strategies and compute cost calculations to analyze the best scenarios depending on facilities' characteristics.



Join at **slido.com**
#1515967

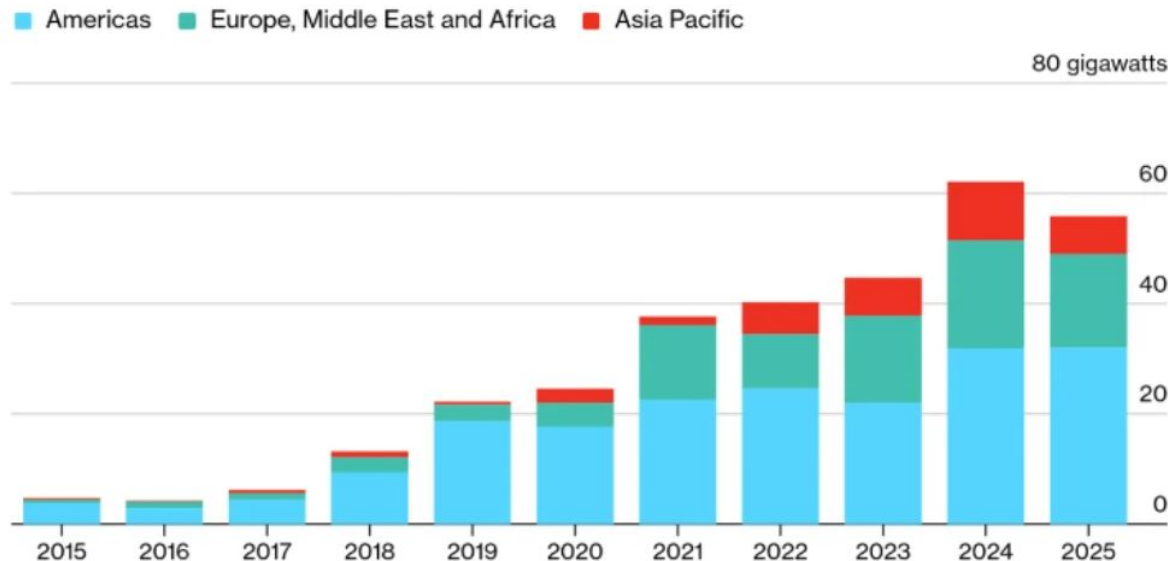




Did you watch the recording from our energy procurement webinar?

Corporate clean energy buying fell in 2025

Global annual corporate PPA volumes by region



- Corporate Power Purchase Agreements (PPAs) fell for the first time in a decade by 10% compared to 2024
- Meta, Amazon, Google and Microsoft were responsible for 49% of all global activity last year
- This was driven by smaller players outside Big Tech becoming less active, as project costs and policy uncertainty rose
- The number of unique corporate buyers in the US dropped 51% year-on-year to just 33

Annual vs hourly matching in renewable energy

Annual matching

Current energy reporting looks like constant energy use, all covered by renewables.

Hourly matching

Renewabl

Wind GOs
(Excess)

Energy
consumption
(not covered)

Solar PPA
(Excess)

7:00

9:00

11:00

13:00

Reality shows:

- Wind doesn't blow constantly
- The sun doesn't always shine
- Your consumption profile isn't always in sync with renewables

"It's about increasing traceability and credibility in reporting. We are moving toward more precise spatial and temporal matching, **so you can say that every hour of consumption you report as clean is matched by actual clean production.**"

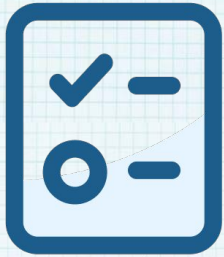
- Carolyn Addy, Renewabl



Scope 2 updates including
hourly matching



Final standard to be
published in 2027



Which do you think is the least supported energy source in the US with the current administration?

