

# Capitalizing on Incentives for On-Site Renewables

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## Climate Leaders Partners Meeting

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# NREL On-site Renewable Energy Projects

## Alternative Financing Mechanisms

### Power Purchase Agreement (PPA)

- Third party developer PV (photovoltaics) projects
- Xcel Solar\*Rewards Program
- Sun Edison (developer)

### Performance Contracting

- Energy Savings Performance Contracting (ESPC)
- Ameresco Select (ESCO)

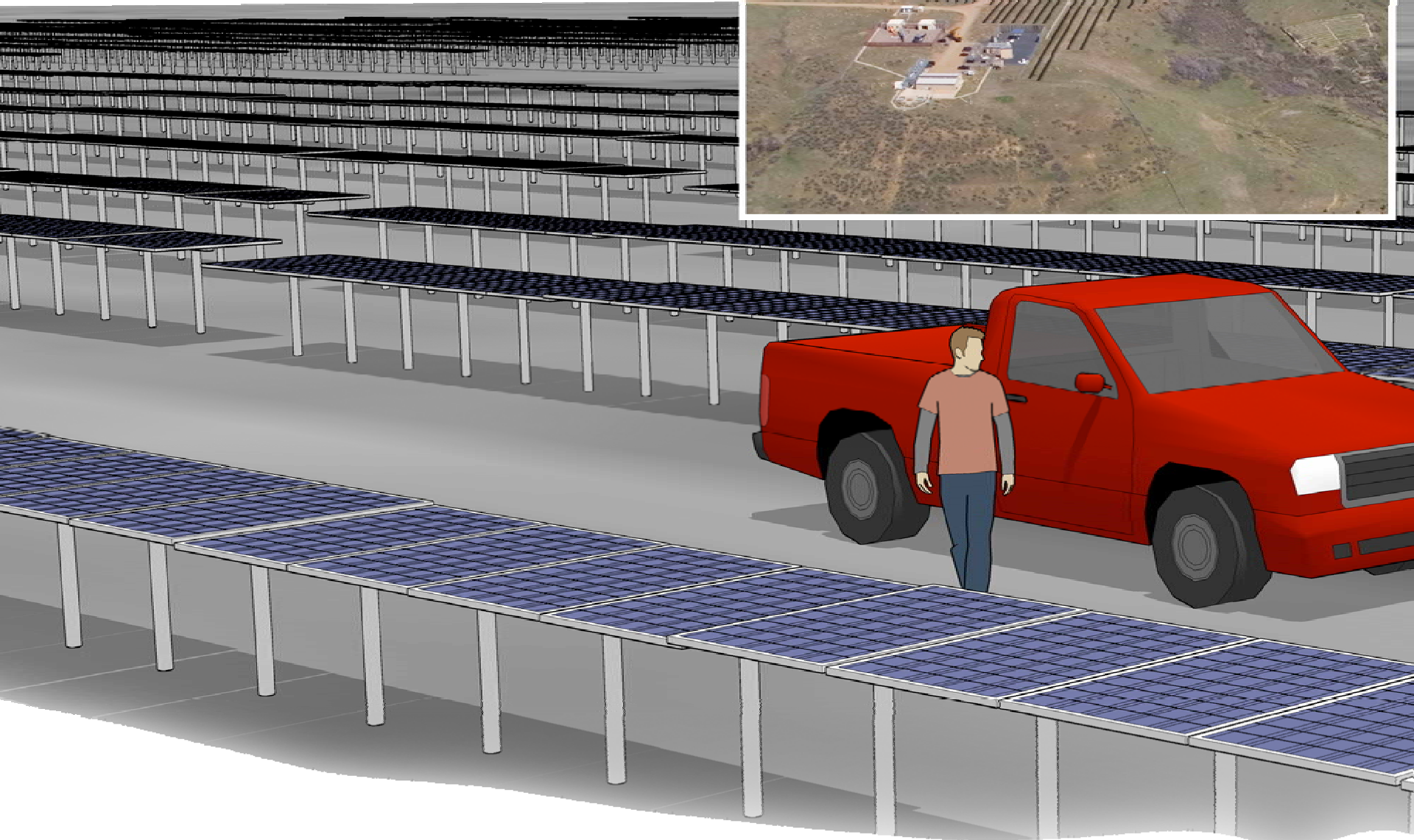
# Mesa Top PV Project

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## (Power Purchase Agreement)

- 750 kW (1,200,000 kWh) one-axis tracking PV system
  - Located on South Table Mountain on 5-6 acres
  - Grid connected (NREL “side of the meter”)
- Operation: April-May, 2008

