Key Priorities and Solutions for Building Decarbonization

Delivered by:

Digital Energy
Decarbonization Office

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Key Priorities for Net-Zero Buildings

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From 3 Steps to Key Priorities

Building owners and corporate tenants are on a race to net-zero, and we are providing a basic framework with our 3 Steps to Net-Zero: **Strategize**, **Digitize**, **Decarbonize**.

This **Top 10 List** dives deeper into the priorities and tangible actions needed to reach net-zero ambitions.

Each priority has associated actions, outcomes, Schneider Electric solutions, and ease of implementation.

Each customer's decarbonization journey is unique, and this list provides a "cheat sheet" to know how and where to start or pick up on your journey, whether it's at the portfolio or individual building level.

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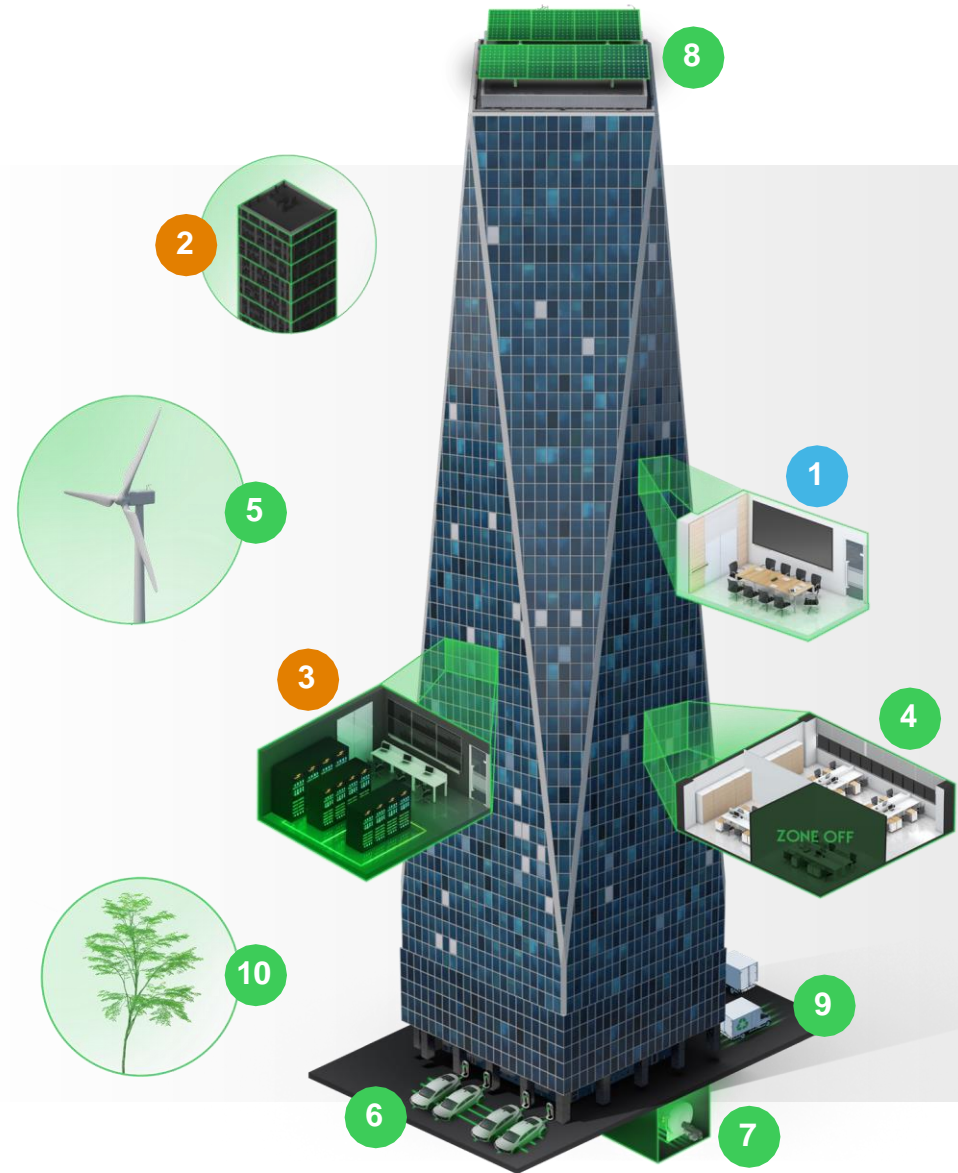
The Path to Net-Zero Buildings

Strategize

Measure enterprise baseline

Create decarbonization roadmap

Structure program & governance

Engage ecosystem

Communicate commitment

Digitize

Monitor resource usage & emissions

Identify saving opportunities

Report and benchmark progress

Decarbonize

Reduce energy use

Electrify operations

Replace energy source

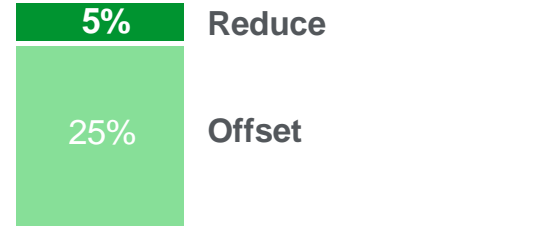Life Is On | Schneider Electric

Where Decarbonization Comes From

~30%
Embodied carbon
Construction materials & inefficiency

5%	**Reduce**
25%	**Offset**

~70%
Operational carbon
Fossil fueled, low electrification, Inefficient operations

15%	**Reduce** for efficiency
25%	**Electrify** and upgrade
25%	**Replace** energy supply
5%	**Offset**

https://www.mckinsey.com/industries/engineering-construction-and-building-materials/our-insights/call-for-action-seizing-the-decarbonization-opportunity-in-construction
https://globalabc.org/resources/publications/worldgbc-bringing-embodied-carbon-upfront-report-2019
https://www.se.com/ww/en/insights/sustainability/sustainability-research-institute/back-to-2050.jsp

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# Key Priorities for Net-Zero Buildings

Strategize

1. **Create** decarbonization roadmap

Digitize

2. **Track** embodied carbon
3. **Measure** and monitor energy and carbon

Decarbonize

4. **Reduce** energy and carbon through automation
5. **Purchase** offsite renewables
6. **Electrify** transportation
7. **Upgrade** building systems and electrical infrastructure
8. **Install** onsite renewables
9. **Limit** embodied carbon
10. **Offset** residual carbon emissions

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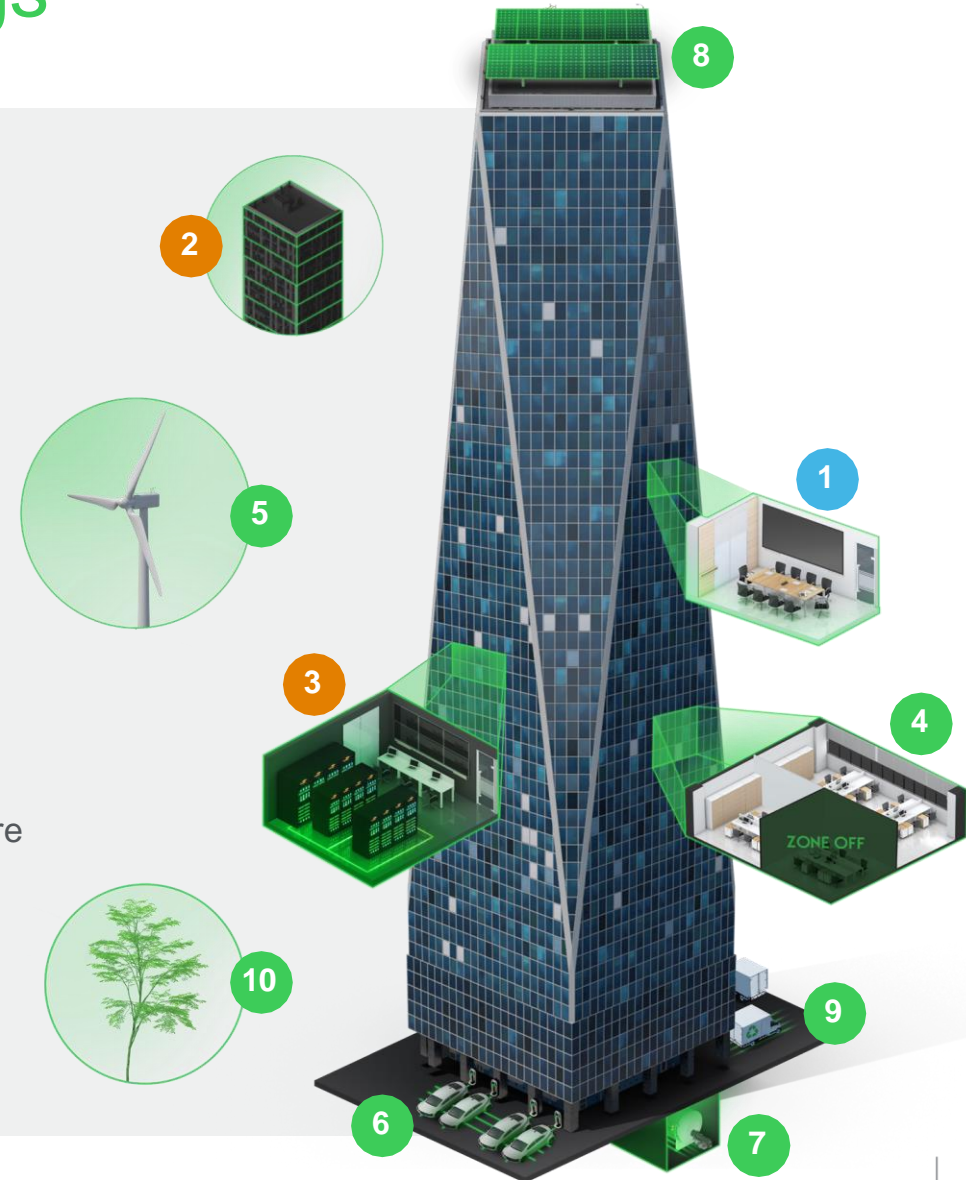
1 Create Decarbonization Roadmap at a Single Site or Across Your Portfolio

Determine carbon emission baseline
- GHG footprinting – baseline health check
- [Zeigo Activate](#)

**Assess digital technology** to identify gaps and inform roadmap
- Digital energy sensor audit
- Metering gap analysis
- Site connectivity plan

Assess technical and economic feasibility to prioritize actions
- Efficiency, electrification, and renewable energy advisory services

Model building retrofit scenarios to develop roadmap and timeline
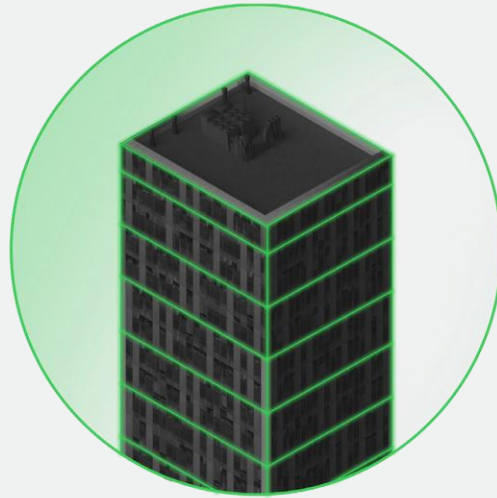- Site decarbonization assessment

