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CARBON AUDITING OVERVIEW
CAP OVERVIEW
ONLINE TRAINING BY KRISHNAJI PAWAR
LEED AP(BD+C),GSAS CGP,GCP,ISO 14001
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MODULE 1

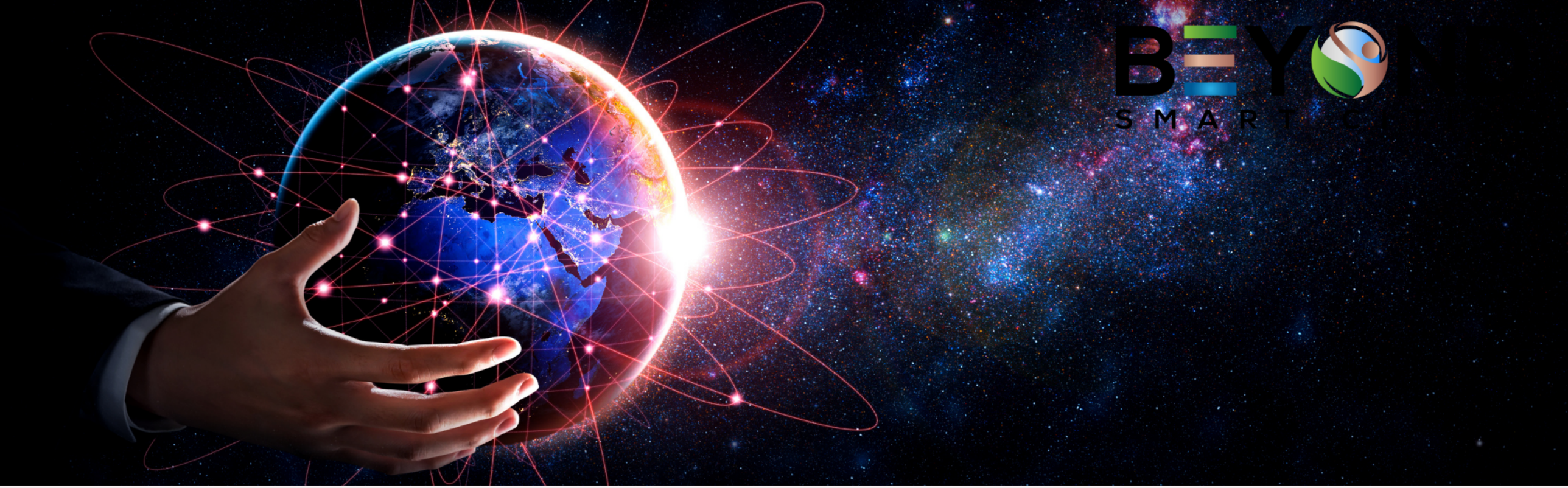
Introduction and Course Outline

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CARBON AUDITING OVERVIEW

Carbon accounting helps organizations quantify their greenhouse gas emissions, understand their climate impact, and set goals to reduce emissions, primarily due to rising CO2, methane, and fluorinated gases since 2012.

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BRIEF ABOUT ME

Krishnaji PAWAR

CEO & FOUNDER



Krishnaji Pawar is founder and CEO of Beyond Smart Cities. Before being named CEO in January 2020, Krishnaji held leadership roles at Beyond Smart Cities in both Sustainability ,Energy & Environmental Consultancy.

Specialized in developing sustainable design strategies for Green Building Certification Systems (LEED, GSAS, etc.), Energy & Water Conservation, Commissioning, Environmental Impact Assessment & Environmental Management Systems.

Currently responsible for 3,787 million square feet Green Building /Energy modeling Consulting since January 2008 in UAE, India and Qatar.

Learning Objectives

- Introduction
- Origins of Carbon Accounting
- Fundamentals of carbon accounting
- Kyoto Protocol and beyond
- Professional Certification for Carbon Auditing
- Business Applications of Corporate GHG Inventories
- Summary and Resources

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INTRODUCTION

- GHG emissions, including 82% CO2, 9% methane, 6% N2O, and 3% other fluorinated gases, have been increasing since 2012.
- Countries with high GHG emissions are improving energy efficiency.
- Legal and technical efforts are needed to reduce GHG emissions.
- Governments should synchronize laws, standards, and tools to protect the environment.
- The construction industry significantly contributes to GHG emissions.

GHG EMISSIONS AND CLIMATE CHANGE

- The Carbon Auditing Overview training program aims to provide participants with the knowledge and resources to conduct effective carbon audits.
- Corporates should adopt carbon-reducing measures and conduct carbon audits to identify carbon emissions sources.
- Energy professionals can benefit from this program, including cost avoidance, risk mitigation, competitiveness, productivity, shareholder value, community engagement, and branding.