Recall: The One Big Beautiful Bill Act supports firm “baseload” resources

Energy source	Legislation
Solar & wind 	Removes production & investment tax credits for solar and wind from IRA & tightens timelines
Nuclear 	Preserved baseline credits & increase support for certain reactors → Favored baseload clean resource
Geothermal 	Supports tech advancements and increased investments → Favored baseload clean resource
Biofuels & hydro 	Preserved baseline credits → Favored baseload clean resources
Fossil fuels 	Expanded as well as preserved subsidies for coal, gas & oil

Note: the term Foreign Entity of Concern (FEOC) limits sourcing materials from countries like Russia, China etc.

There's hope amidst the winddown of solar & wind

Energy source	Legislation
Solar & wind ✓?	American Energy Dominance Act Recently (Apr 2026) House Republicans introduced a new bill to extend renewable tax credits on clean electricity production & investment, plus clean hydrogen production: • Removing the accelerating deadlines OBBBA placed on credit phase out • Extending credit deadlines for net-zero facilities producing electricity • However, it's unlikely to pass unless democrats win house or senate in the 2026 elections
Nuclear ✓	
Geothermal ✓	
Biofuels & hydro ✓	
Clean hydrogen ✓	

Reminder: Energy procurement strategies

Solution	Description	Feasibility Considerations
Onsite solar	Direct contribution to producing renewable energy by owning management and / or development of a power plant or site; requires available space for implementation	• Market: Regulated or deregulated • Type: additional vs. non-additional (includes physical electricity delivery or implies an extra cost over retail grid rates) • Space: Does solution require physical, available space? • Load size: Does solution require a minimum load size? • Purpose: Financial mechanism vs actual emissions reductions
Green Tariffs	Utility-approved rates that allow large customers in regulated markets to purchase bundled renewable electricity and EACs directly through provider	
Power Purchase Agreements (PPAs)	Long term contracts (10+years) with renewable energy providers available in deregulated markets, which lets companies directly purchase clean energy for a defined period	
Virtual Power Purchase Agreements (VPPAs)	Financial contract (10+years) that supports renewable energy projects and provides price certainty to both buyer and supplier, but excludes physical delivery of electricity	
Unbundled Energy Attribute Certificates (EACs)	Region-specific instruments (RECs in the US) used to claim the use of renewable electricity without physically receiving it; energy source, location & quality can vary based on certificate	

Regulated vs deregulated energy markets

Regulated Markets

Local utility companies control a monopoly. Customers **have to** purchase their energy from the local utility, and these companies produce, sell, and distribute energy.

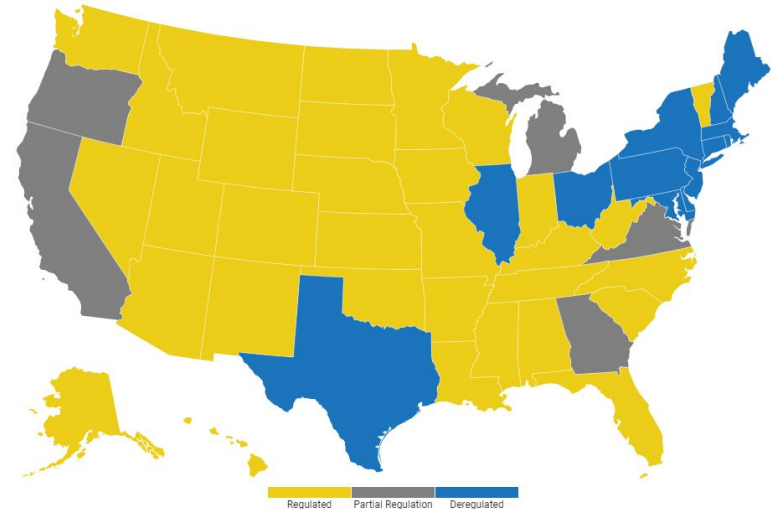
→ Businesses are price-takers and have to accept the utility company's rates: cost savings can only be achieved through reduced usage & improved efficiency

Deregulated Markets

Customers can choose from multiple suppliers, either buying from the utility company or third-party suppliers, providing flexibility.