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Track Embodied Carbon

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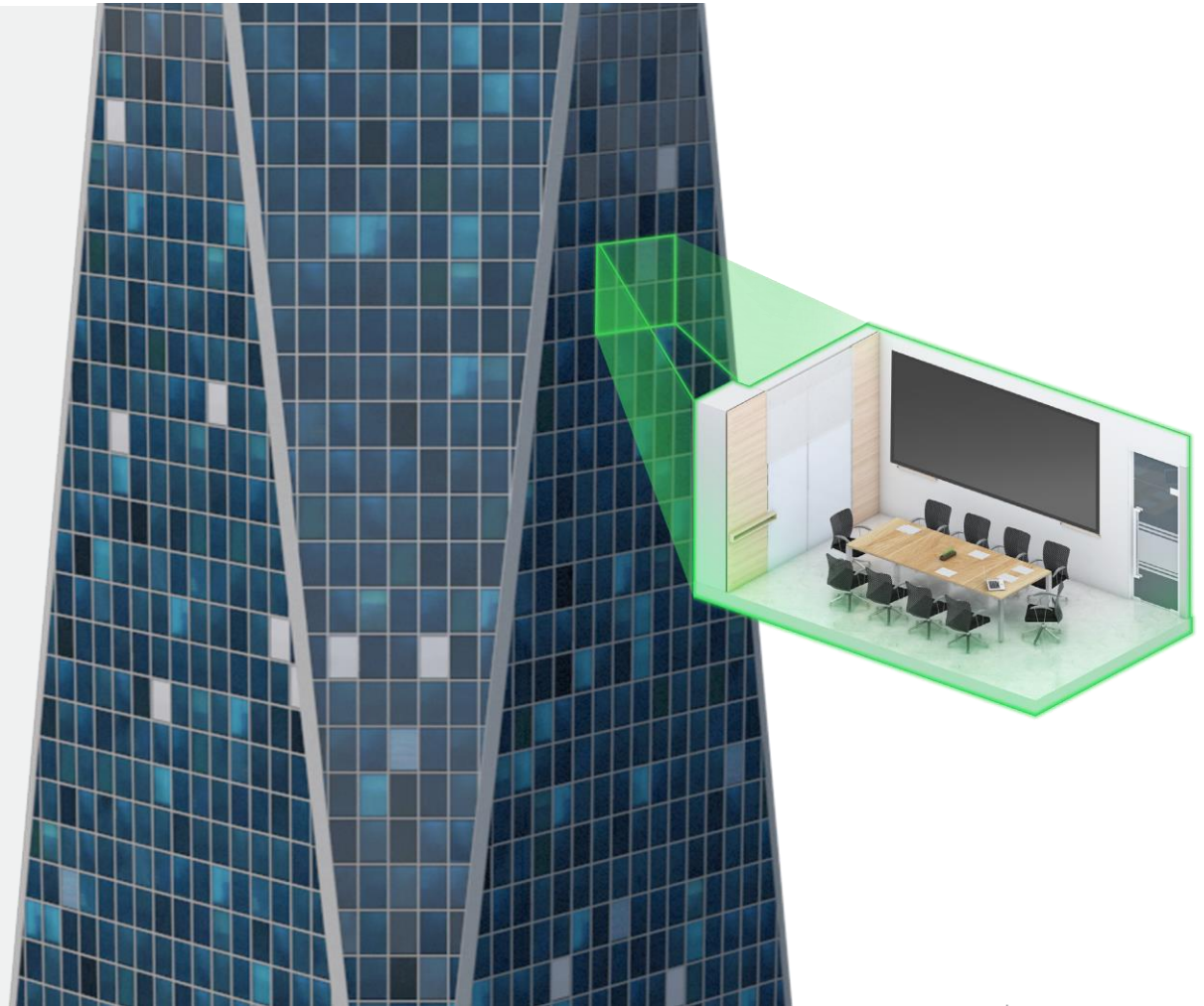
Utilize building information modeling (BIM) to capture carbon data and gain visibility needed for total carbon reporting

- RIB

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Measure and Monitor Energy and Carbon

**Centralize energy supply and utility data** to analyze & report on energy and carbon
- EcoStruxure Resource Advisor

Gain visibility of major energy usage to understand equipment usage patterns & anomalies
- EcoStruxure Resource Advisor
- EcoStruxure Energy Hub
- EcoStruxure Power Monitoring Expert
- PowerLogic meters and PowerTag sensors
- MasterPact MTZ intelligent breakers

Implement cloud-based analytics for equipment-level energy & carbon savings insights
- EcoStruxure Building Advisor
- EcoStruxure Power Advisor
- EcoStruxure Asset Advisor
- EcoStruxure Energy Hub
- Building Data Platform

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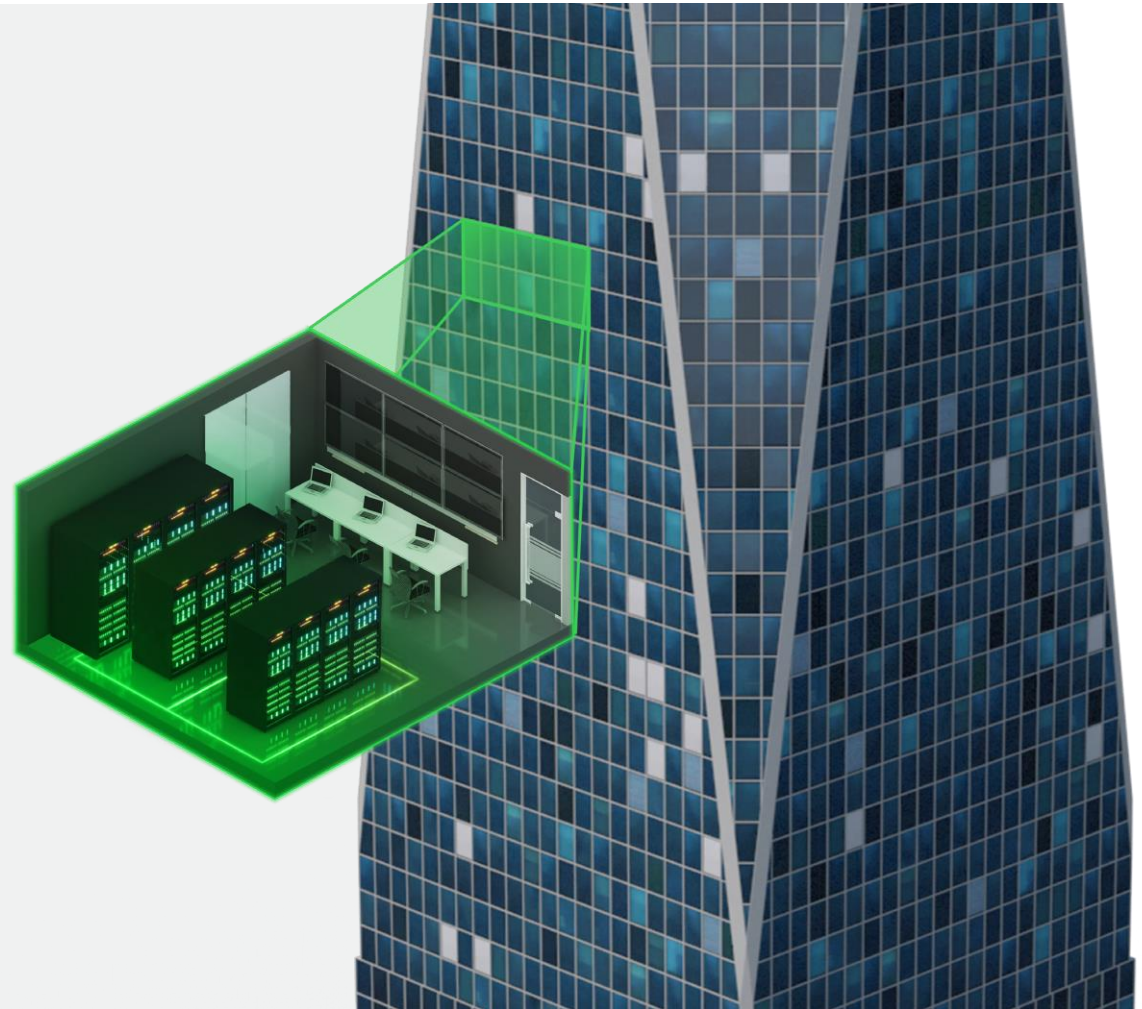
4 Reduce Energy and Carbon Through Automation

Utilize **modern building & power management systems** to control equipment and systems efficiently
- EcoStruxure Building Operation
- EcoStruxure Power Monitoring Expert

Access **space utilization data** to achieve operational savings through occupancy-based lighting & HVAC system control
- EcoStruxure Connected Room Solutions with SpaceLogic sensors
- Planon Workplace Insights

Optimize **equipment performance** through predictive maintenance to prevent performance degradation
- EcoStruxure Building Advisor
- EcoCare Service Membership

Leverage **AI for real-time optimization** to reduce HVAC energy and scope 1 and 2 carbon emissions
- AI HVAC Optimization

ZONE OFF

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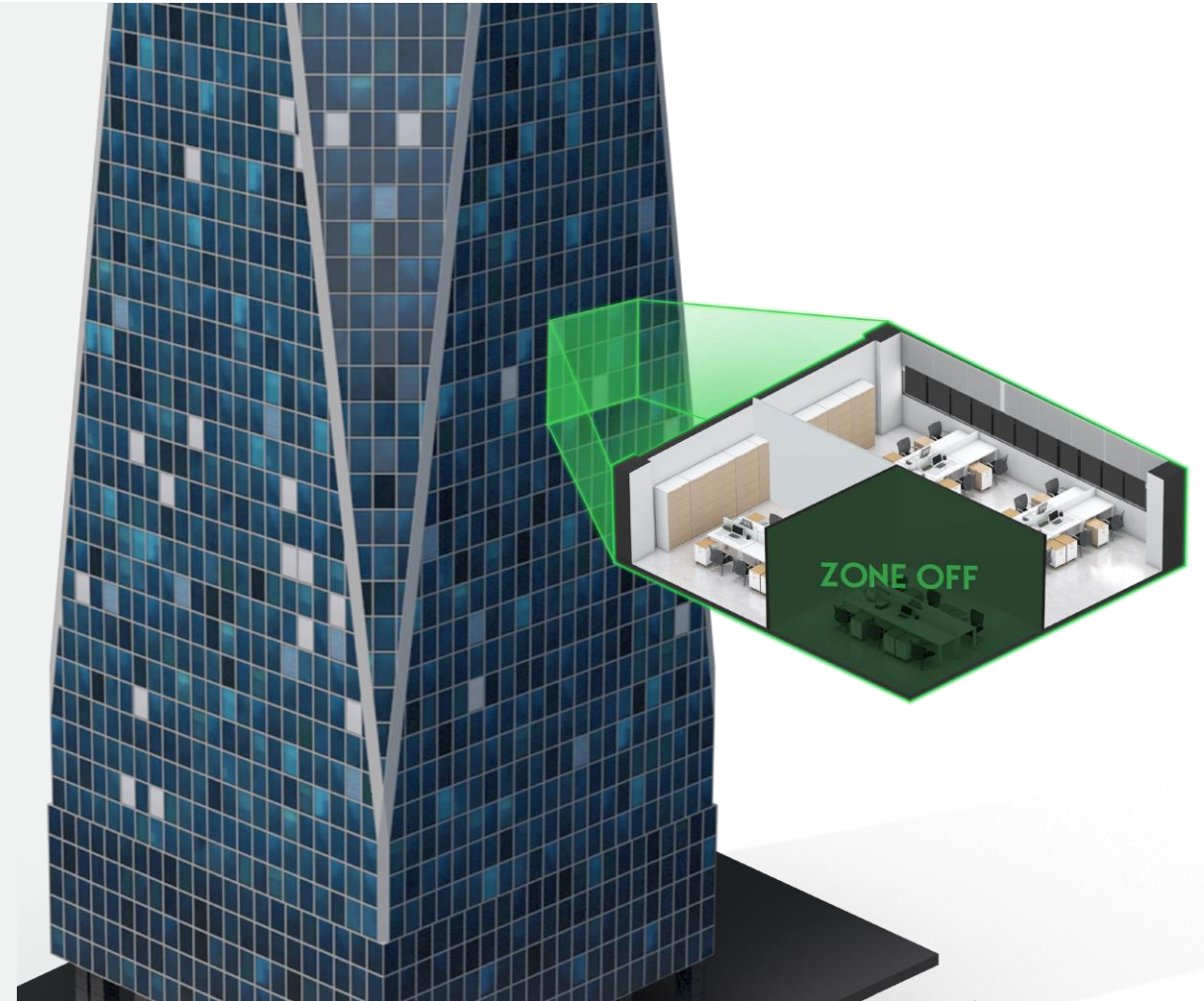
5 Purchase Offsite Renewables

