

## The ESG Planning Guide for Energy Projects

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# Preface

**D**esigning and constructing energy projects has never been more challenging and rewarding than it is today.

I should know. I've spent decades engaged in the planning and execution of major projects in the energy sector. I've managed projects in the US and overseas for a major oil & gas company, provided consulting services to hundreds of project managers and teams, trained thousands of project managers, and instructed as part of construction executive programs with leading universities. I've authored five project management books prior to this one. And I've loved every minute.

How could we not love this industry? Whether our projects are in oil & gas, power generation and distribution, or the latest green technologies, we know the importance of energy to the quality of life of everyone on the planet. And we know the satisfaction of taking a project through engineering, procurement, construction, and startup.

And here we are, leading the energy transition. Whether we're working for an oil & gas operator, a power developer, a service provider, or an energy investor, we know that our profession has become a lot more complicated. Success today requires more than turning over a facility that works as expected and meets safety, time, and cost targets. We are now also accountable for meeting the expectations of a broad group of stakeholders with an expanded view of project success that prioritizes both the environmental and social impact.

Although there are different views on the severity and rapidity of climate change, there is general agreement that the production and consumption of energy are both its cause and solution. Every player in the energy sector is now part of the energy transition, entrusted with the task of delivering on the huge capital investments and ambitious climate goals at stake. Of course, this requires metrics, and many corporations today use the ESG (environmental, social, and governance) framework to communicate strategies and measure progress.

What does all this mean for project managers and teams? How do we translate the broad goals of ESG into specific objectives? And how do we develop a project ESG plan to meet them?

This book offers a methodology to answer those questions. It provides a structured process for project managers and teams to collaborate with internal and external experts, service providers, investors, and stakeholders to develop a project ESG plan and align their activities with it.

I'm passionate about this new, important dimension of energy project management, and hope this ESG planning methodology will enable you to experience the gratification that comes from delivering your projects with a positive environmental and social impact.

Richard Westney

# Introduction

## “So, what are you going to do about ESG?”

It’s a great question, and just about everyone in the energy sector is either asking it, being asked it, or both.

ESG is a powerful concept that combines expectations for environmental (E) and social (S) benefits with those for effective governance (G), to ensure those benefits are achieved. Investors, business partners, and consumers now consider a corporation’s commitment to ESG goals as an important indicator of its current value and future success. While there is debate about the metrics to use for ESG, and how they correlate to long-term financial performance, there is general agreement that corporations should be prioritizing these overarching goals. So ESG, in some form, is here to stay.

These trends come into sharp focus in the energy sector. The energy transition is at the heart of the global initiative to address climate change, and the huge, long-term investments being made to decarbonize the environment can also create opportunities for millions of people for whom economic stability was previously impossible.

But, like all good questions, this one requires answers to more, tough questions such as:

- Who are the ESG stakeholders whose expectations must be met?
- How does a project team translate ESG expectations into specific objectives?
- What is the impact of ESG on a project’s scope of work, cost, and resource requirements?
- How does a team develop a project ESG plan to meet these objectives?

For generations, project success has been defined as meeting safety, cost, and schedule objectives, and ensuring the facility operates as intended. Long-standing project management methods provided the tools to ensure those objectives were met. Now that project team accountability has expanded to include environmental and social objectives, so too must project management methods be expanded accordingly.

How can ESG be managed with the same discipline, structure, and consistency that characterize the way project teams manage safety, cost, schedule, and quality? The answer lies in doing what we do best: breaking down the problem into manageable chunks, setting up a process everyone can follow, working together to develop a plan to which all players can commit, and then executing that plan.

This Guide is a methodology for doing exactly that. It is a workbook, filled with predefined worksheets to be completed for each project. It provides a structure for planning workshops to address each aspect of an ESG plan. In addition to its role for project teams, this Guide can also be used by executives, investors, lenders, or government agencies as part of due diligence to ensure plans are in place to meet or exceed ESG requirements and expectations.

