

Session 7: Integrating Renewable Energy on a Federal Campus/Large Installation



Army Office of Energy Initiatives Project Development

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Army Office of Energy Initiatives
August 10, 2016



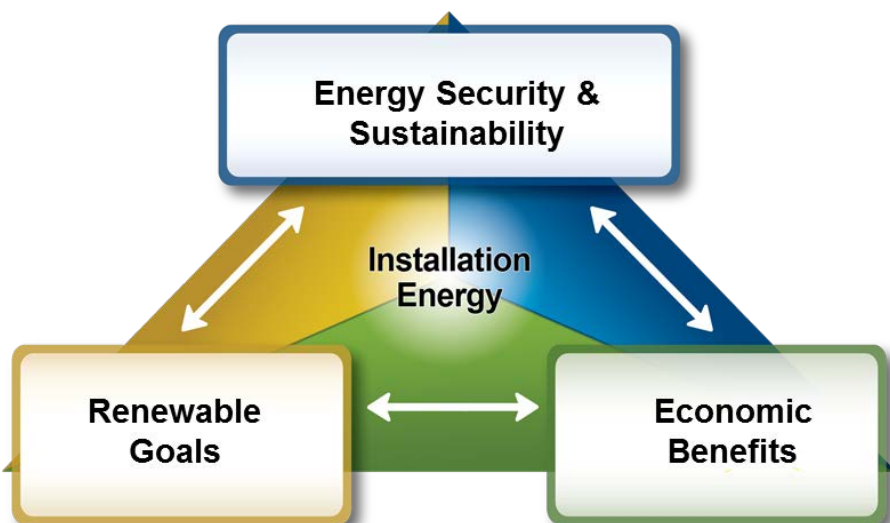
Agenda



- Army Office of Energy Initiatives (OEI) Overview
- OEI Projects
- Iterative Project Development
- Conceptual Model Case Study
Assessment Questions Parts 1,2 & 3
- Go/No-Go Decision
- Iterative Project Development Part 2
- Summary



OEI Overview



SecArmy Directive

“The OEI will serve as the Army’s central management office for the development, implementation and oversight of all **privately financed, large-scale** renewable and alternative energy projects”

Guiding Principles

- Priced at or **below grid parity**
- On/near an installation
- Brings some form of **energy security enhancement**

Challenge

Develop projects that **attract private financing** in accordance with market conditions and **balance all three drivers**



OEI Projects



Installation Project Status:
Operations
Construction
Contracts and Agreements
Project Assessment & Validation