Procure **offsite renewable energy** across your portfolio* through power purchase agreements (PPAs) to reduce scope 2 carbon emissions, reduce exposure to energy market price volatility, and potentially achieve long-term cost savings
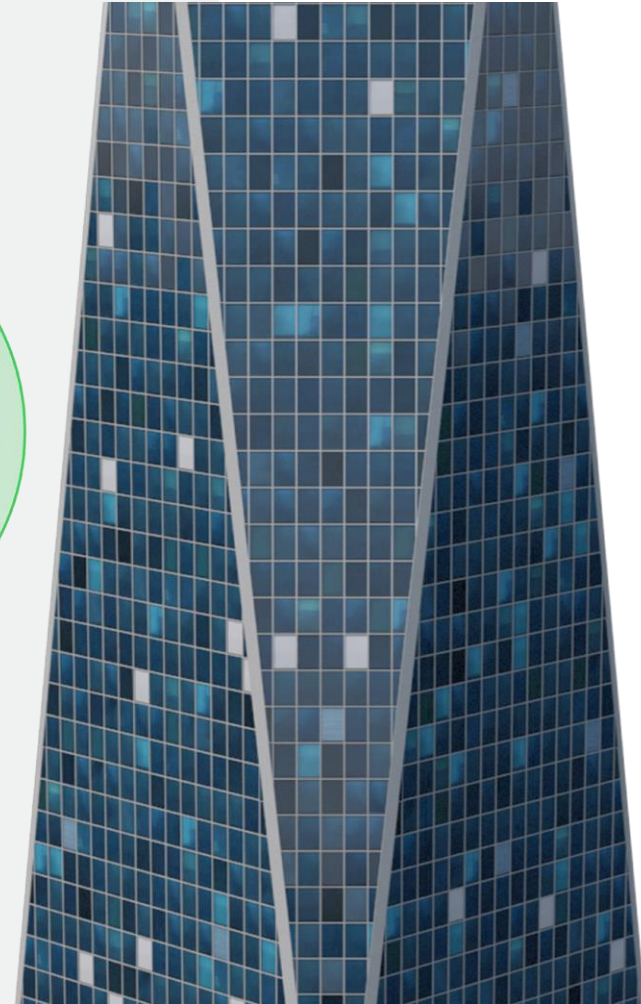
- Cleantech advisory services
- Zeigo Network
- Zeigo Power

Purchase **energy attribute certificates (EACs)** to balance any residual scope 2 carbon emissions

- Cleantech advisory services

For more information on these offers, click here.

*Offsite PPAs only apply at a portfolio level, not building level

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6 Electrify Transportation

Convert **fleet vehicles to electric** to reduce scope 1 carbon emissions and provide necessary EV charging infrastructure

- Fleet electrification strategy

Install **EV charging stations** to reduce scope 3 carbon emissions, provide EV charging, and generate new revenue

- EVlink charging stations
- QMerit

Manage **EV charging loads** to minimize peak demand charges and avoid electrical infrastructure upgrades

- EcoStruxure EV Charging Expert
- EcoStruxure EV Advisor

Design **and model** EV charging station installation, integrating protection requirements and expansion needs

For more information on these offers, click here.

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Upgrade Building Systems and Electrical Infrastructure

(7)

Optimize electrical designs to reduce scope 2 carbon emissions
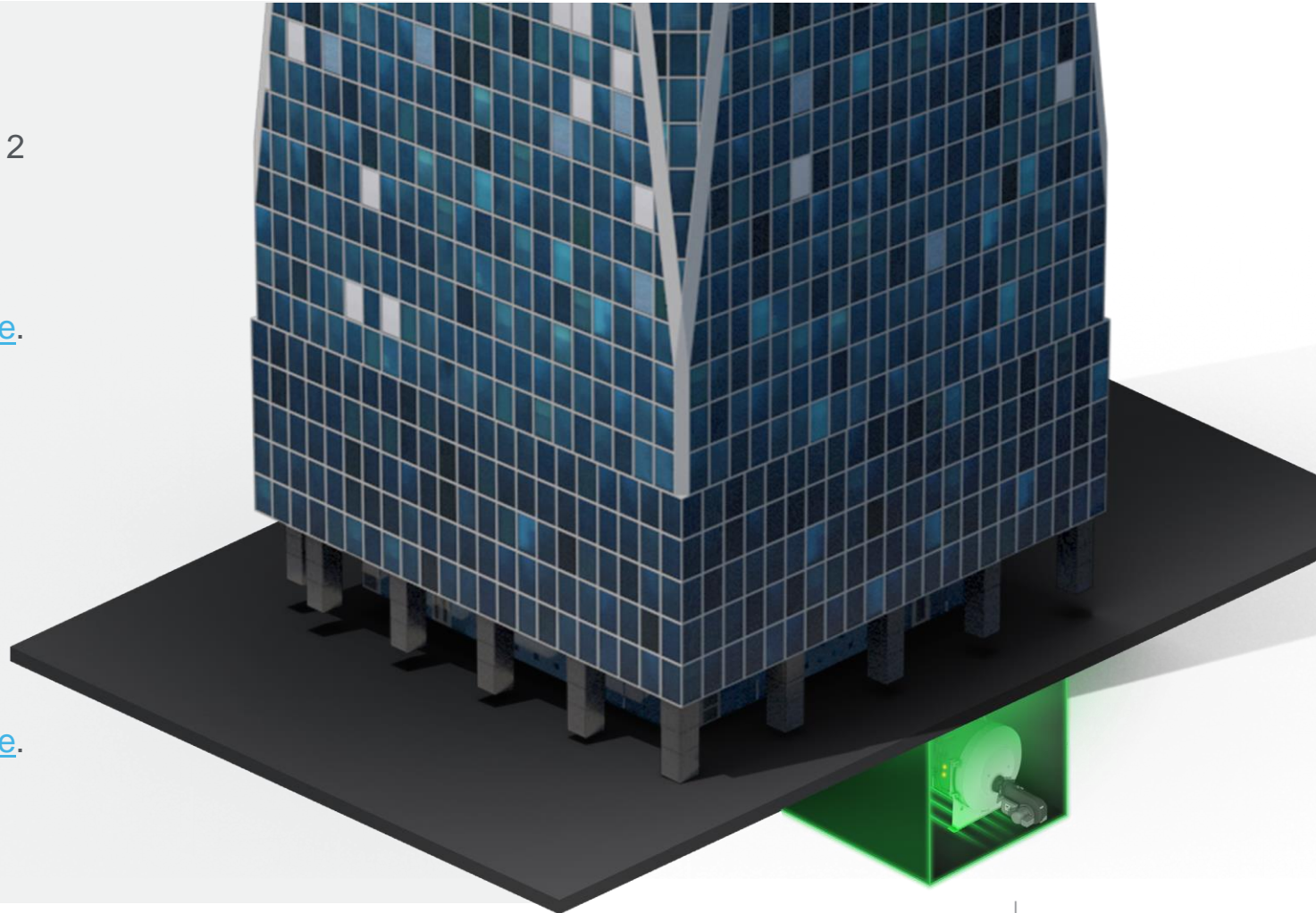
- ETAP
- AED+

For more information on these offers, click here.

Modernize electrical distribution to reduce scope 1 fugitive emissions and scope 2 carbon emissions

- SF6-free AirSeT Switchgear
- Galaxy High-efficiency UPS
- Altivar Variable Speed Drives
- PowerLogic AccuSine EVC Plus

For more information on these offers, click here.

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8 Install Onsite Renewables

Install renewable energy onsite to reduce Scope 2 carbon emissions, reduce exposure to energy market price volatility, and potentially achieve long-term cost savings

- AlphaStruxure
- GreenStruxure
- GreeNext
- GreenYellow
- Cleantech advisory
- Zeigo Network
- EnergySage
- Microgrid Engage
- Microgrid Build
- Conext™ Photovoltaic (PV) string inverters

Store distributed energy onsite with a microgrid for improved resiliency

- Battery energy storage system (BESS)

Manage loads dynamically for peak demand savings and load distribution for maximum value and grid impact

- EcoStruxure Microgrid Operation
- EcoStruxure Microgrid Advisor
- AutoGrid

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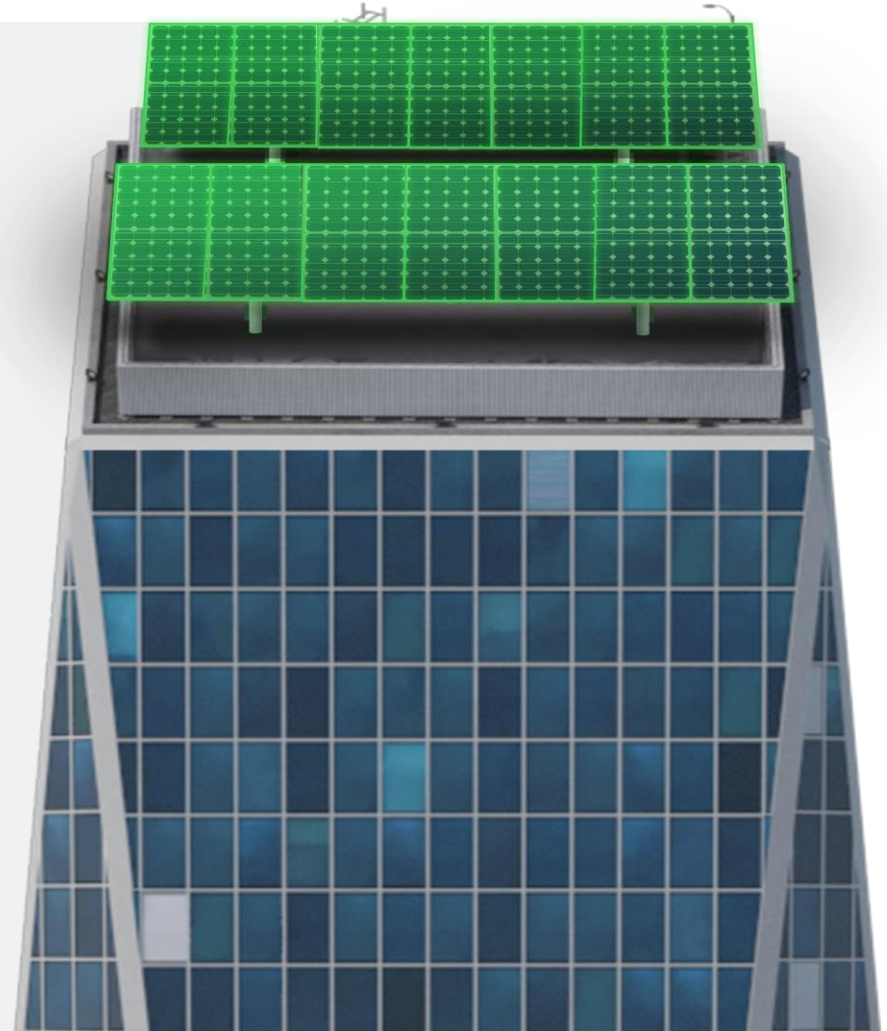
9 Limit Embodied Carbon

