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# A Developer's View of Solar (PV) Projects on Federal Sites A Look at 2010 and Beyond

SUNPOWER™



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# SunPower

- >1 GW solar PV deployed
- >1000 dealers
- Diversified portfolio: roofs to power plants
- >20 MW of Federal PV Projects Installed
- 2009 revenue of \$1.5 billion
- 550 MW 2010 production
- 5,000+ Employees; 100% solar
- Publicly listed NASDAQ: SPWRA, SPWRB



**Residential**



**Commercial &  
Government**

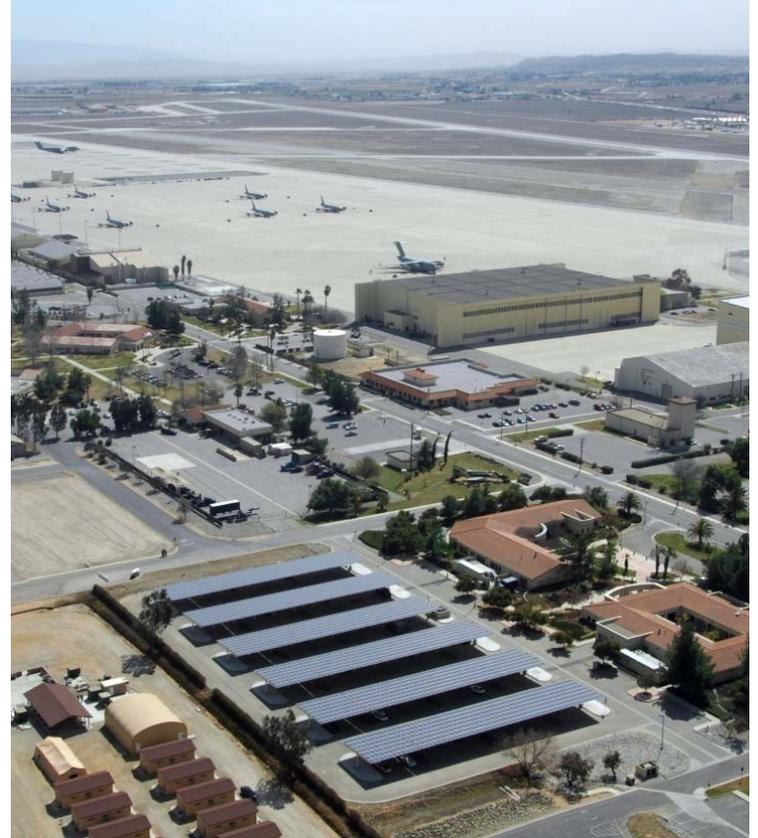


**Power Plants**



# Agenda

- Background and Market Potential
  - Market size and Drivers
- A Quick Look Back 2007-09
  - Installed Projects
- Federal Market Projections
  - ARRA Impact on 2010
- Developing a Successful RFP
  - Do's and Don'ts
- Sustaining the Momentum
  - Life after the Stimulus
- Q&A