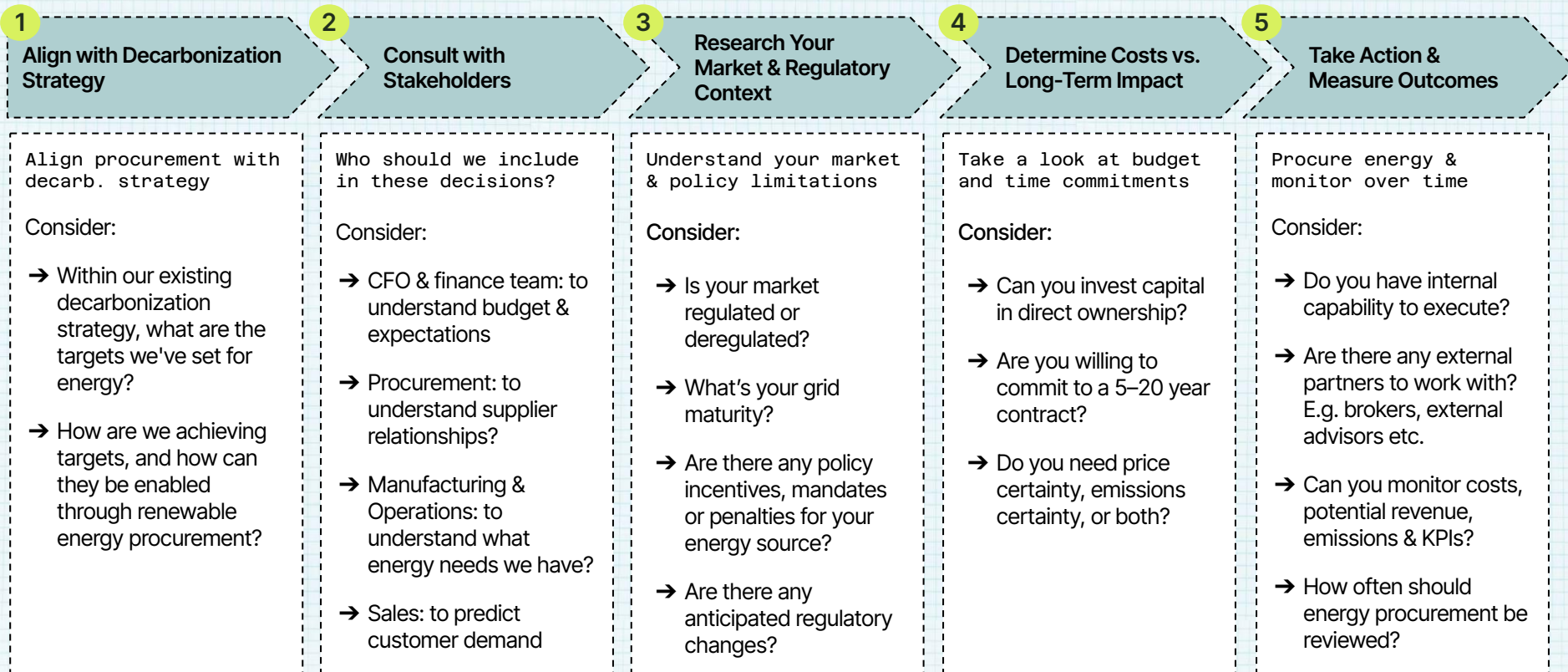
→ Businesses can choose their provider and need to make many decisions to find the best rate.