Purchase low or no carbon products such as building materials, equipment, and supplies to reduce scope 3 carbon emissions

- Green Premium products

Conduct circularity assessment for major building equipment to determine better use and disposal options that reduce scope 3 carbon emissions

- Circularity strategies

Extend equipment life through better life-cycle maintenance

- EcoCare Service Membership

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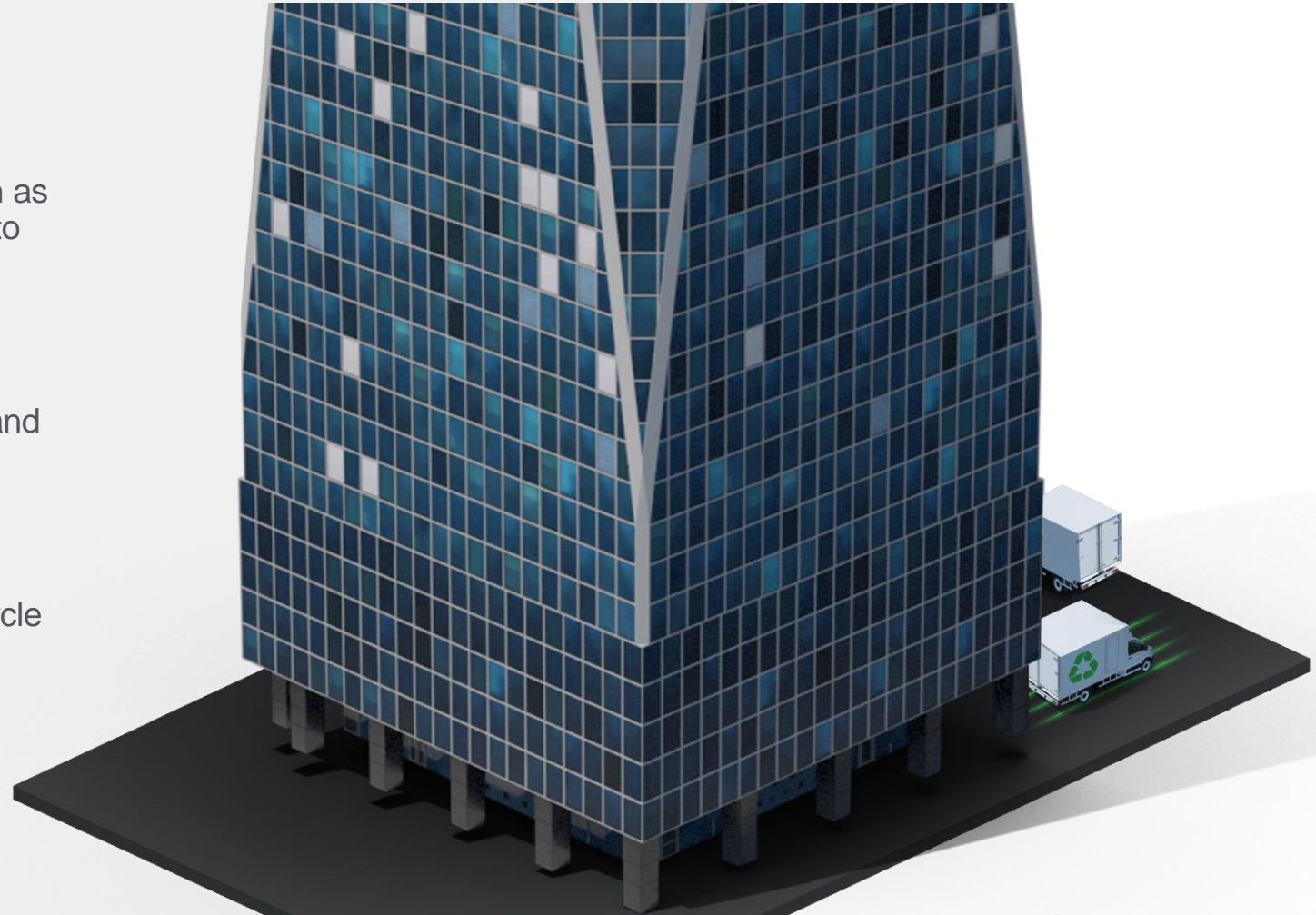
10 Offset Residual Carbon Emissions

Purchase carbon offsets to balance any residual scopes 1 & 3 carbon emissions

- Cleantech advisory services

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Assess Where You Are

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A checklist to get started
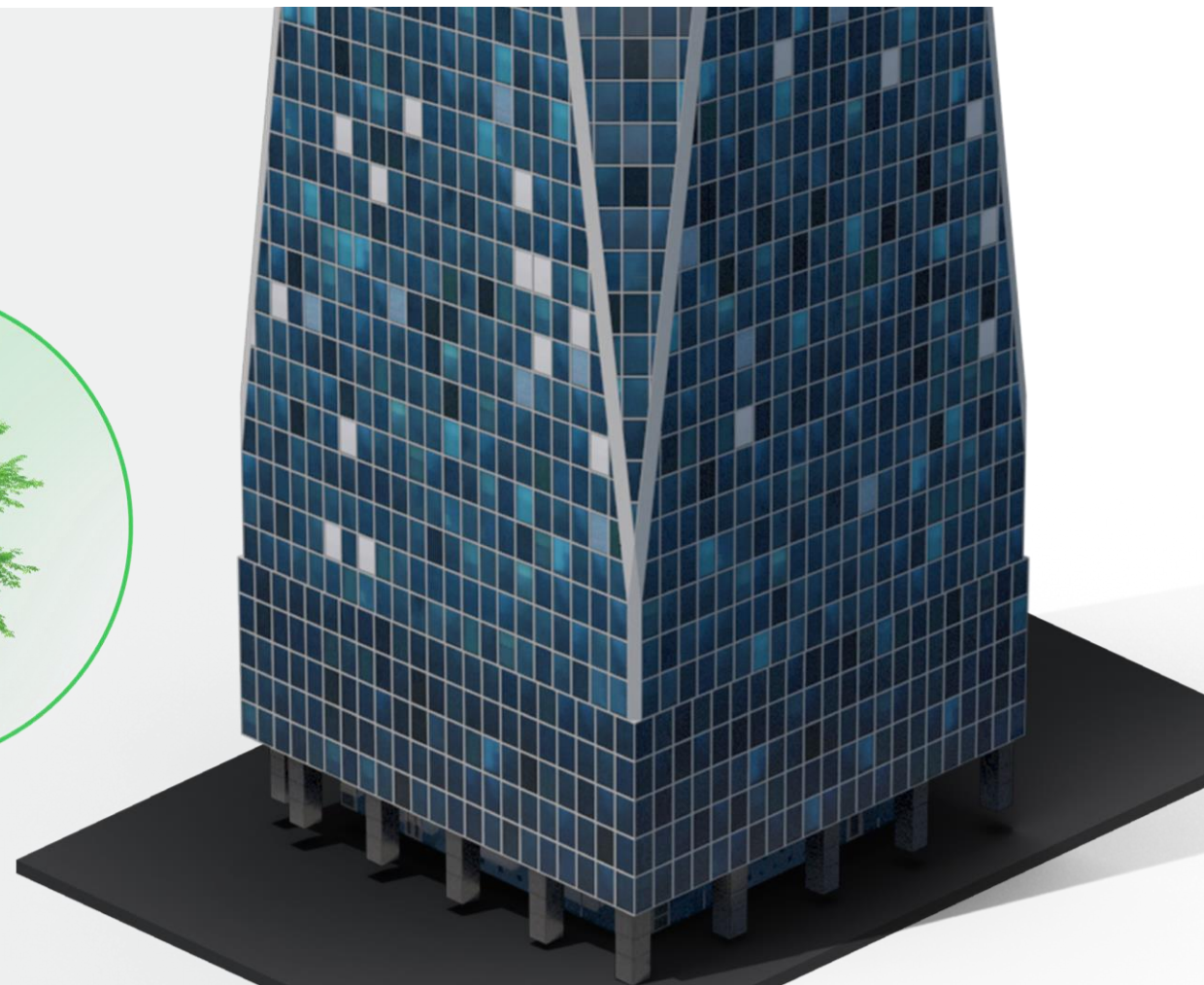
Our checklist helps you determine where you are on the sustainability roadmap and what you need to do next.
It helps clarify your goals and opportunities to begin forming your strategy. Answer as many questions as you can.

	Strategize	Digitize	Decarbonize		
1	Do you know the current CO_2 emission of your building?			⦿ Yes	⦿ No
2	Do you believe your company is leading on sustainability compared to other buildings in your neighborhood?			⦿ Yes	⦿ No
3	Are net-zero targets defined in your organization?			⦿ Yes	⦿ No
4	If yes, are the business and operating divisions aligned with the execution of the sustainability strategy?			⦿ Yes	⦿ No
5	Has your organization identified sustainability champions to help drive transformation?			⦿ Yes	⦿ No
6	Have you identified incentives that can support sustainability goals, such as renewable energy sources or government subsidies?			⦿ Yes	⦿ No
7	Do you know how to calculate ROI for a sustainable project?			⦿ Yes	⦿ No
8	Do you know how to measure and report on sustainability?			⦿ Yes	⦿ No
9	If yes, have you defined sustainability-related KPIs?			⦿ Yes	⦿ No
10	Are you seeking sustainability certifications for your buildings?			⦿ Yes	⦿ No

Your goal: Set net-zero strategy

Count your "Yes" answers to see your level for each of the steps

0-4	Beginner
5-7	Intermediate
8-10	Advanced

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A checklist to get started

Our checklist helps you determine where you are on the sustainability roadmap and what you need to do next.
It helps clarify your goals and opportunities to begin forming your strategy. Answer as many questions as you can.

Strategize	Digitize	Decarbonize

1	Do you have a system to digitalize your building drawings (e.g., line diagrams, cabling, substations, control panels)?	◉ Yes ◉ No
2	Do you use a digital twin (virtual model) to simulate system(s) functionality within your building(s)?	◉ Yes ◉ No
3	Do you know the age of all power and building equipment in the product lifecycle?	◉ Yes ◉ No
4	Are you currently using sub-metering to collect energy data from your equipment? (meters, controllers, etc.)	◉ Yes ◉ No
5	Are you using advanced metering, smart meters enabling communication between the meter and the central system?	◉ Yes ◉ No
6	Do you collect energy efficiency data automatically using a building management system (BMS)?	◉ Yes ◉ No
7	Do you use pulse meters connected to the BMS?	◉ Yes ◉ No
8	Do you manage multiple building sites using a single, integrated BMS?	◉ Yes ◉ No
9	Do you have strategies to automate your building HVAC functionality based on demand, i.e., building occupancy?	◉ Yes ◉ No
10	Do you have automated systems installed for your sustainability metrics, integrated with energy management system (EMS) or BMS?	◉ Yes ◉ No

Your goal: Monitor energy usage

Count your "Yes" answers to see your level for each of the steps

0-4	Beginner
5-7	Intermediate
8-10	Advanced

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A checklist to get started

Our checklist helps you determine where you are on the sustainability roadmap and what you need to do next.
It helps clarify your goals and opportunities to begin forming your strategy. Answer as many questions as you can.