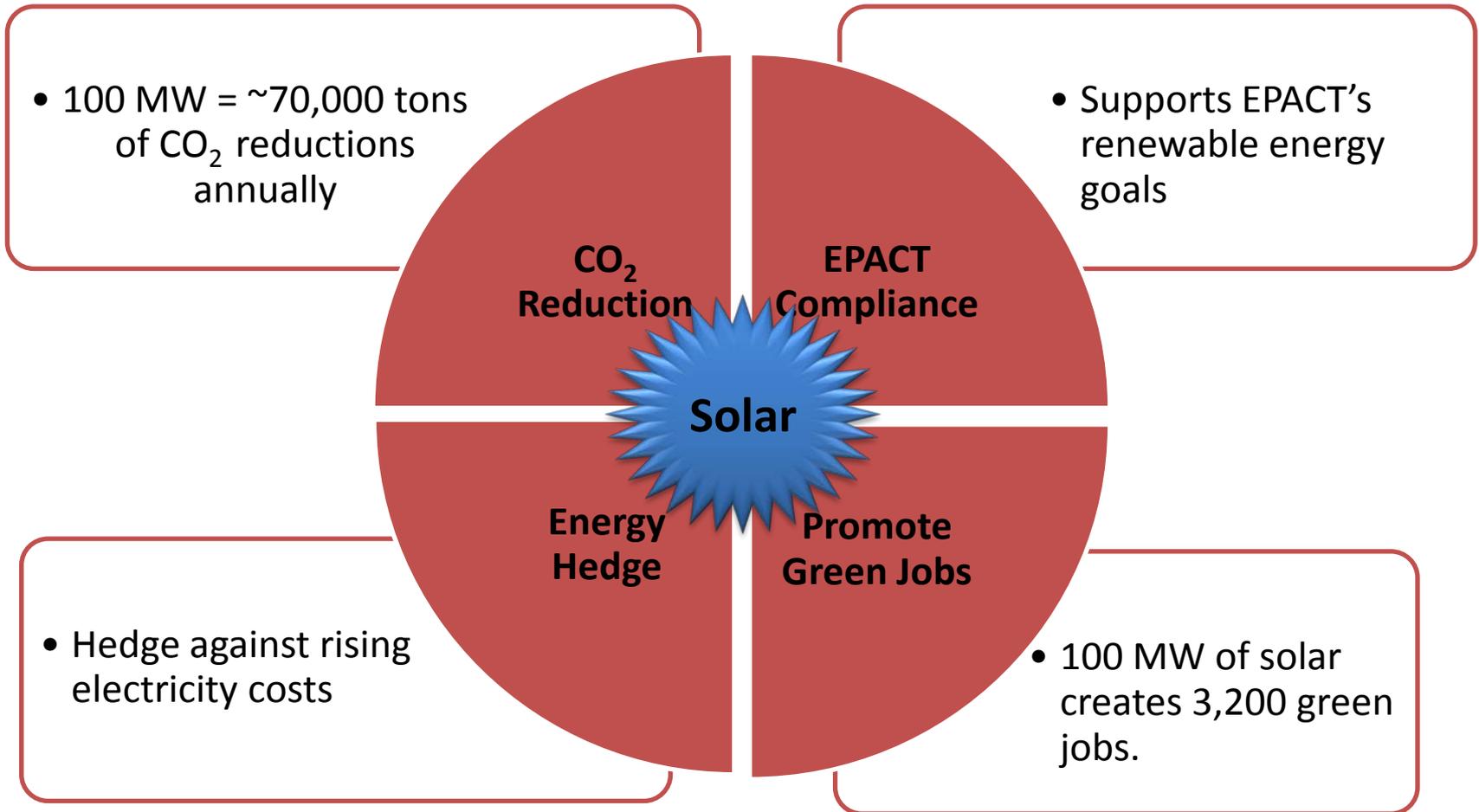
# Federal PV Market Potential

- Total Physical Potential 5-10 GW
  - DoD controls 30 Million Acres of Land
  - Federal Government owns 1.5 Billion gross sq/ft of buildings



- Today Potential 1 GW
  - Assumes Current Incentives and Utility Rates
  - Assumes Agencies meet or come close to meeting EPACKT goals
  - Assumes 20 year Contracting Authority