Regulated & deregulated energy markets in the US

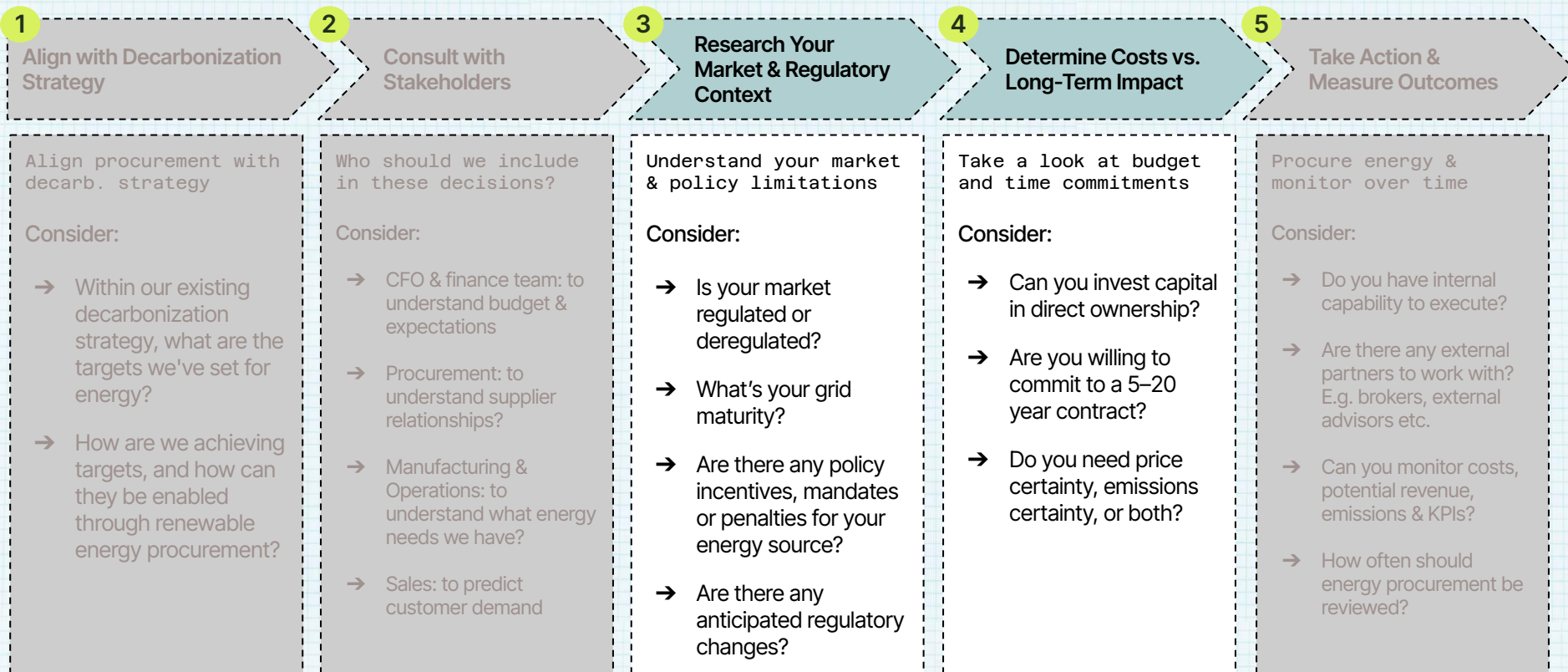


Source: [Diversegy](#), [EPA](#), [Consumer Energy Alliance](#)

Let's recall: A 5 step guide to procuring energy to lower cost & carbon



Let's recall: A 5 step guide to procuring energy to lower cost & carbon





Workshop Overview

What to expect today

You will work in breakout groups (or individually) on the **Aurora Foods Lab Case Study**.

Part I (20 min)

- **Objective:** Select 1-2 feasible energy procurement strategies for each facility
- **Skills Involved:** Understanding market regulation, discerning between energy procurement strategies, analyzing company structure and needs

Part II (20 min)

- **Objective:** Calculate manufacturing facility costs and emissions reductions for the chosen procurement strategies
- **Skills Involved:** Understand electricity rates, premium costs, emissions factors and balance emissions reductions and ROI

Lab Case Study

Aurora Foods Clean Energy Procurement Strategy

Aurora foods is a mid-sized consumer brand based in the US that produces cookies and crackers.

They have around 500 employees, distributed across 3 facilities: their HQ, based in Illinois, their distribution center, based in North Carolina and their manufacturing facility based in Texas.

Due to increasing risk of an energy crisis given rising demand and a need to reduce cost and emissions, Aurora foods wants to evaluate their options to procure clean energy in their facilities.

Aurora foods has a climate transition plan, including a 60% scope 1 & 2 emission reduction, however, their financial department is slightly skeptical about true cost reductions and prefers lower or no price volatility.

Project Scope & Objectives

Identify Aurora Foods' emission reduction goals and energy needs.

