

# Session 2: High Impact Projects: Renewable Energy Success Stories and Lessons Learned



## Army Office of Energy Initiatives Fort Hood, TX Hybrid Project

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Army Office of Energy Initiatives  
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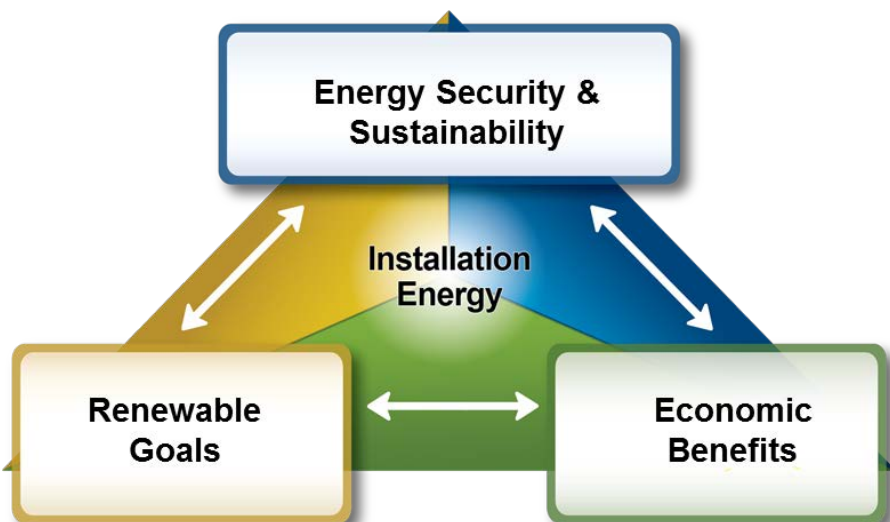
# Agenda



- Army Office of Energy Initiatives (OEI) Overview
- OEI Projects
- Case Study: Fort Hood, TX
- Fort Hood Strategic Contribution
- Lessons Learned
- 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** IAW 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

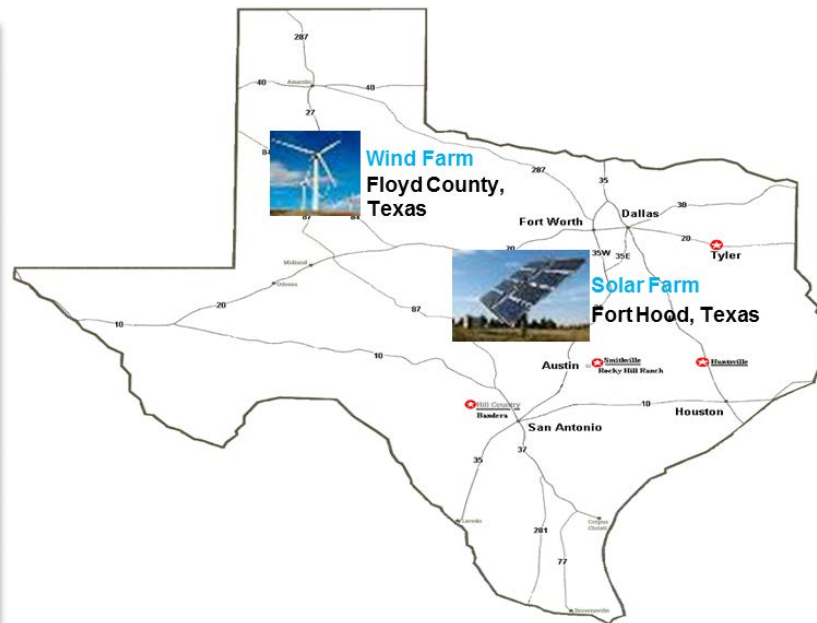
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# Case Study: Fort Hood, TX



|                                  |  |
|----------------------------------|--|
| <b>Technology</b>                | Hybrid – solar PV, wind                      |
| <b>Size</b>                      | 15 MW AC onsite solar; 50 MW AC offsite wind |
| <b>Project Phase</b>             | Phase 4 – Construction                       |
| <b>Deal Type</b>                 | RESA, Lease                                  |
| <b>Real Estate Partner</b>       | USACE – Fort Worth                           |
| <b>Procurement Partner</b>       | Defense Logistics Agency - Energy            |
| <b>Baseload Demand</b>           | 31 MW  |
| <b>Average Demand</b>            | 52 MW  |
| <b>Peak Demand</b>               | 93 MW  |
| <b>Contract Award</b>            | 15 Jan 2016                                  |
| <b>Commercial Operation Date</b> | Apr 2017 (expected)                          |