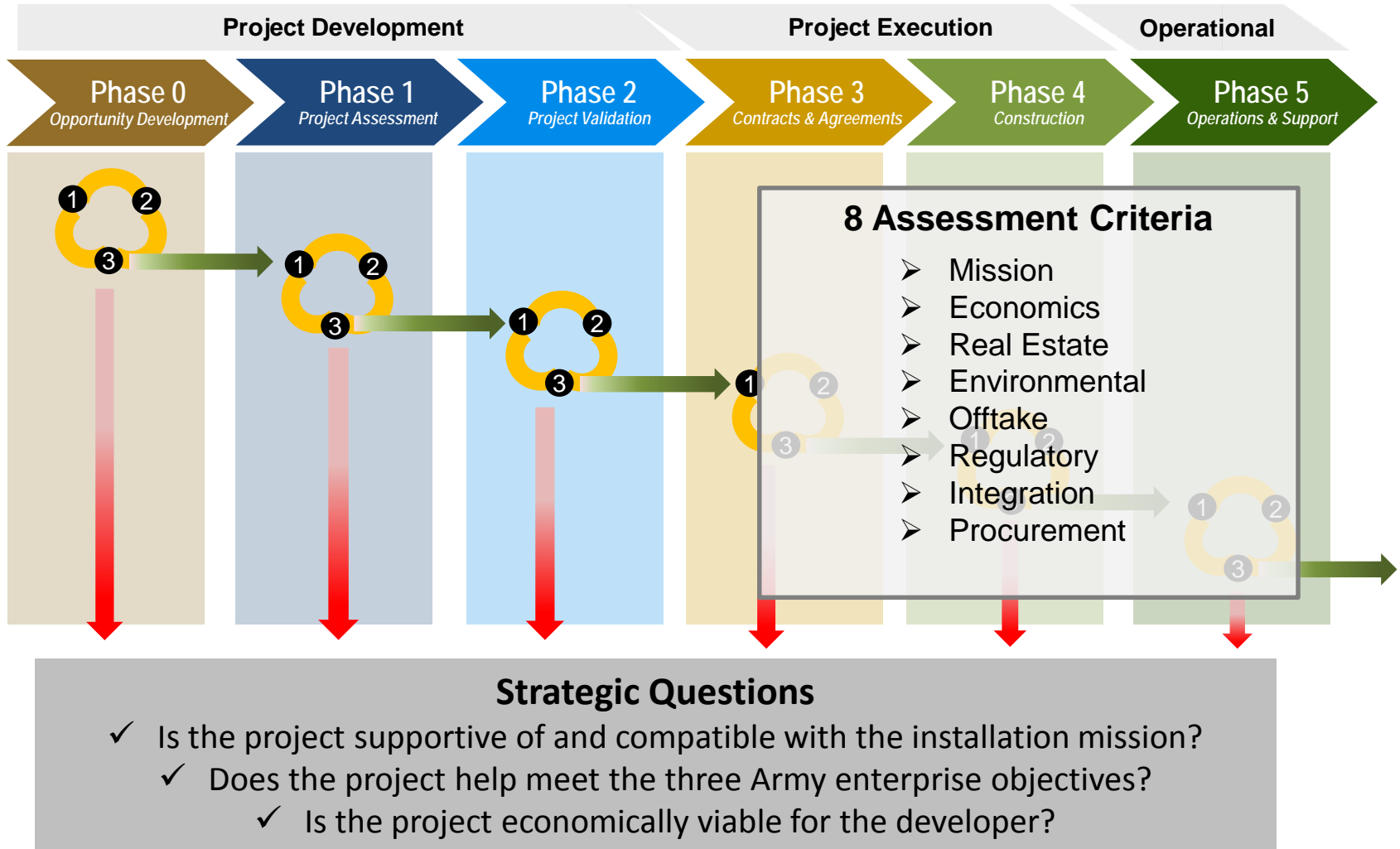


*Ft. Benning: Operational, expect receipt of final required contract documents

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Iterative Project Development



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Project Case Study Assessment Questions

Part 1: Mission & Real Estate



Mission

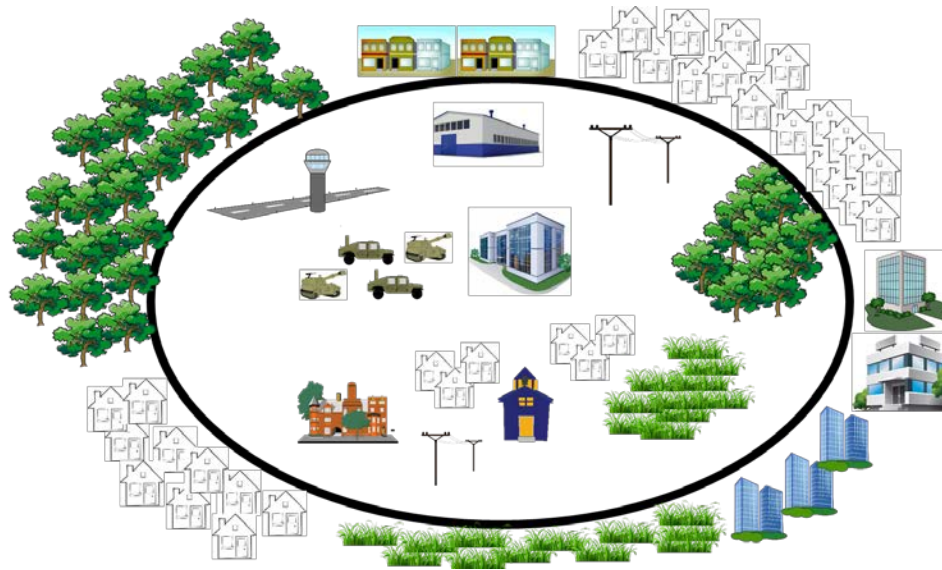
Is the project compatible with installation mission?