WHAT IS CARBON ACCOUNTING?

Carbon accounting, or greenhouse gas accounting, is the process of quantifying the amount of greenhouse gases (GHGs) produced directly and indirectly from a business's or organization's activities within a set of boundaries.



CARBON ACCOUNTING OVERVIEW

- Quantifies the amount of greenhouse gases (GHGs) produced from a business's or organization's activities.
- Carbon dioxide (CO2) is the most common GHG emitted by human activities.
- All other major GHGs are given a "carbon dioxide equivalent," or CO2e.
- The GWP of a gas is determined by how much energy it will absorb over time relative to its emissions.
- Demand for robust GHG accounting is growing as investors and businesses demonstrate their commitment to decarbonization.
- The Greenhouse Gas Protocol is the most commonly used approach to calculate GHG emissions.



SCOPE 1 EMISSIONS OVERVIEW

- Direct emissions from organization-owned or controlled sources.
- Examples: manufacturing process emissions, fugitive emissions, and onsite electricity production.



SCOPE 2 EMISSIONS OVERVIEW

- Indirect emissions from electricity, steam, heating, and cooling purchases.
- 2015 GHG Protocol revision recommends location-based and market-based methodologies for Scope 2 emissions calculation.



SCOPE 3 EMISSIONS OVERVIEW

- Refers to indirect greenhouse gas emissions from non-owned or controlled sources.
- Accounts for 5.5 times more emissions than direct emissions.
- Offers opportunity for organizations to engage suppliers for global decarbonization.



CARBON ACCOUNTING IMPORTANCE

- Essential for organizations to focus emissions reduction efforts.
- Helps develop strategies and track the impact of reduction initiatives.
- Directs efforts towards efficiency improvement, renewables introduction, and offset purchase.
- Provides a quantified feedback loop for tracking if initiatives are achieving desired outcomes.



CARBON ACCOUNTING CHALLENGES

- Carbon accounting requires accurate, real-time, and historical energy data and factor sets.
- Regular updates are necessary for benchmarking performance against targets.
- Data collection and emission calculations should adhere to internationally accepted standards.
- Manual data collection and spreadsheets can lead to risk and productivity loss, especially for complex, global organizations.
- Data is often stranded in silos or spreadsheets, making it difficult to access consolidated metrics.
- Data quality is inconsistent and unreliable, increasing the likelihood of inaccurate or incomplete data.
- High time and cost of sustainability reporting are associated with manual data management.
- Ongoing sustainability performance is poorly understood, making it difficult to monitor and manage sustainability performance.





BENEFITS OF CARBON AUDIT



- Provides a comprehensive understanding of an organization's carbon emissions.
- Helps identify reduction and offset opportunities for carbon emissions.
- Enables the creation of a tailored strategy for achieving carbon reduction goals.
- Ensures reporting aligns with industry practices and regulatory requirements.
- Facilitates operational cost savings and energy bill reduction.

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BENEFITS OF CARBON AUDIT +



- Differentiates the organization from competitors by demonstrating best practices in carbon reduction and energy efficiency.
- Ensures continuous monitoring of GHG emissions for improved performance.
- Builds the organization as a sustainability leader.
- Fulfills customer requirements for sustainability credentials.
- Elevates the organization's reputation by contributing to zero carbon emissions and supporting the UK Government's Net Zero 2050 target.

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ESG REPORTING DISCLOSURE



- GHG emissions data is crucial for tracking and disclosing performance against net zero goals.
- Carbon accounting informs the "E" in ESG reporting, recognizing sustainability risk as investment risk.
- ESG reporting frameworks require quantitative or qualitative information for a score or peer-comparison benchmark.

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ESG REPORTING DISCLOSURE +



- Reporting frameworks indicate how a company's operations impact the environment and climate change's impact on value generation.
- Relevant to financial stakeholders and the general public.
- ESG reporting frameworks require disclosure of an organization's environmental impact, often including GHG emissions.
- Accountability for emissions must be as rigorous as financial accounting due to increased investor interest.

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WELCOME TO BEYOND SMART CITIES

Beyond Smart Cities is the world's 1st Green Technology Marketplace, connecting millions of Sustainability Specialists, Green Building Specialists, Energy Specialists, Commissioning Specialists, Environment Specialists, Health & Safety Specialists, Fire Safety Specialists, Climate Change Specialists & Green Products/Technology Manufacturers with independent talent around the globe.

Our mission is to build and support a global community of experts with the highest professional standards in sustainability, green building, energy, commissioning, environment, health & safety, fire safety, climate change, GHG accounting, carbon auditing, and GHG emissions management.

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