## Types of Energy Transition Projects

Virtually all energy projects today are, in some way, part of the energy transition, i.e., initiatives to mitigate the impact of energy production and consumption on the global ecosystem. Some projects, such as large-scale installations of wind and solar, are expansions of renewable/green energy technologies, while others, such as carbon capture, utilization, and sequestration, enable



the decarbonization of hydrocarbon-based energy sources. Types of energy transition projects for which this Guide is intended are listed in Table 1.

**Energy Transition Project Types**  
**Common goal: Decarbonize the energy sector**

Not exhaustive

- **Renewable/green energy production** – these projects generate power, with zero or minimal emissions, from a naturally renewable source. Examples include onshore and offshore wind, solar, hydropower, biofuels, geothermal, and hydrokinetic.
- **Clean energy production** – these projects generate power, with zero or minimal emissions, from a non-renewable source such as nuclear, or a source that has minimal carbon emissions when consumed, such as hydrogen.
- **Conventional energy production** – these projects generate power from conventional hydrocarbon sources. Most such projects must now meet higher emissions standards.
- **Decarbonization** – these projects reduce carbon emissions or remove carbon from the atmosphere. Examples of reduced emissions include new technologies for producing “green steel” or “green concrete”, or reducing emissions from wells, refineries, and LNG liquefaction and regasification facilities. Examples of facilities to remove carbon from the atmosphere include carbon capture, utilization and storage (CCUS), and direct air capture (DAC).
- **Energy source production** – these projects produce the materials and products that are processed into fuels. Examples involving hydrocarbons include facilities for onshore and offshore oil & gas production, liquefaction, and refining. Examples involving renewable/green or clean energy include mining and processing of materials used for solar cells and wind turbines.
- **Energy infrastructure** – these projects enable energy to be transported, processed and stored. Examples include pipelines, power distribution systems, marine terminals, oil & gas treating facilities, LNG regasification, and large-scale battery systems.

**Table 1.** The energy transition includes many types of projects

# The Project ESG Planning Process

This Guide presents a Project ESG Planning Process designed to foster a collaborative process that results in a well-thought-out plan for ensuring that a project-specific set of ESG objectives is achieved.

Having spent decades working with energy sector projects, I have seen straightforward projects fail miserably, challenging projects succeed brilliantly, and many others lurch from crisis to crisis until they finally achieve startup. Of all the lessons learned from those hundreds of projects, one key success factor stands out: **critical thinking**.

*Critical thinking is knowing the right questions to ask, when and of whom to ask them, and how to judge the validity of the answers received.*

The Project ESG Planning Process is designed to facilitate the critical thinking essential to preparing the Project ESG Plan. Critical thinking is most effective when thought-provoking questions are discussed in a collaborative, diverse workshop setting. Project planning works best when all the participants are involved and, of course, when their participation in the planning process builds trust as well as alignment on the priorities and path forward.

The Project ESG Planning Process is focused on planning and conducting planning workshops. It provides targeted critical thinking questions around each aspect of ESG. The answers formulated serve to lay the foundation for the Project ESG Plan.

The Project ESG Planning Process for an energy project is shown schematically in Figure 1.

### The Energy Project ESG Planning Process



**Figure 1.** The Project ESG Planning Process has five stages

## How to Use the Project ESG Planning Guide

The Project ESG Planning Guide is structured to provide guidance and tools at each stage of the Project ESG Planning Process, as shown in Figure 2.