	Strategize	Digitize	Decarbonize	
1	Do you plan to decarbonize primary operations in your building(s)?			◉ Yes ◉ No
2	Do you have the corporate renewable power purchase agreement (to buy renewable energy at an agreed pricing scheme)?			◉ Yes ◉ No
3	Have any or all of your fossil-fuel-based loads (e.g., heating) been replaced by electric?			◉ Yes ◉ No
4	Do you have a basic EV charging infrastructure?			◉ Yes ◉ No
5	Do you use energy management system (EMS) that is integrated to your BMS to enable additional data aggregation?			◉ Yes ◉ No
6	If yes, do you use strategies to ensure the high level of data quality of your power system?			◉ Yes ◉ No
7	Do you have any on-site renewable sources of energy? (solar, geothermal, microgrid etc.)			◉ Yes ◉ No
8	Do you take part in any demand response initiatives from your energy suppliers?			◉ Yes ◉ No
9	Are your maintenance schedules tracked in a digital form?			◉ Yes ◉ No
10	Do you use a condition-based maintenance strategy for your equipment to extend their lifecycle?			◉ Yes ◉ No

Your goal: Reduce energy use

Count your "Yes" answers to see your level for each of the steps

0-4	Beginner
5-7	Intermediate
8-10	Advanced

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Decarbonization Steps – Proposed Customer Journey

Step	Ease of Deployment	Carbon Impact	Outcome	
1 Create decarbonization roadmap	Easy	**Enabler** – must have, **SE differentiator**	Portfolio and building-level action plans to move from ambition to action	**Prerequisite**
2 Track embodied carbon	Medium	Enabler – nice to have	CO_2 transparency – must have for total carbon footprint visibility	
3 Measure and monitor energy and carbon	Medium	**Enabler** – must have, **SE differentiator**	CO_2 transparency – Visibility needed for reporting and insights, enables operational carbon reductions	**High ROI** short-mid term investment
4 Reduce energy and carbon through automation	Easy	Medium	15-30% reduction in operational carbon (10-20% total building carbon footprint reduction)	
5 Purchase offsite renewables	Easy	Medium-High, **SE differentiator**	Operational carbon savings (Scope 2), impact depends on scale purchased	
6 Electrify transportation	Easy-Medium	Low for most customers, exception for logistics or customers with fleets	Operational carbon (fleet – Scope 1) and Scope 3 (commute) savings, impact depends on scale purchased	**Mid-Low ROI** mid-long term investment
7 Upgrade building systems and electrical infrastructure	Difficult	Medium	30-60% reduction in operational carbon (20-40% total building carbon footprint reduction)	
8 Install onsite renewables	Medium	Medium, **SE differentiator**	Operational carbon savings (Scope 2), impact depends on scale and site applicability	
9 Limit embodied carbon	Easy-Medium	Low for most customers, exception developers	Scope 3 reduction, scale of impact depends on level of investment in major retrofits/ new construction across a portfolio	
10 Offset residual carbon emissions	Easy	High	Scope 1 and 3 reduction, impact depends on scale purchased	**Low-No ROI** short term investment

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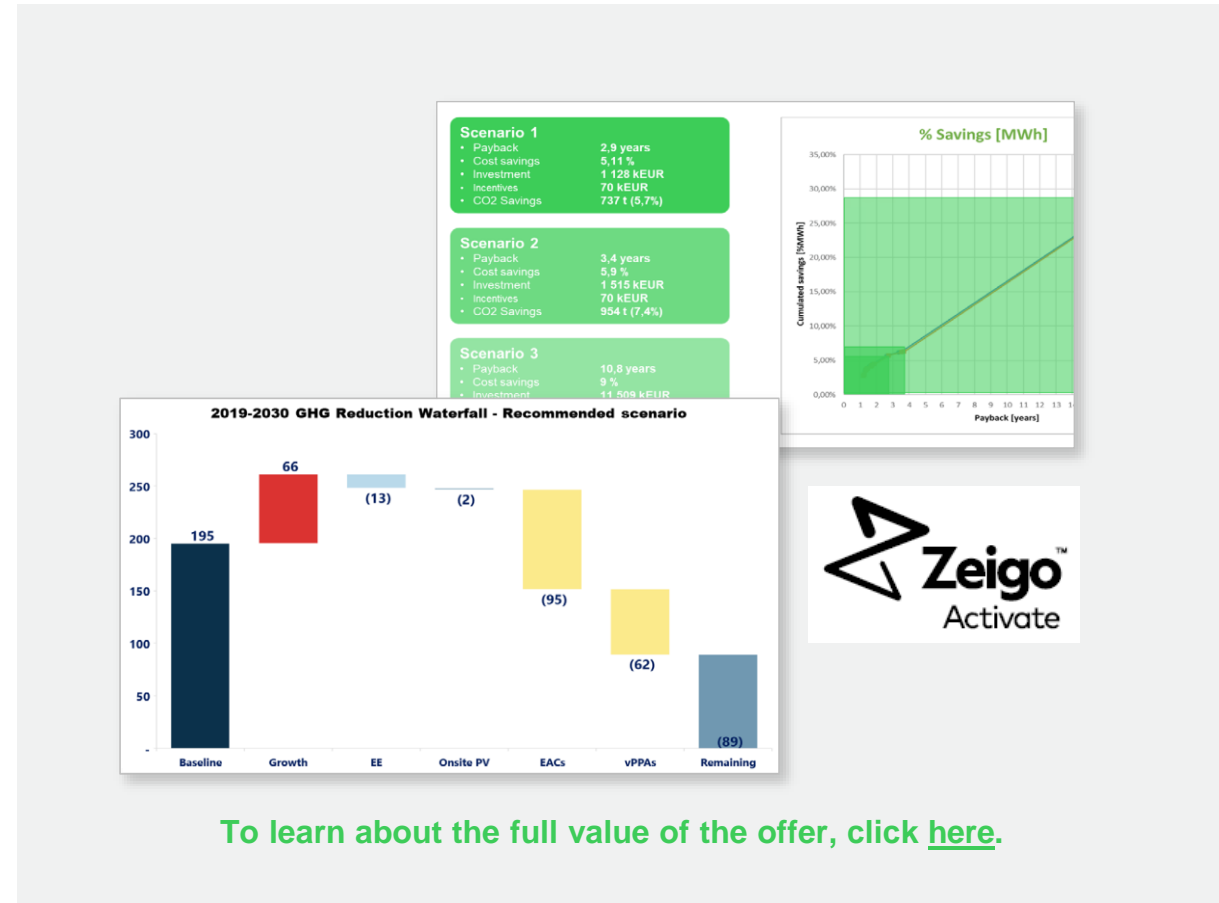
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Strategize Solutions

Create a Baseline and Decarbonization Roadmap

Strategy advisory services and Zeigo Activate

Large enterprises can rely on the strategic advisory services delivered by 2500+ experts in over 100 countries. These services help to develop strategies that are actionable with knowledge on the costs, benefits, and deployment of decarbonization solutions locally. With a strategic roadmap you can:

- Get to your goals faster and with confidence

- Preserve and enhance brand value with a plan that enables action toward your climate commitments

- Define how you will get to your goals at an enterprise or portfolio level and how you will measure progress toward key milestones to report to internal and external stakeholders

- Maximize ROI through scenario modeling and choosing the optimal path for your building and portfolio and the associated implementation timeline and budget

With **Zeigo Activate**, small-medium enterprises can set their own straightforward, achievable decarbonization goals and follow customized action plans to reduce emissions, all with intuitive software

To learn about the full value of the offer, click here.

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Digitize Solutions

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Centralize, Analyze, and Report on Energy and Carbon Data

EcoStruxure Resource Advisor

Unlock the power of global carbon data and transform intelligence into action

EcoStruxure Resource Advisor is your one source of truth for energy, emissions, and sustainability data. It allows you to:

- Utilize a best-in-class carbon management reporting platform and fully maintained emissions library

- Manage the complexity of enterprise data integration from many sources, locations, and stakeholders and ensure data integrity

- Rank & benchmark facilities to identify improvement opportunities

- Track projects and their ROI to facilitate decisions and action

- Track and report enterprise sustainability data (energy, carbon, water, waste, supply chain and more)

60k+	**250k+**	**128M**	**€30B**	**70k**	**4bn**
Users across 140+ countries	Sites managed globally	Metric tons of CO_2 managed	Energy spend managed globally	Tariffs	Data points

To learn about the full value of the offer, click <u>here</u>.

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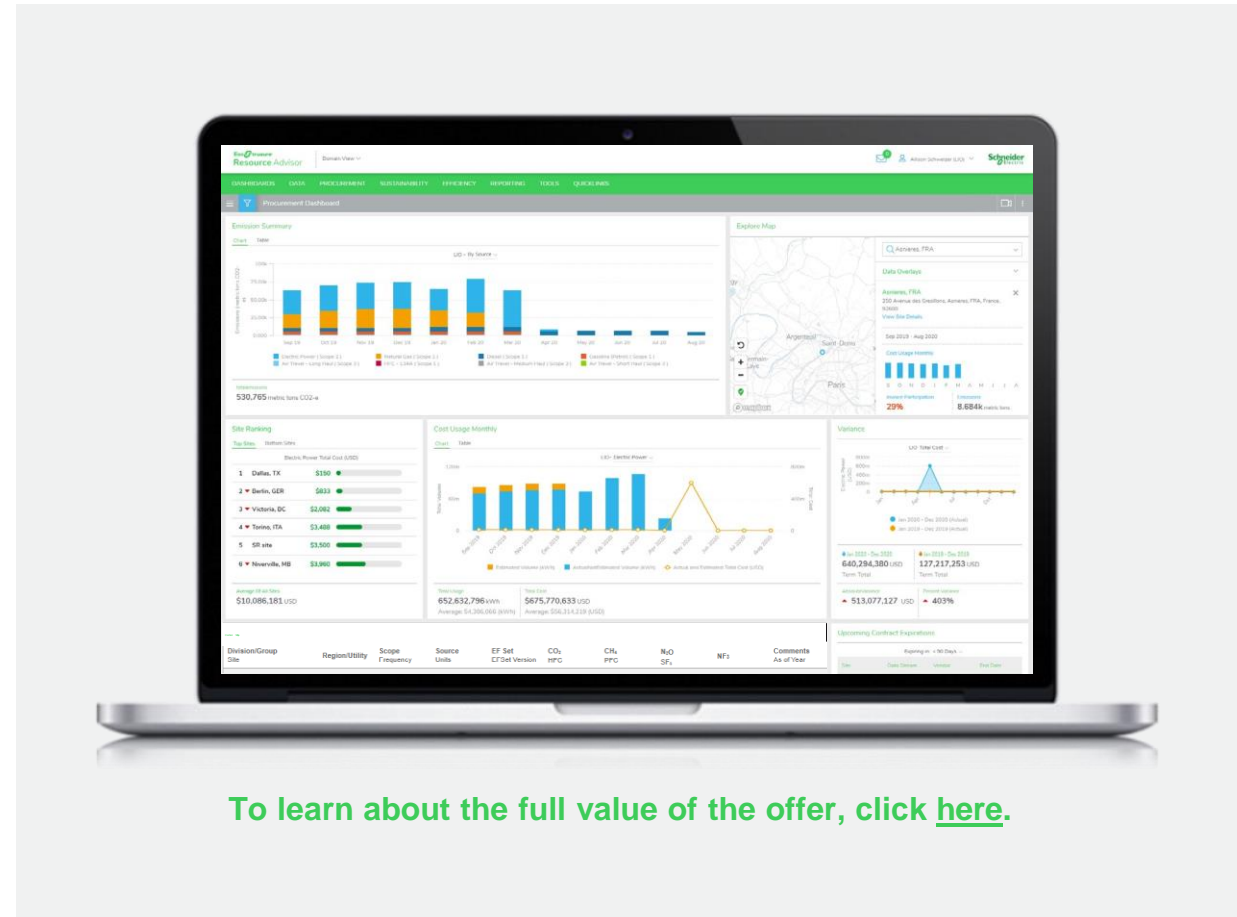
Gain Visibility Through Meter Data