Evaluate the feasibility of different clean energy procurement strategies for Aurora Foods' 3 facilities.

Calculate costs and scope 2 emissions reductions based on chosen strategies for Aurora Food's manufacturing facility.



Part I

Objective: Select 1-2 feasible energy procurement strategies for each facility

20 min: (3-4 fellows per team)

Groups align on feasibility of strategies according to market, company needs and structure.

- Each group will use the same case study worksheet
- Designate one person to share their screen in the breakout room
- The person sharing screen will be entering data into the spreadsheet; team members can follow suit individually, or complete the exercises on their own afterwards

If you need assistance, come back to the main room & let us know

Part I Walkthrough - Screenshare

Aurora Foods Case Lab — 60-Min

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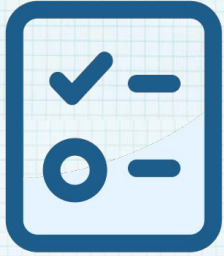
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	A	B	C	D	E	F	G																																	
1	PART I — SELECT ENERGY PROCUREMENT STRATEGIES Aurora Foods																																							
3	20 min Groups of 3–4 Use the 'Reference Slides' tab alongside this worksheet																																							
5	INSTRUCTIONS Objective: Select 1–2 most feasible renewable energy procurement strategies for each facility based on its characteristics, market, and company context. Instructions: - Review the Facility Info and Reference Slides - Complete the table below Note: We recommend dividing and conquering assessment amongst your group, by Facility, to best complete the assessment in 15min For each facility, - Assess feasibility of the clean energy procurement solutions - Provide a brief rationale explaining why the solution is or is not feasible - Based on your assessment, select the top 2 strategies to recommend implementing - Provide a brief rationale for the selection Be ready to explain your choices and trade-offs 3. Determine who will represent your group in sharing key findings; review the optional guidance questions for help on what types of info to shareback. We recommend revisiting these questions after the workshop to close out key learnings. Tip: avoid cutting (CTRL+X) — use copy-paste or delete.																																							
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10	PART I WORKSHEET <table> <tr> <th>Facility</th><th>Strategy</th><th>a. Feasibility</th><th>b. Rationale (1–2 bullets)</th><th>c. Top 1– 2 Strategies</th><th>. Why These Were Selected (Key Rationale)</th></tr> <tr> <td rowspan="5">HQ (IL)</td><td>Green Tariff</td><td></td><td></td><td></td><td></td></tr> <tr> <td>On-Site Renewables</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Physical PPA</td><td></td><td></td><td></td><td></td></tr> <tr> <td>VPPA</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Unbundled EACs</td><td></td><td></td><td></td><td></td><td></td></tr> </table>							Facility	Strategy	a. Feasibility	b. Rationale (1–2 bullets)	c. Top 1– 2 Strategies	. Why These Were Selected (Key Rationale)	HQ (IL)	Green Tariff					On-Site Renewables					Physical PPA					VPPA					Unbundled EACs					
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What was your top chosen strategy for the manufacturing facility (Texas)?

A photograph showing the backs of three people hugging each other. On the left, a person with long brown hair wears a red and white patterned headscarf. In the middle, a person with long reddish-brown hair wears a blue denim jacket. On the right, a man with dark hair and sunglasses is partially visible. The word 'Shareback' is overlaid in large white text.

Shareback

Part I Shareback & Discussion

Pop into chat:

- How did it go?
What were your top chosen strategies for each facility?

OR

Raise a hand:

- Give a shout-out to your Breakout Room for their help & support
- Share feedback

Part I Answer Key: which procurement strategy fits each facility?

HQ - Illinois

Deregulated

Unbundled EACs: Available in any market and require no physical infrastructure but carry the lowest credibility for Scope 2 reporting. Considered here because HQ load is too small for a VPPA to be the most feasible option.

VPPA

Onsite Solar / Physical PPA

Green tariffs: Not available — deregulated market

Manufacturing - Texas

Deregulated

Physical PPA: Fit for deregulated markets, and provides clean energy directly in addition to EACs, at no additional cost.

Onsite Solar: Available roof space that covers ~80% of facility load, potential long term cost savings.