### Using the Project ESG Planning Guide



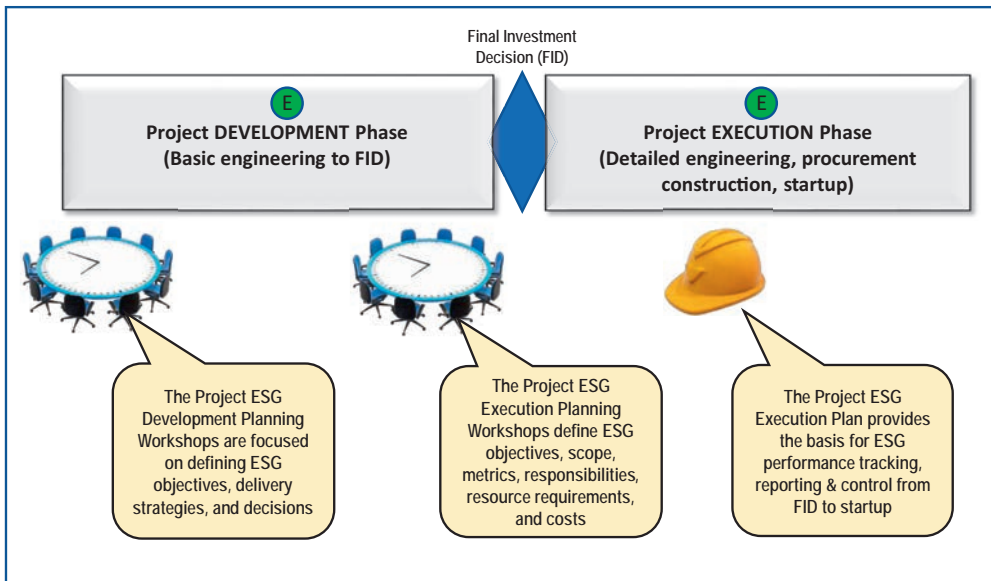
**Figure 2.** The Project ESG Planning Guide is mapped to the ESG Planning Process

- **PART I:** Introduces project stakeholders, managers, and teams to the Project ESG Planning Taxonomy and provides guidance for those who will be planning and leading the ESG Planning Workshops
- **PART II:** Provides a structured process for developing the plan to meet environmental goals
- **PART III:** Provides a structured process for developing the plan to meet social goals
- **PART IV:** Provides a structured process for developing the plan to meet governance goals
- **PART V:** Provides guidance on compiling the results of the planning workshops and developing the Project ESG Plan

## Project ESG Planning requires collaborative planning in a workshop setting

Having established that the role of energy transition projects is improving people's lives by improving their ecological and social environments, we must now consider how project managers and teams can set ESG objectives, make ESG decisions, and develop ESG development and execution plans. The answer is simply this: ESG should be planned the same way we plan to meet other project objectives. This process is illustrated in Figure 4.

### Mapping Project ESG Planning to Development & Execution Phases



**Figure 4.** Project ESG Planning is accomplished through collaborative workshops at the start and end of the Project Development Phase

Note that two types of Project ESG Planning Workshops are described.

- *Project ESG Development Planning Workshops* are held at the start of the Development phase. This is when every aspect of the project is being scoped out and progressively defined. Discussions focus on what must be done in the context of overall project development to make key decisions as to exactly how the project's objectives will meet corporate and public environmental and social energy transition goals. Cross-functional, collaborative workshops focus on what must be done to define the project's objectives, scope, engineering, plans, and cost estimates to the level of completeness required for confidence in the final investment decision. The result is a Project ESG Development Plan that will be used to guide the project team and service providers' work during the Development phase.
- *Project ESG Execution Planning Workshops* are held shortly before the Final Investment Decision (FID) that marks the end of the Development phase and (assuming funding is approved) the start of the Execution phase. Cross-functional, collaborative workshops focus on agreeing on the project's ESG objectives, and the financial and human

The Project ESG GOAL SETTING Worksheet

Objective E1: Improve the *atmospheric* environment  
Planning Pathway E1a: REDUCE GREENHOUSE GAS (GHG) EMISSIONS



Planning Question E1a1: *What are the corporate GHG emissions standards the project must meet?*

| Required tasks or deliverables | Issues to be resolved |
|--------------------------------|-----------------------|
|                                |                       |
|                                |                       |
|                                |                       |
|                                |                       |