# The Rationale for Funding Solar



# Federal Renewable Energy Requirements

## EPACT 2005

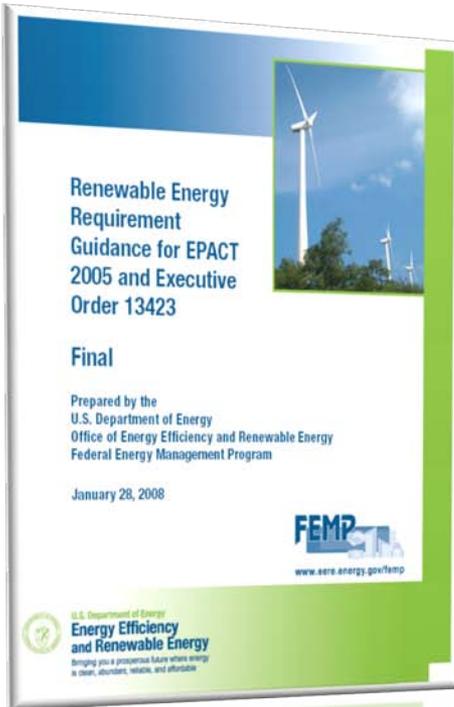
- 3% in 2007 – 2009
- **5% in 2010 – 2012**
- 7.5% in 2013+
- Onsite generation counts double towards the goals
- Ability to sell more valuable solar RECs for less expensive RECs

## EO 13423

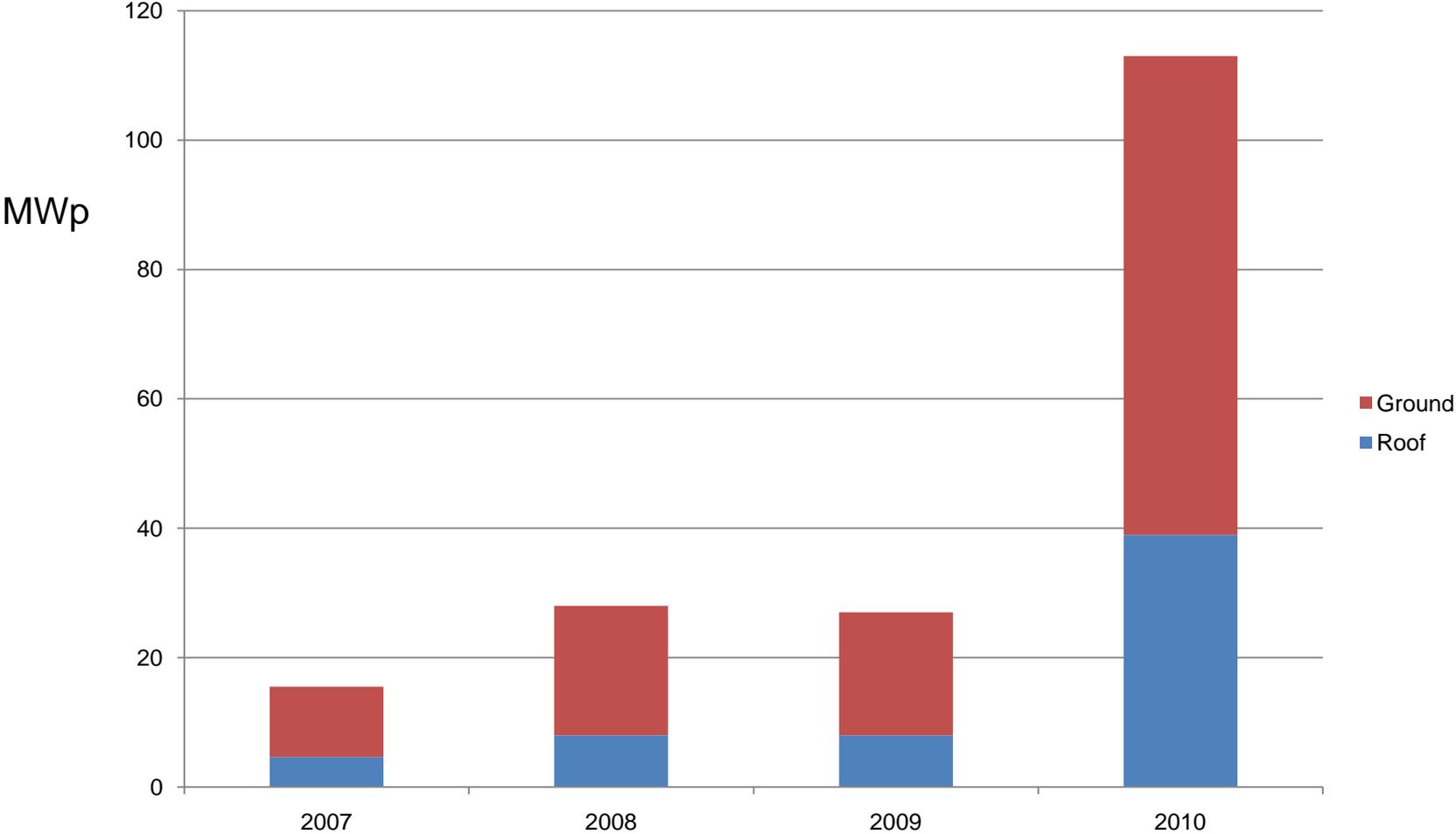
- **50% of EPACT requirement must come from new sources (post '99)**
- 1.5% in 2007 – 2009
- 2.5% in 2010 – 2012
- 3.5% in 2013+
- Agencies are encouraged to enter into long term contracts (10+ years)