# Fort Hood Strategic Contribution



- ✓ For solar, microgrid capable to ensure operation with other generation sources/storage
- ✓ Some on-site generation
- ✓ Distributed generation
- ✓ Low O&M
- ✓ Few moving parts
- ✓ No refueling



- ✓ 2.6% toward NDAA goal
- ✓ 6.5% toward Army's 1GW goal
- ✓ 3% toward Energy Policy Act 2005 Goal

- ✓ \$189M cost avoidance over 30 year term

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# Lessons Learned



- Use off-site economics to support on-site security enhancements
- Recognize off-site NEPA requirements
- Specify production guarantees
- Include financial RFP requirements and evaluation criteria
- Consider any “pass through” costs in BCA

**Lessons learned are documented and shared across teams**



# Summary

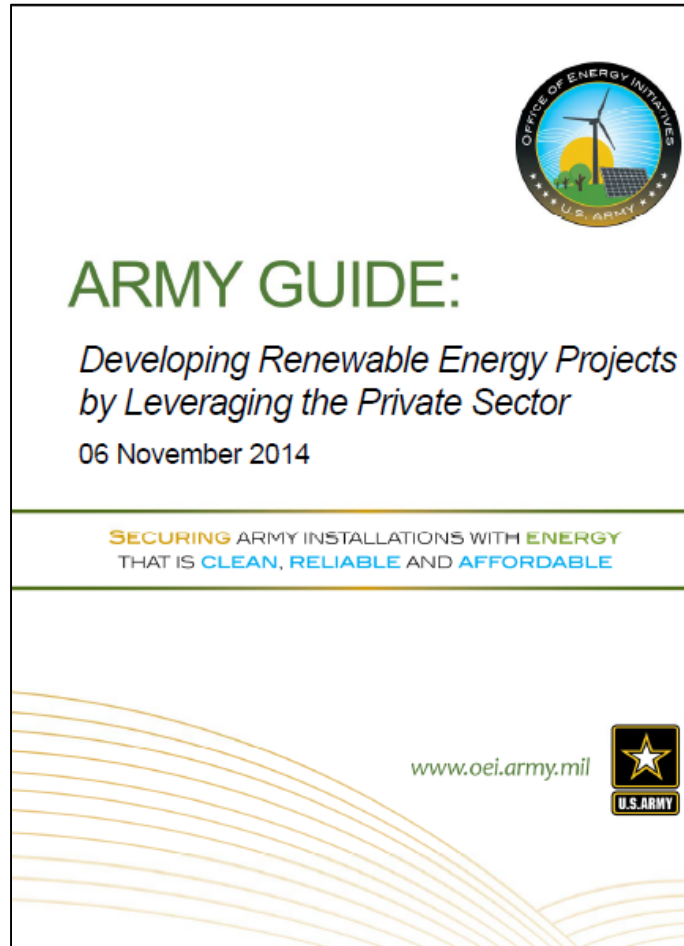


- Army strategy and OEI guiding principles drive project scope
- OEI pursues a variety of project types across the country
- Fort Hood is hybrid onsite solar/offsite wind with valuable strategic contribution
- Lessons learned are documented and shared





# OEI Contacts



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# Backup



# Quiz Questions



1. T/F: Adding the offsite wind component to the Army large-scale renewable energy Ft. Hood project is what allowed the project to be economically viable. (Answer: True)

2. What makes the world go 'round?

- a. Money
- b. National security
- c. Peace, love and understanding
- d. Environmental stewardship

(Answer: a. Money)