Are there mission de-conflict issues?

What are installation energy and energy security requirements?

How is the installation powered during normal and emergency operations?

Conceptual Model



What is possible?



Real Estate

What are the potential sites for the project?

Is the land available for energy development?

Is the land suitable for energy development?

What is the estimated land value?

Is ownership/control including jurisdiction and annexation understood?

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Project Case Study Assessment Questions

Part 2: Regulatory, Integration & Offtake



Regulatory

What are the state emissions and permitting requirements?

What are state PPA regulations? What are the ISO/RTO regulations?

Integration

What are interconnection and net metering limits?

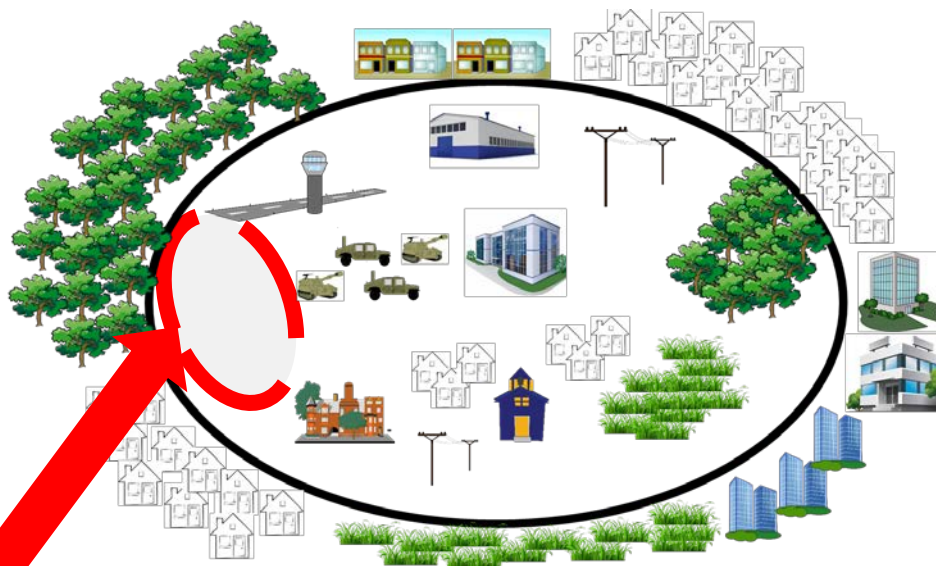
What are potential requirements for smart grid and energy storage?

What data needs to be gathered on transmission and distribution lines to identify if potential upgrades needed?

Offtake

Will the installation consume all the electricity or are other offtakers needed (export)?

If exporting, what interconnection studies, permits and agreements are required?



Potential Site

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Project Case Study Assessment Questions

Part 3: Economics, Environmental & Procurement



Economics

What does the utility tariff analysis reveal?

What does the projected base case look like?

What are the potential rent revenues or in kind considerations?

What is the projected cost of power from the project?