## EO 13514

- Signed on Oct, 2009
- **Requires Greenhouse gas emission reductions by 2020** (compared to 2008 baseline)



# 2007-2009 Annual Totals Federal Government Solar PV



# 2010 Completed or Awarded or Contracted

## DoD (60-70MW)

• Buckley AFB	CO	1.2 MW	SATOC	Cash
• Navy East	Various	TBD	MAC	Cash
• NAVFAC SW	Various	40.0 MW	MAC	PPA
• Luke AFB	AZ	17.0 MW	Utility	Tariff
• Camp Pendleton	CA	1.0 MW	MAC	Cash
• Edwards AFB	CA	3.5 MW	RFP	PPA
• Air Force Academy /CSU	CO	TBD	Utility	Tariff
• Fort Shafter	HI	2.0 MW	8A	Cash



# 2010 Completed or Awarded or Contracted

## GSA (8-15MW)

• Denver Federal Center	CO	6.0 MW	Small Business	Cash
• Bean Center	IN	1.8 MW	Sub to Con	Cash
• Medicare	MD	1.1 MW	RFP	Cash
• Terry Sanford	NC	0.6 MW	RFP	Cash
• Chet Holifield	CA	0.7 MW	RFP	Cash
• Other Sites	Various	1.0 MW	RFP	Cash



# 2010 Completed or Awarded or Contracted

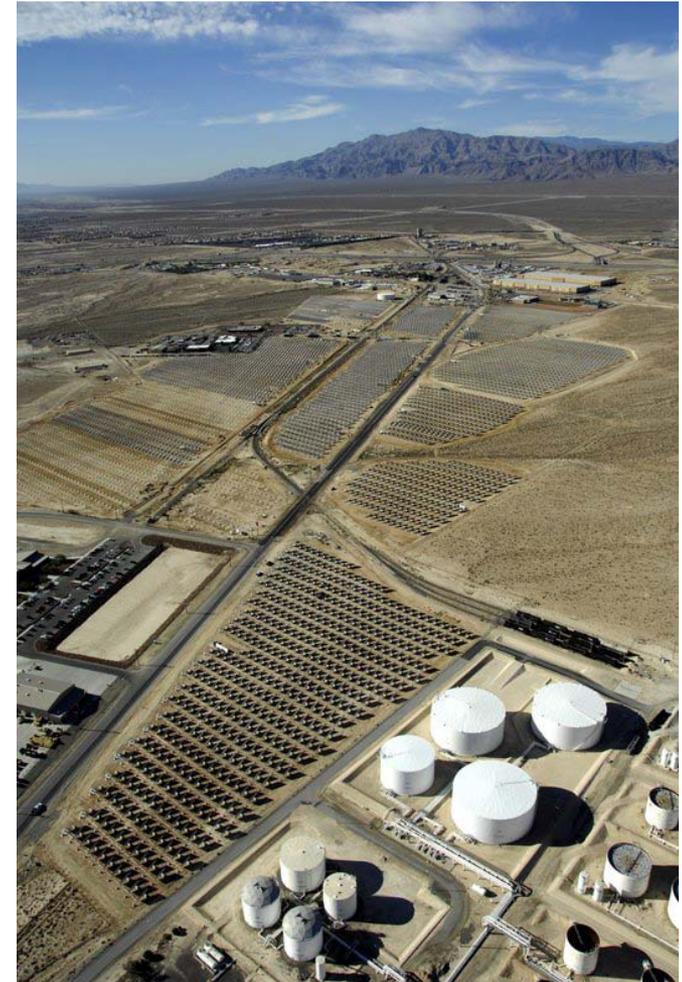
## Other (30-40MW)

