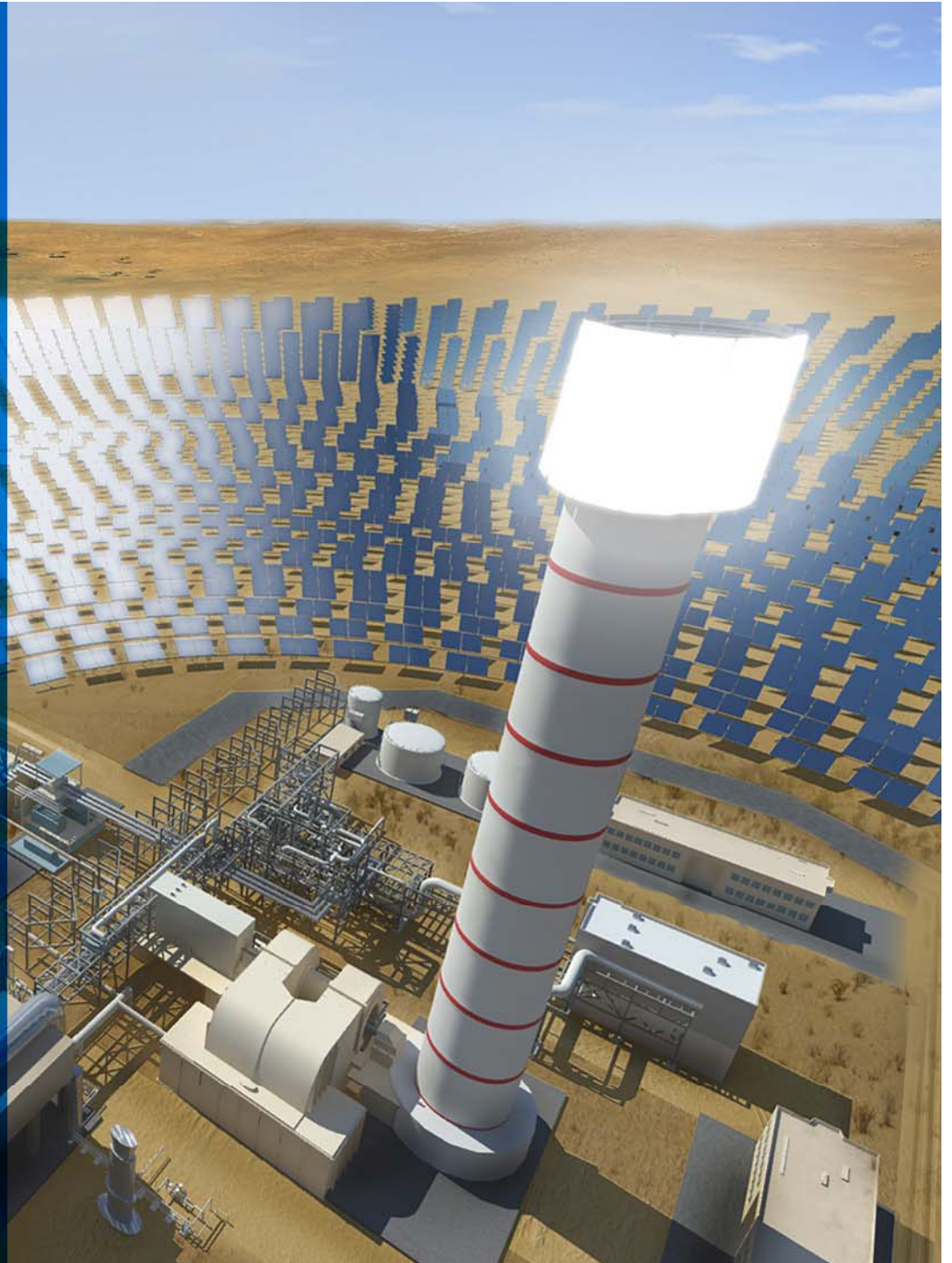


Palen SEGS

Palen Solar Holdings LLC

CEC Informational Hearing

February 20 2013



Palen Solar Holdings, LLC (PSH)



❖ Palen Solar Holdings (PSH):

- ❖ Originally a JV between Caithness Energy and BrightSource Energy.

❖ Objective of Palen Solar Holdings:

- ❖ Purchase, amend permit and assign existing PPA's 2016 CoD

❖ Recent Developments:

- ❖ Caithness sold interest in PSH to BrightSource Energy.
- ❖ BrightSource in late stage discussions to introduce a new strategic partner

Power Tower Solar Thermal Technology

HELIOSTATS



SOLAR RECEIVER
(BOILER)