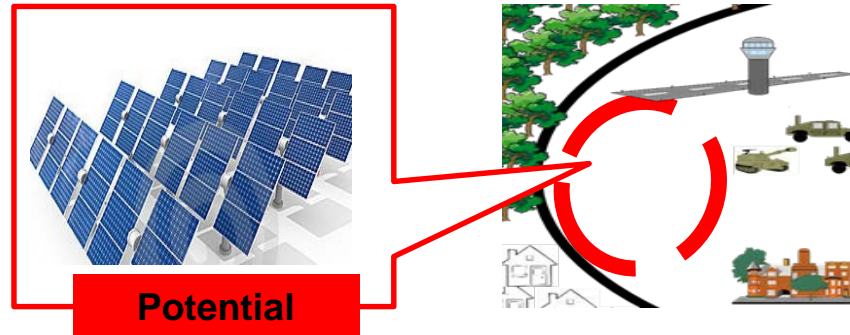
What is the outcome of preliminary business case and financial analyses (total NPV)?

Environmental

Are any environmental studies needed?

What are National Environmental Policy Act (NEPA) contracting, scheduling and costing issues

What is the impact of historic use of property and possible environmental contamination?



Procurement

What are existing contracts for utilities and real estate?

What are available authorities and business models?

What is the projected procurement timeline?