Unbundled EACs / VPPA

Green tariffs: Not available — deregulated market

Distribution Center - NC

Regulated

Green Tariff: Regulated market; Duke Energy NC offers renewable programs for commercial customers

Onsite Solar: Owned facility with 5 acres available for roof and ground-mount solar installation

Unbundled EACs / VPPA

Physical PPA Not available — regulated market

Refer to answer key in your worksheet
for detailed explanation

Feasibility

High

Medium

Low

A woman with long dark hair, wearing a dark denim shirt, is looking upwards and to the left, reaching towards a plant in a greenhouse. The background is filled with green foliage and the structure of the greenhouse.

Part II

Objective: Calculate facility costs and emissions reductions for a PPA in the manufacturing facility

20 min: (3-4 fellows per team)

Calculate electricity costs and potential emissions reductions within the manufacturing facility of baseline operations and compare with a PPA. Answer the discussion questions to evaluate potential issues.

- Each group will use the same case study worksheet
- Designate one person to share their screen in the breakout room
- The person sharing screen will be entering data into the spreadsheet; team members can follow suit individually, or complete the exercises on their own afterward

If you need assistance, come back to the main room & let us know

Google Sheets Screenshare

 Aurora Foods Case Lab — 60-Min .XLSX    

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C17:D17   Grid scenario

	A	B	C	D	E	F	G
1		PART II					
3		20 min Groups of 3-4 Use the 'Reference Slides' tab alongside this worksheet					
5		INSTRUCTIONS					
		Objective: a) Determine the cost and carbon savings for 100% grid versus 100% PPA and b) Reflect on renewable energy quality and procurement conditions					
		Instructions:					
		1. Review the Facility Info and Reference Slides, focusing on Aurora's Manufacturing Facility					
6		2. Using the provided inputs in the table below, calculate and compare the cost and carbon impacts of sourcing 100% of Aurora's electricity from the grid versus a PPA. Complete summary tables 2A and 2B with your responses.					
		3. The CEO of Aurora is concerned about real emissions reductions and wants to make sure energy is procured by hourly and location matching. Reflect on the necessary requirements to procure a PPA that fulfills these characteristics. Complete tables 2C and 2D and identify ...					
7							



Shareback

Part II Shareback & Discussion

Shareback your thoughts on the discussion questions for part II

- If the company wants to electrify Scope 1 emissions from the furnaces used to produce baked goods over the next 3–5 years, **what variables do you anticipate changing as a result of this initiative** (e.g., load, procurement strategy, cost, emissions)?
- **What are the risks of a 100% PPA** (covering 100% of your facility's load), and **how do you determine the "right" amount of PPA to source?** Consider pushback you might get from the CFO.

Part II Answer Key

Electricity Cost & Market-Based Carbon Emissions of retail grid procurement vs PPA procurement over a 10 year period

	Cost	Carbon Emissions
Grid	\$576,011	1,857 tCO2e
PPA	\$264,000	0 tCO2e
Savings	↓ \$312,011	↓ 1,857 tCO2e

Takeaways: Three steps for any energy procurement decision

Apply these in order: assess the market, understand your facility nuances, and apply your company lens.

1 Market

What does the market allow?

Regulated vs. deregulated market helps decide which strategies are even on the table. Are you able to negotiate with different providers / utilities?

Hot Tip: Don't assume your market, utilities sometimes serve both regulated and deregulated zones in the same state.

2 Facility

What does the facility enable?

Owned or leased, what's the available space, what's the facility's annual load & time horizon? What's the grid interconnection in the area? What's the utility relationship?

Hot Tip: When space is available, look at third-party-owned onsite solar (developer owns the panels, you sign an onsite PPA), which can reduce capital expenditure needs.

3 Company

What does the company need?

Cost certainty or emissions credibility? Does your company have available capital expenditure (capex)? Does your company qualify for incentives?

Hot Tip: The '% of load' you cover matters more than the dollar value. Aim for 60-80%, not 100%, as it leaves no buffer for load growth or shape mismatches.

Takeaway: The chosen procurement strategy is only the correct one for *this* facility, *this* market, and *your* company.