• VA	Various	20-40 MW	GSA Schedule	Cash
• Federal Correctional	NJ	1.2 MW		
• NPS/FWS	Various	2.0 MW	RFP	Cash
• NREL	Colorado	2.0 MW	Sub to Con	Cash
• DESC: CA / NJ	CA/NJ	TBD	RFP	PPA



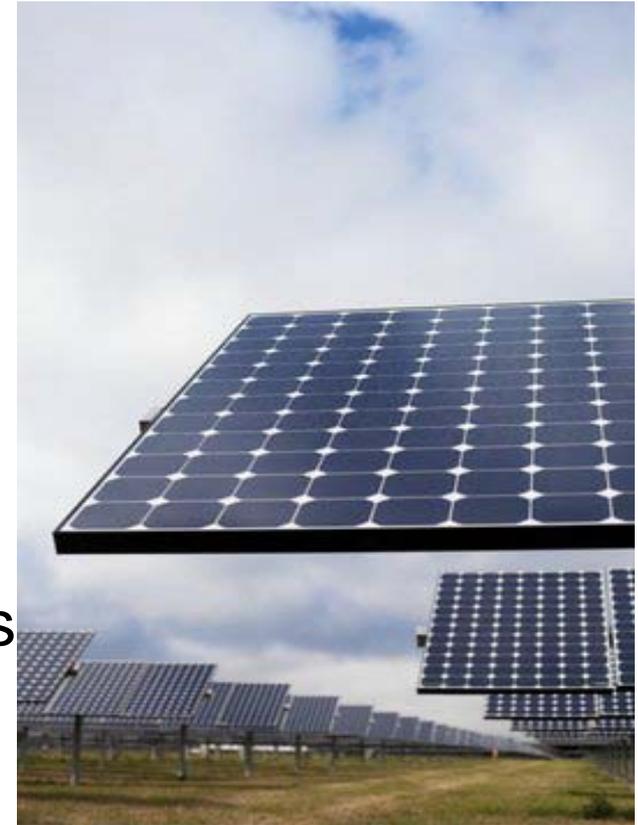
# Solar RFP “Don’ts”

- Don’t reinvent the wheel
  - Use federal experts (FEMP, PNL, CO’s, Consultants)
  - Get a reality check on your RFP
- Don’t focus on lowest price at the expense of LCOE
- Don’t underestimate the importance of quality and O&M
  - “Things” can go wrong with PV
  - Good Feasibility Studies Pay Dividends



# Solar RFP “Do’s”

- Build as large as you can
  - Lower cost per KW and Maximum kWh
- Buy proven technology and track record
  - Understand Maintenance issues
  - Require Federal experience
- Follow Domestic Sourcing Requirements
- Take Site Visit Seriously
  - Provide access and data upfront
- Align Contract Officers and Project Engineers
  - Conflicting or lack of information increases mistakes



# Continue the Momentum after the Stimulus

- Migrate to the PPA as a Key Procurement Strategy
  - No Up Front Capital (no cost to taxpayers)
  - Big Projects attract private investment
- Enhanced Use Leases
  - No Up Front Capital
  - Largest Project Potential
- Appropriations
  - ECIP/MILCON
- Support Energy Legislation
  - Need 20 year Contracting Authority
  - Drive solar adoption nationally



# Q&A