EcoStruxure Energy Hub

Easy to deploy, easy to use and easy to achieve results

Simplify the management of the electrical and energy systems without high upfront investment through the EcoStruxure Energy Hub cloud-based IoT solution

Decarbonization benefits include:

- Increase visibility into energy loads to uncover opportunities to reduce energy, utility cost, and the associated carbon emissions

- Visualize data from **PowerLogic** meters, **PowerTag** sensors, and **MasterPact MTZ** intelligent breakers with built-in meters to conduct analysis

- Improve data coverage for carbon and ESG reporting where utility meter data is not available

Co-benefits include:

- Demonstrate compliance with building energy codes and energy disclosure ordinances

- Provides the insights needed for energy cost allocation and tenant billing

To learn about the full value of the offers, explore these links:
EcoStruxure Energy Hub Web
EcoStruxure Energy Hub Video
Power Metering and Energy Monitoring Systems
PowerLogic PowerTag
MasterPact MTZ

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Gain Carbon Insights and Track Savings

EcoStruxure Building Advisor

With Building Advisor you can unlock the optimal operational performance of your building

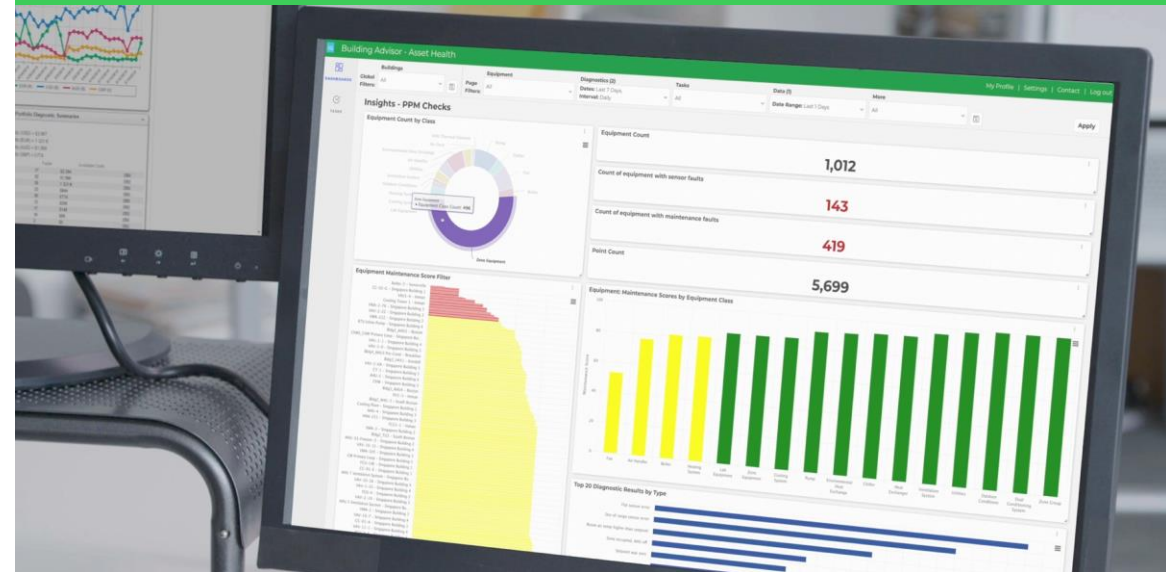**Decarbonization benefits include:**

- Leverage fault detection and diagnostics to detect equipment and system performance issues and prevent performance degradation

- Calculate avoidable carbon associated with system faults using the Carbon Insights dashboard and prioritize actions based on avoidable carbon emissions

- Track carbon savings opportunities and forecast the annual carbon savings impact of open/ongoing tasks

- Document annual carbon savings delivered from completed tasks

Co-benefits include:

- Leverage automation for labor savings; streamline troubleshooting and prioritization of suggested actions with remote team of experts

- Prioritize suggested actions based on comfort, maintenance need, or energy savings

Success to Date

Sq Ft: **480M+** | Buildings: **1700+** | Equipment: **240K+**
Energy Avoided: **102+ GWh**
CO_2 Emission saved: **115,000+ metric tons**

To learn about the full value of the offer, click <u>here</u>.

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Gain Energy and Carbon Insights

EcoStruxure Power Advisor for large and critical facilities

EcoCare Service Memberships delivered with EcoStruxure Power Advisor to optimize your power system performance

Decarbonization benefits include:

- Proactive, analytics-based service, delivering optimized power system performance based on applying diagnostics to Power Monitoring Expert metering data

- Expert analysis of power and energy data to identify opportunities for increased energy efficiency and carbon savings

Co-benefits include:

- Improve power reliability and safety for your power management and distribution system

- Identify power quality issues and root causes within your electrical distribution system

- Ensure your system - your meters, power quality mitigation equipment, and power monitoring software - is functioning properly so your operations run smoothly, minimizing unexpected downtime

- Notify site staff of system issues and concerns before they become critical

To learn about the full value of the offer, click here.

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Digitize the Path to Decarbonization

Track embodied carbon with RIB

Calculate the embodied carbon for a project and store and reuse carbon data with RIB

Decarbonization benefits include:

- Access the world's leading EPD databases through a single platform using RIB's **Carbon Quantifier**

- Ensure reliable carbon data extraction through a seamless integration with EC3, RICS, and soon, One Click LCA

- Measure carbon values from vendors and subcontractors to aid in vendor selection based on carbon, cost and the impact on the schedule

- Measure and report on the carbon and cost impact of design and construction decisions in real-time

Co-benefits include:

- Leverage stored carbon data from past projects to speed up the setup time for new projects

- Improve data integrity with automatic flags that help identify quantity and unit format mismatches
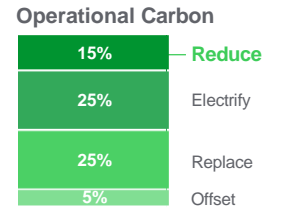

To learn about the full value of the offer, click <u>here</u>.

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Decarbonization Solutions

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Reduce Energy and Carbon Emissions

Building management solutions for efficient building operations

Operational Carbon

15%	Reduce
25%	Electrify
25%	Replace
5%	Offset

Create the foundation for a modern digital building with EcoStruxure Building Operation

Decarbonization benefits include:

- Use advanced scheduling and energy conservation control sequences for equipment and systems

- Use alarms and event management to keep equipment and performance within desired parameters

- Leverage trend-logs, historical data, and visualizations to uncover savings opportunities

- Integrate with key decarbonization infrastructure to create a single pane of glass across power monitoring, on-site generation, EV charging, peak demand programs

Co-benefits include:

- Optimize occupant experience with tighter control of assets for improved comfort and indoor environment quality
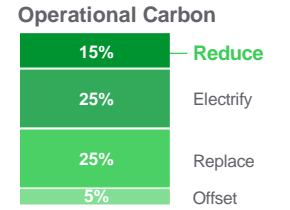
- Enable LEED, WELL, BREEAM and other certifications

To learn about the full value of the offer, click here.

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Reduce Energy and Carbon Emissions

Space management solutions for carbon savings and occupant experience

Operational Carbon

15%	Reduce
25%	Electrify
25%	Replace
5%	Offset

Planon Workplace Insights and **Connected Room Solutions** with Space Logics sensors provide a suite of connected, IoT-enabled controllers, devices, and software

Decarbonization benefits include:

- Fine tune system performance based on occupant and space needs to drive better occupant experience and energy and carbon savings
- Implement demand driven temperature and ventilation control schemes based on real-time data to deliver energy and carbon savings

Co-benefits include:

- Maximize space utilization using anonymous people counting & occupancy monitoring and analytics
- Enable building certifications such as LEED and WELL

Planon Workplace Insights provides a software layer for added decarbonization benefits:

- Continuously optimize performance through automated WO management to turn Building Advisor insights into action
- Utilize space demand forecasts to drive maintenance savings and portfolio optimization decisions, and reduce the associated carbon footprint

To learn about the full value of the offers, explore these links: Planon Workplace Insights and Connected Room Solutions.

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Reduce Energy and Carbon Emissions

EcoStruxure Power Monitoring Expert for large and critical facilities

Operational Carbon

|	
15%	Reduce
25%	Electrify
25%	Replace
5%	Offset

EcoStruxure Power Monitoring Expert gives insight into electrical system health and energy efficiency so you can make informed decisions to improve performance

Decarbonization benefits include:

- Perform energy usage analyses to identify abnormal energy usage and reveal opportunities for energy and carbon savings
- Certified ISO Energy Data Management System for structured approach to energy management and performance verification

Co-benefits include:

- Maximize operational efficiency with a digitized power network
- Maximize uptime and improve reliability with advanced power quality analysis to ensure reliable network operation, equipment performance and reduced network outages
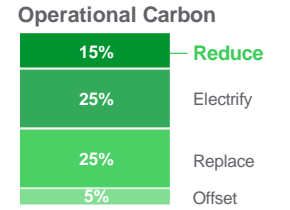
To learn about the full value of the offers, explore these links:
EcoStruxure Power Monitoring Expert Web and
EcoStruxure Power Monitoring Expert Video.

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Purchase Offsite Renewables

Power Purchase Agreements (PPAs)

Operational Carbon

15%	Reduce
25%	Electrify
25%	— **Replace**
5%	Offset

Work with the leading advisor on corporate renewable energy procurement globally*

- Schneider Electric has advised on more than 350 PPA deals for developers across five continents, spanning more than 16+ GW of PPAs since 2014

- Our **Zeigo Network** and **Zeigo Power** platforms simplify the cleantech buying process by connecting members to trusted experts, viable projects and technologies, and exclusive market intelligence to enable and accelerate transaction decisions

- Co-benefits of PPAs can include hedging against energy market price volatility and potentially achieving long-term cost savings over the PPA contract term
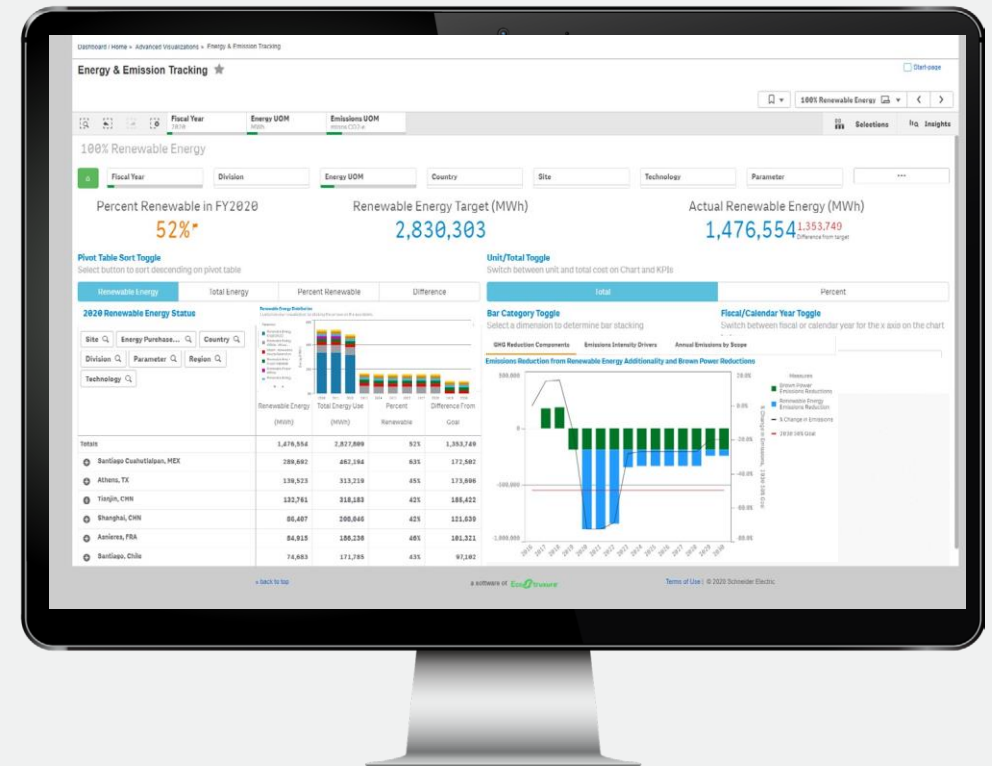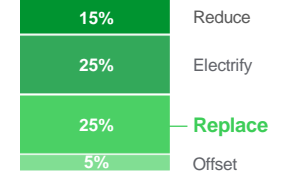
*Industry leader in the Power Purchase Agreements (PPA) market, with a No. 1 ranking by Guidehouse Insights 2022 PPA Marketplace Solution Providers Leaderboard