Questions, Feedback or Suggestions?

Thank you for all your great work!

To learn more or to follow up, contact us at:

matthias@opf.degree

laura@opf.degree

Appendix

Reminder: Energy procurement strategies

Solution	Description	Pros & Cons
Onsite solar	Direct contribution to producing renewable energy by owning management and / or development of a power plant or site; requires available space for implementation	✓ Reduced grid dependence Visible electricity delivery Supports local renewables ✗ Space required High upfront cost Partial coverage only
Green Tariffs	Utility-approved rates that allow large customers in regulated markets to purchase bundled renewable electricity and EACs directly through provider	✓ Flexible load Physical electricity For owned or leased sites ✗ Regulated markets only Modest savings Single-territory only
Power Purchase Agreements (PPAs)	Long term contracts (10+years) with renewable energy providers available in deregulated markets, which lets companies directly purchase clean energy for a defined period	✓ No site ownership or space need Best for large loads Bundled - replaces retail supply ✗ Market price exposure risk Long term commitment Deregulated market only
Virtual Power Purchase Agreements (VPPAs)	Financial contract (10+years) that supports renewable energy projects and provides price certainty to both buyer and supplier, but excludes physical deliver of electricity	✓ Works in any market Geographically flexible Financial hedge ✗ No physical electricity delivery Additive cost on retail Weaker scope 2 claim
Unbundled Energy Attribute Certificates (EACs)	Region-specific instruments (RECs in the US) used to claim the use of renewable electricity without physically receiving it; energy source, location & quality can vary based on certificate	✓ Works anywhere Fast to implement Flexible blocks ✗ No physical electricity Weak scope 2 claim REC prices have risen

Facility Information

Facility	Description	State	Market	Annual Load (MWh/yr)	Characteristics
HQ	Leased urban office campus with contract that expires, used by corporate team 3x/week on average	Illinois	Deregulated	150	- Lease expires EOY with planned relocation to a new site - Limited roof capacity (~200 kW solar max) - Uncovered parking lot is shared with other tenants and not under Aurora's control
Manufacturing Facility	Rural, medium-sized facility owned by Aurora, which manufactures cookie products	Texas	Deregulated	600	- Roof can support ~275 kW system (~480 MWh/yr, ~80% of facility load) - Local grid (Texas = ERCOT) has active market for renewable energy development and sourcing
Distribution Center	Rural single-story warehouse facility owned by Aurora, used for storage	North Carolina	Regulated	325	5 acres available for solar installation (roof + ground-mount) - Duke Energy (local utility) offers renewable energy programs for commercial customers in NC

Time	Time (min)	Hour	Session Segment	Description	Materials / Tools	Goal
0-5 min	5 min	4:15-4:20	Introduction from EDF	EDF intro + presenter intro	Slides (intro + case)	Set context and expectations
5-15 min	10 min	4:20-4:30	Recent Updates	What's new in energy procurement + what's coming, whats changing the landscape now	Slides (frameworks, news)	Stay up to date
15-20 min	5 min	4:30-4:35	Activity Setup	Workshop structure explanation	Excel dataset + reference table + 1-2 polls	Ensure clarity on tools, steps and expectations
20-40 min	20 min	4:35-4:55	Part I: Match the procurement strategy to the facility	Learners match the facilities to the 1-2 most feasible renewable energy procurement strategy (PPA, green tariffs, onsite, VPPAs, RECs)	Excel dataset + reference table	Select the most feasible clean energy strategy based on facility nuances
40-45 min	5 min	4:55-5:00	Share Part I Answers	Share back answers to part 1, make sure everyone is on the same page	Slides	Ensure clarity on results
45-65 min	20 min	5:00-5:20	Part II: Cost & emissions reduction calculations	Learners compute calculations on costs and emissions reduction comparison PPA vs baseline	Excel dataset + calculations sheet	Evaluate the real impact of the clean energy strategy in company operations
65-75 min	10 min	5:20-5:30	Group Share-Out & Discussion + Wrap-Up & Key Takeaways	Q&A + Takeaways	Slides + decision tree	Consolidate learnings and close session