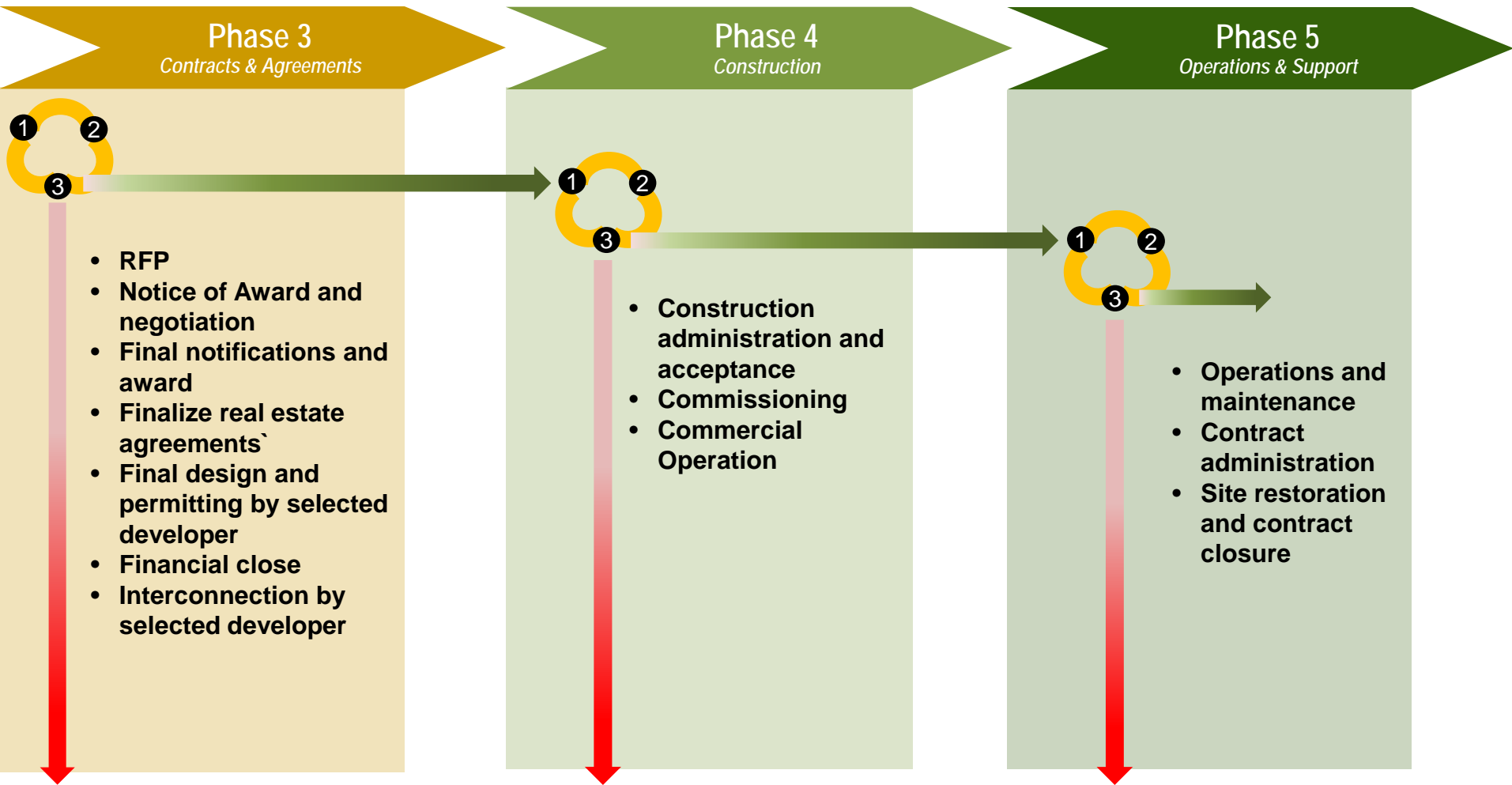
Go/No-Go Decision



Do we have a viable project?



Iterative Project Development



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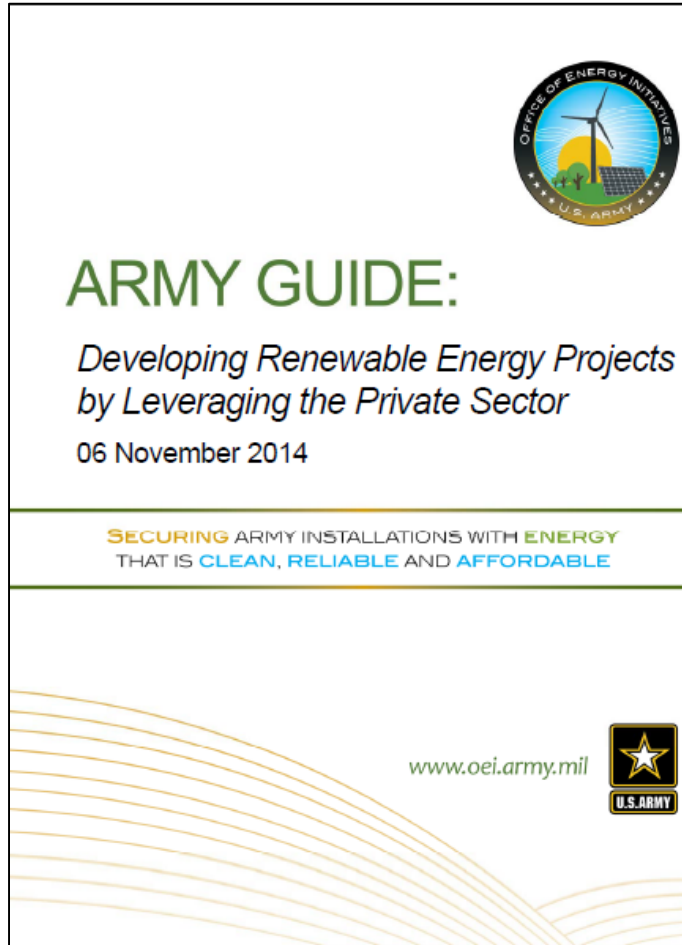
Summary



- Mission needs, Army strategy and OEI guiding principles shape projects
- OEI follows a 5 phase, iterative project development process
- Project teams ask specific questions — tied to 8 assessment criteria — to guide project development
- Long range strategic perspective and process discipline help ensure appropriate due diligence and facilitate project success



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Backup



Quiz Questions



1. T/F. OEI evaluates 8 risk criteria to guide project development. (Answer: T)
2. Which of the following is not one of the 8 risk criteria
 - a. Mission
 - b. Procurement
 - c. BRAC
 - d. Economics
 - e. Environmental(Answer: c. BRAC)