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Electrify Transportation

EcoStruxure for eMobility

15%	Reduce
25%	Electrify
25%	Replace
5%	Offset

Building owners need to prepare for an increase of up to 45% electricity consumption due to EV charging demand. EcoStruxure for eMobility helps commercial and industrial buildings meet this demand and stay on their path to a net-zero future
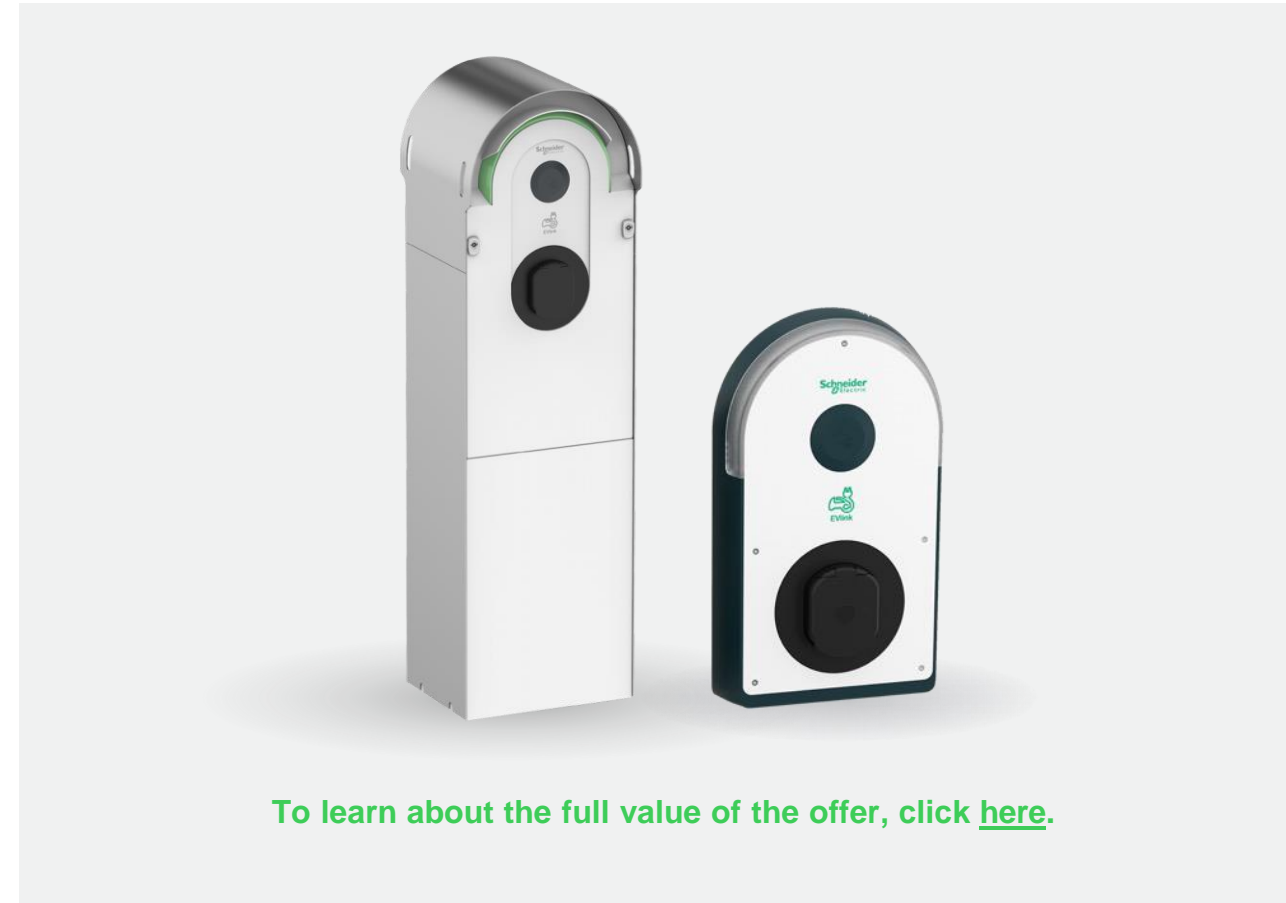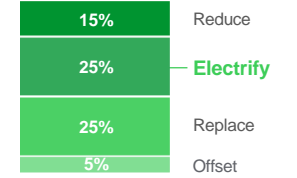
Decarbonization benefits include:

- On-premise load management that dynamically distributes real-time available power in the building to charge EVs, avoiding peak hours and integrating renewable energy via **EcoStruxure EV Charging Expert**

- Remotely monitor and control the EV charging infrastructure to maximize efficiency and minimize the building's energy bill with advanced analytics through **EcoStruxure EV Advisor**

- Efficient operations enabled through **EVlink Pro AC**, a reliable, sustainable, and smart charger

Co-benefits include:

- Attract tenants and enhance tenant satisfaction with EV charging amenities

- Avoid costly electrical infrastructure upgrades by managing EV power demand to not exceed building power capacity

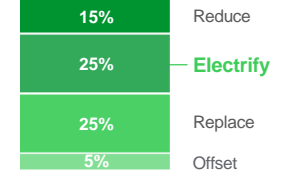- End-to-end connected solution that is easy to install through a robust installer network – **Qmerit**

To learn about the full value of the offer, click here.

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Internal

Upgrade Building Systems and Electrical Infrastructure

Advanced electrical design software

Operational Carbon

|	
15%	Reduce
25%	Electrify
25%	Replace
5%	Offset

Leverage BIM-based electrical design solutions with tools like AED+ by BIM Electric and ETAP

Decarbonization benefits include:

- Reduce energy-related carbon emissions through accurate sizing and optimized electrical systems designs

Co-benefits include:

- Enable high performance building design by leveraging modern workflows, unlocking efficiencies and optimizing designs to reduce waste

- Simplify microgrid and electrical system design with renewable energy modeling including solar, wind, energy storage & control devices from design to operations

- Leverage ETAP Load and Generation Forecasting to predict data center load demand and generation availability to participate in energy arbitrage
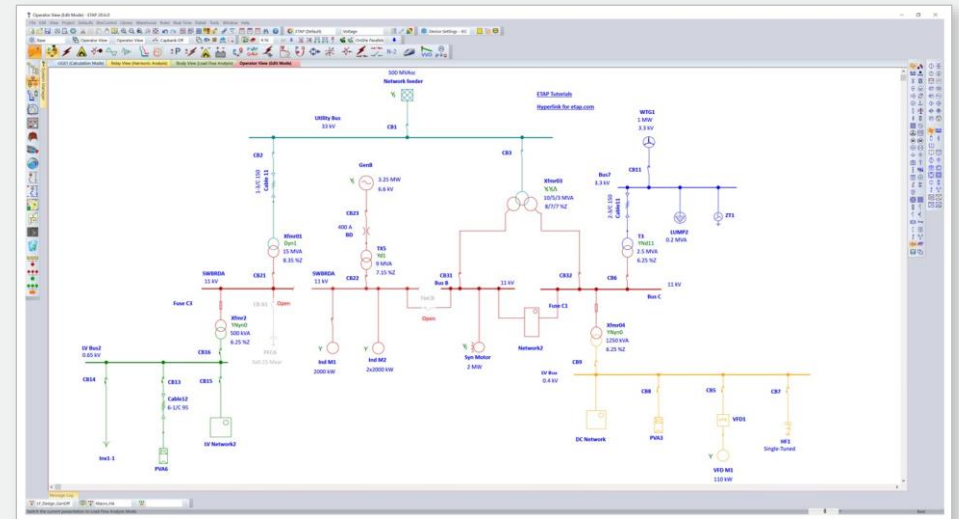
To learn about the full value of the offers, explore these links: ETAP and BIM Electric.

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Internal

Upgrade Building Systems and Electrical Infrastructure

Hardware to enable electrification and improve efficiency
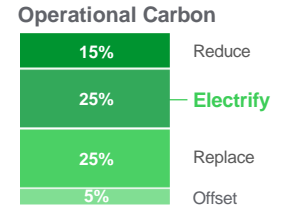
Schneider Electric offers a wide range of electrical distribution products to help improve energy efficiency and reduce greenhouse gas emissions, a sample of these solutions include:

- **Easy Altivar 610 VSDs** specially designed for better control of pump and fan building applications to reduce energy waste and the associated carbon

- **SM AirSeT** is a range of SF6 gas-free modular air-insulated switchgear that uses pure air to eliminate fugitive emissions of SF6, a potent greenhouse gas

- The **Galaxy Uninterrupted Power Supply (UPS)** delivers up to 97% efficiency in double conversion mode and up to 99% in ECOnversion mode, equivalent to 66% energy and carbon savings*

- The **PowerLogic AccuSine EVC+** provides power factor correction, phase balancing, and harmonic mitigation, ideal for modern electrical networks with fast-changing loads, multiple digital loads, and distributed power sources
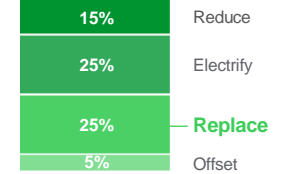
*Compared to legacy 94% efficiency standard UPS

Galaxy UPS   **Altivar VSDs**   **AccuSine EVC Plus**   **SM AirSeT**

Life Is On | **Schneider Electric**

Internal

Replace Energy Sources with Renewables

Onsite renewable energy and storage solutions

Operational Carbon

|	
15%	Reduce
25%	Electrify
25%	— **Replace**
5%	Offset

Schneider Electric offers a wide-range of onsite renewable energy solutions including advisory services and marketplaces like EnergySage and the Zeigo Network, as well as the design, installation, and operation of microgrid solutions

Decarbonization benefits include:

- Provide operational carbon-free electricity to the building

- Intelligently operate between grid consumption, storage, and on-site generation with the ability to manage peak loads and optimize for lowest energy cost and maximize usage of on-site renewables

- Help accelerate grid decarbonization by reducing peak loads and the associated carbon emissions

Co-benefits include:

- Provides local and resilient power sources with the ability to island from the grid

- On-site generation with optimization management provides future-proofing for volatile energy prices
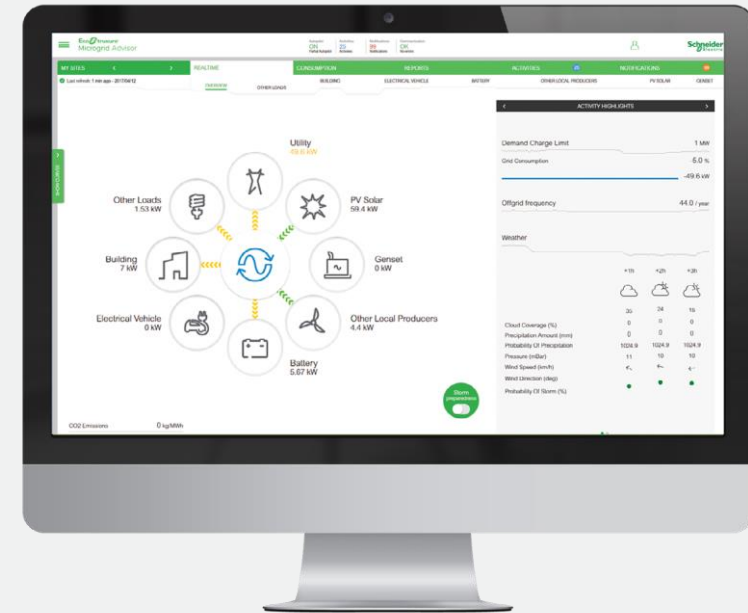
To learn about the full value of the offers, explore these links: Microgrids and Zeigo Network.