# Mesa Top PV Project



# Power Purchase Agreement “Wiring Diagram”

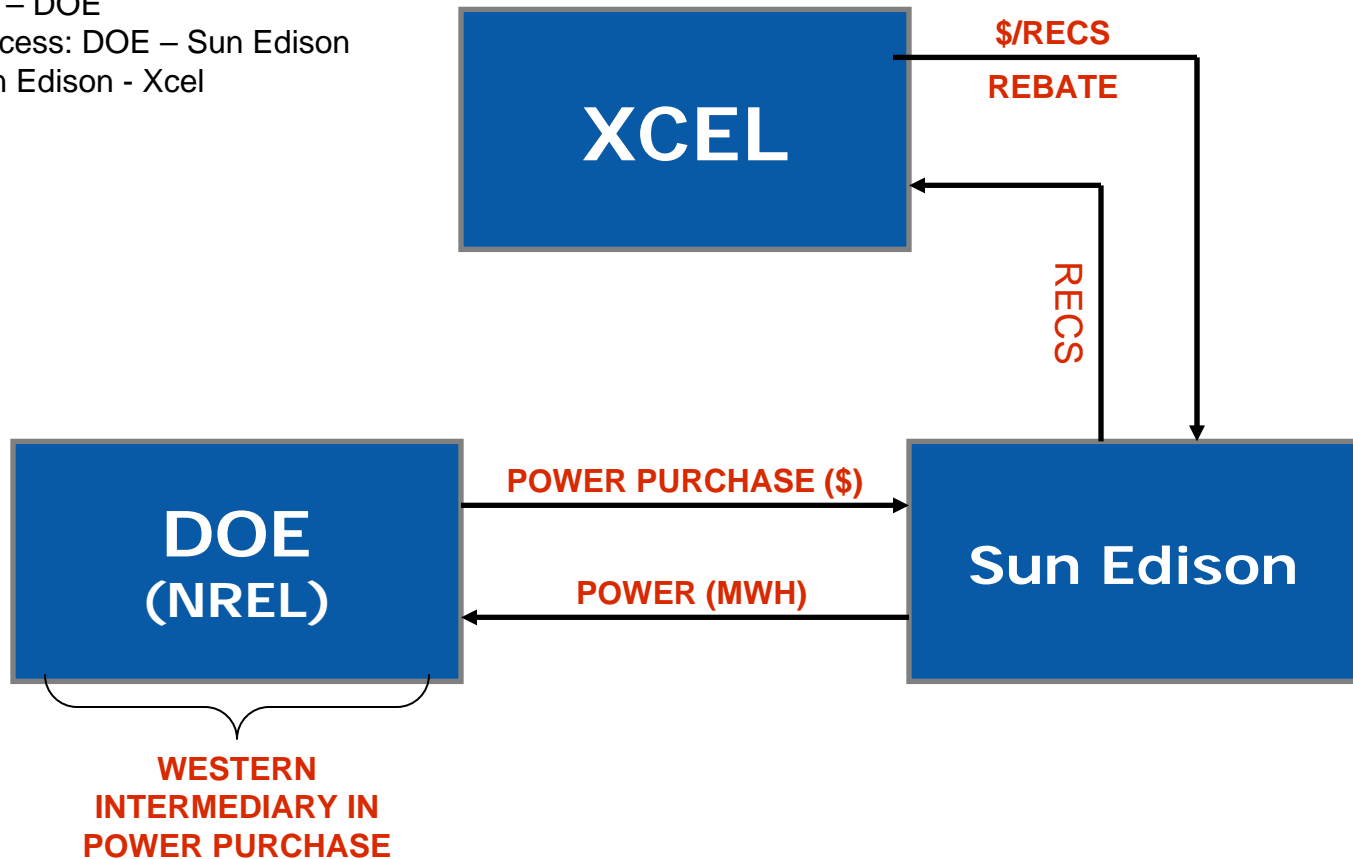
## Agreements

PPA: Western/DOE - Sun Edison

IAA: Western – DOE

Easement/Access: DOE – Sun Edison

SO-REC: Sun Edison - Xcel



# What's In It for the Parties?

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## Xcel

- Secures RECs to meet State statute (Amendment 37) renewable energy use requirements
- Cost neutral
- Corporate benefits of using renewable energy

## Third Party Developers (profitable business)

- Federal tax incentives
- Xcel Rebate and REC revenues
- Sale of electricity

## User

- Purchase of power at  $\leq$  utility electric price
- Lease/easement considerations?
- End of term ownership/early “buyout”
- Supports use of renewable energy without capital investment

# Renewable Fuel Heating Plant



# Renewable Fuel Heating Plant

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(Energy Savings Performance Contract)

- Nine (9) MMBtu/hr wood-fired combustion boiler to heat NREL South Table Mountain facilities
- Project Economics
  - ESCO Investment: \$ 3,307,200
  - Annual Savings: \$ 406,072
  - Simple Pay-back: 8.3 years
  - Delivery Order Term: 25 years



## RFHP Overview

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- RFHP base loaded with natural gas used for peaking and shoulder months
- Displaces 75% of STM campus natural gas use (direct emissions)
- ESCO carries risk of wood waste supply (25 years)
- Operation: May, 2008

## Breakout Session Speakers

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**Rick Gilliam**

**Director, Western States Policy**

**Sun Edison**

*“Capitalizing on Incentives for On-site Renewables: The Solar PPA Model”*

**Susan Innis**

**Colorado Carbon Fund**

**Program Manager**

**CO Governor’s Energy Office**

*“Capitalizing on Incentives for On-Site Renewable Energy Projects: The State Perspective”*

# Thank you!!

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