Life Is On | Schneider Electric

Replace Energy Sources with Renewables

AlphaStruxure and GreenStruxure Energy as a Service solutions

Operational Carbon

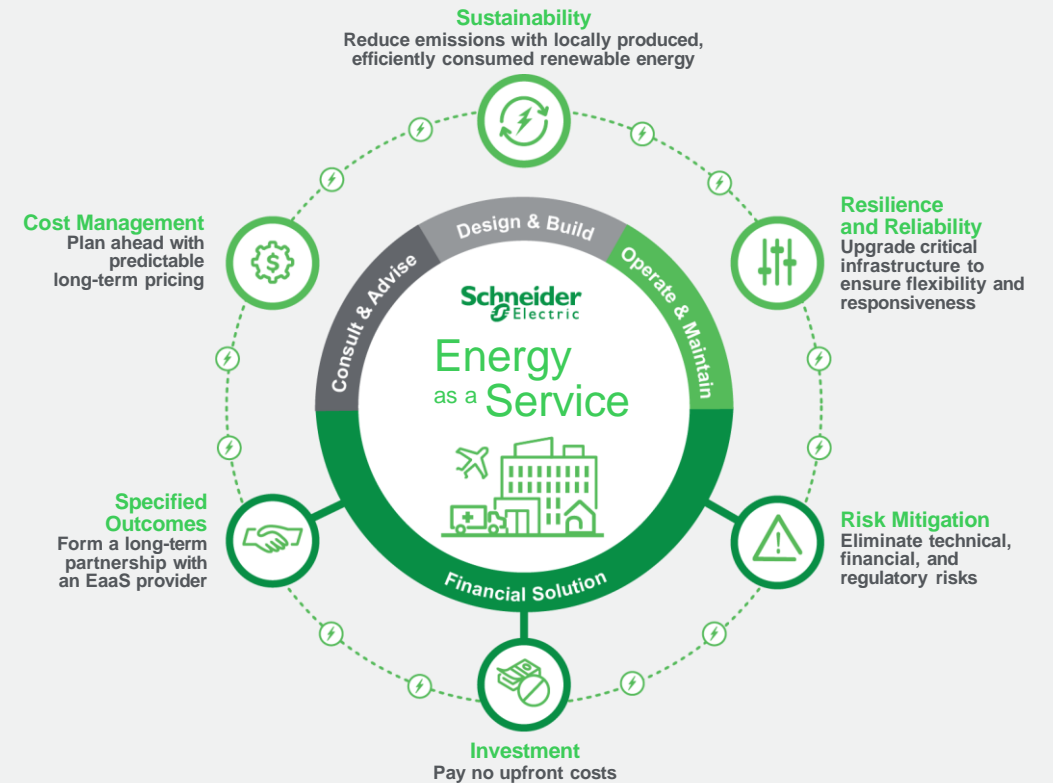|	
15%	Reduce
25%	Electrify
25%	⎯ **Replace**
5%	Offset
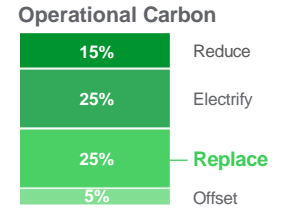
Schneider Electric has two joint ventures to deliver Energy as a Service solutions for microgrids and the associated energy infrastructure including EV charging stations, and electrical system refreshes: AlphaStruxure and GreenStruxure

Decarbonization benefits include:

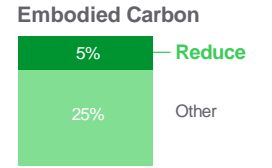- Guaranteed specified outcomes for sustainability, cost optimization, resilience and reliability

Co-benefits include:

- Industry-leading financial and technology expertise

- Best-in-class project delivery with no upfront cost

- Transfer the execution, financial, and operational risks so you can focus, instead, on your core mission

- Digitally enabled asset optimization to maximize performance and minimize costs over the EaaS term

Sustainability
Reduce emissions with locally produced, efficiently consumed renewable energy

Resilience and Reliability
Upgrade critical infrastructure to ensure flexibility and responsiveness

Cost Management
Plan ahead with predictable long-term pricing

Risk Mitigation
Eliminate technical, financial, and regulatory risks

Specified Outcomes
Form a long-term partnership with an EaaS provider

Investment
Pay no upfront costs

Design & Build · Operate & Maintain · Financial Solution · Consult & Advise

Schneider Electric
Energy as a Service

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Internal

Limit Embodied Carbon

Green Premium products

Embodied Carbon

5%	**Reduce**
25%	Other

The Green Premium™ label is Schneider Electric's answer to help you reduce your energy and carbon footprints, optimize the total cost of ownership of your assets through IoT solutions and circular services, and better protect people from chemical substance risks.

Today, more than 75% of Schneider's product sales come from Green Premium offers that provide superior transparency and environmental stewardship, with ~300 Environmental Product Declarations (EPDs) published on the PEP Ecopassport Database.

Schneider Electric products receive the Green Premium label by meeting a number of pre-defined conditions:

- Compliance with the most ambitious standards globally

- Superior sustainability performance that goes beyond compliance, across resource use, circularity, and well-being

- Validation by leading third-party labels and building certifications

Green Premium™ — Sustainable performance, by design

PEP eco PASS PORT

Life Is On | Schneider Electric

Limit Embodied Carbon

Extend equipment life through better life-cycle maintenance

**Embodied Carbon**

5%	Reduce
25%	Other
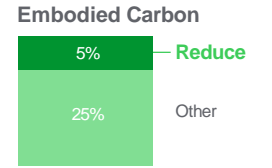
EcoCare Service Memberships using experts from the Connected Service Hub and technology insights from EcoStruxure Asset Advisor can extend equipment life through condition-based maintenance, delaying equipment replacement and avoiding the associated embodied carbon emissions

Decarbonization benefits include:

- Proactive approach to electrical distribution and critical data center asset maintenance, combining IoT and cloud-based technologies with Schneider Electric's experts, technology, and services to manage equipment health

- Prevent performance degradation with predictive maintenance service specialists to avoid increased energy consumption and the associated carbon

Co-benefits include:

- Anticipate and address issues before they become critical incidents and expensive maintenance interventions

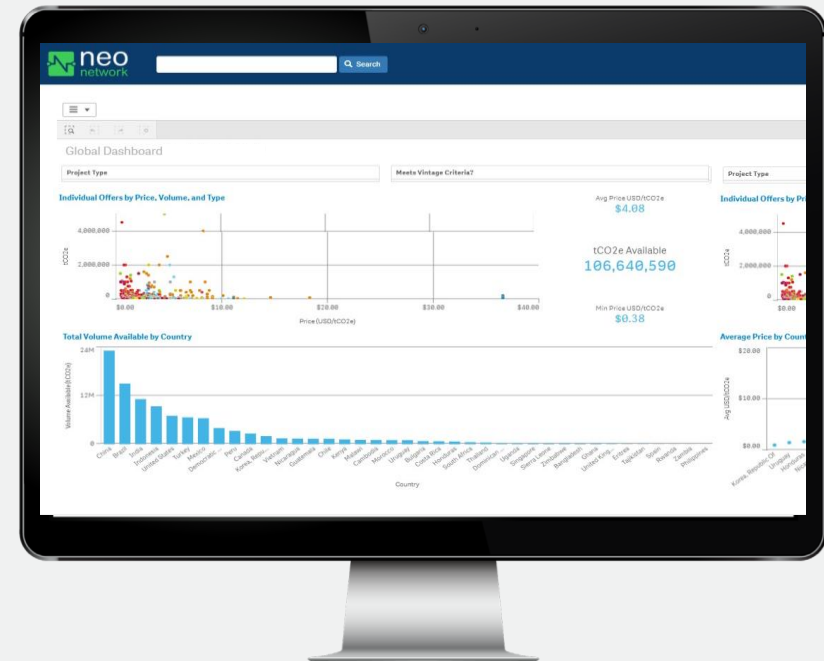- Mitigate safety risks, and help to avoid unplanned downtime, operational losses
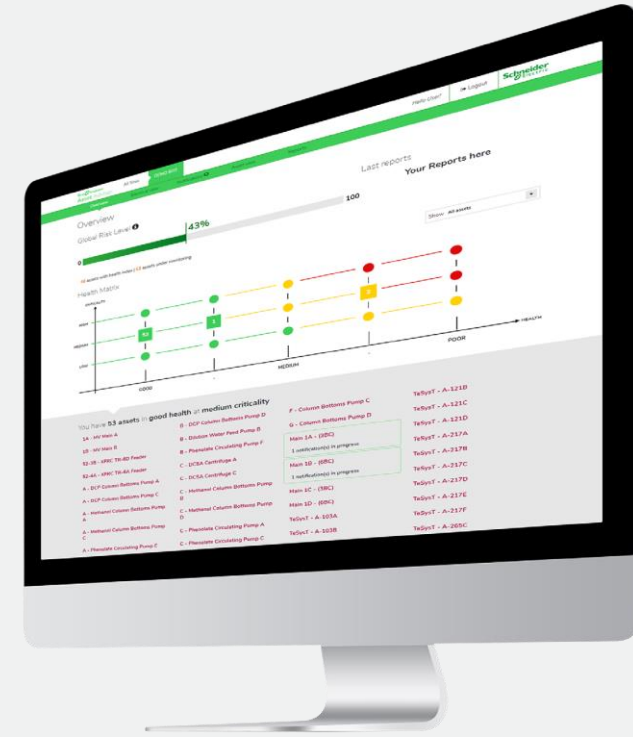
To learn about the full value of the offers, explore these links:
EcoStruxure Asset Advisor and EcoCare.

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Offset Residual Emissions

Balance emissions that cannot otherwise be reduced

Rely on the market's leading carbon offset advisor having advised on the purchase of 15,000,000+ MT of carbon offsets, and with 20+ years experience navigating global markets on behalf of clients

- **Comprehensive Market Access** to 100,000,000+ MT of global project technologies with varying certifications, co-benefits, geographies, and pricing

- **Offset Strategy Development** to build organization consensus on carbon offset purchasing criteria, including potential internal price on carbon, alignment with reporting frameworks, and determining implications on net zero commitment

- **Competitive Solicitation and Project Management** with RFP results tracked and managed through advanced visualization tools

- **Consistent External Messaging** to establish credibility and ensure alignment with industry best practices and guidelines

To learn about the full value of the offer, click <u>here</u>.

Life Is On | Schneider Electric

Delivered by:

Digital Energy
Decarbonization Office

Life Is On | **Schneider** **Electric**