POWER BLOCK



TURBINE



AIR-COOLED CONDENSER



SOLAR FIELD OPTIMIZATION
SOFTWARE & CONTROL SYSTEM

SOLAR
THERMAL
POWER
TOWER

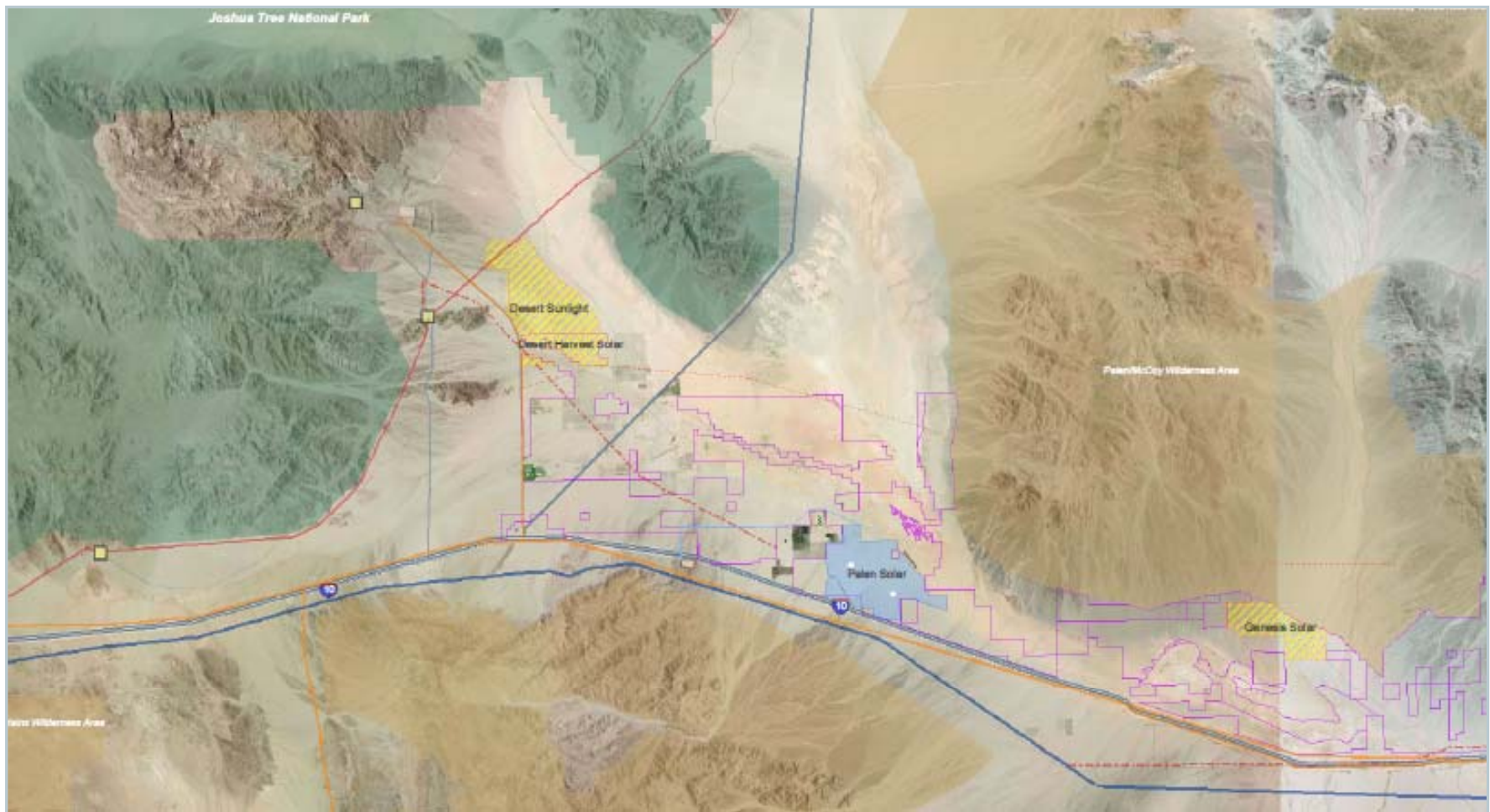


- 1) Maximum Thermal Efficiency
- 2) Grid Stability



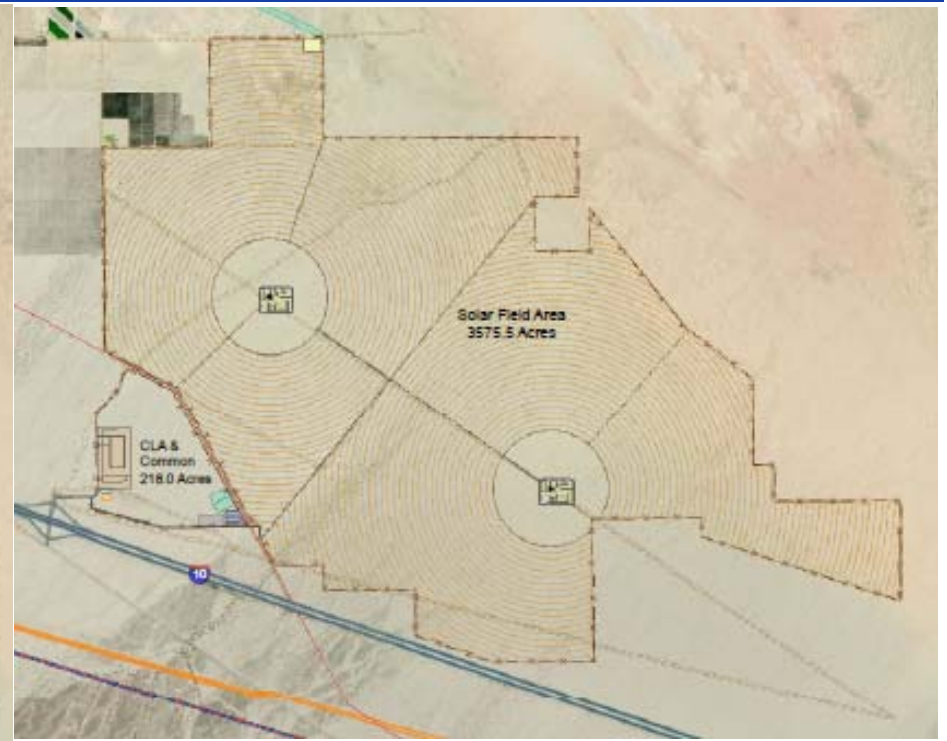
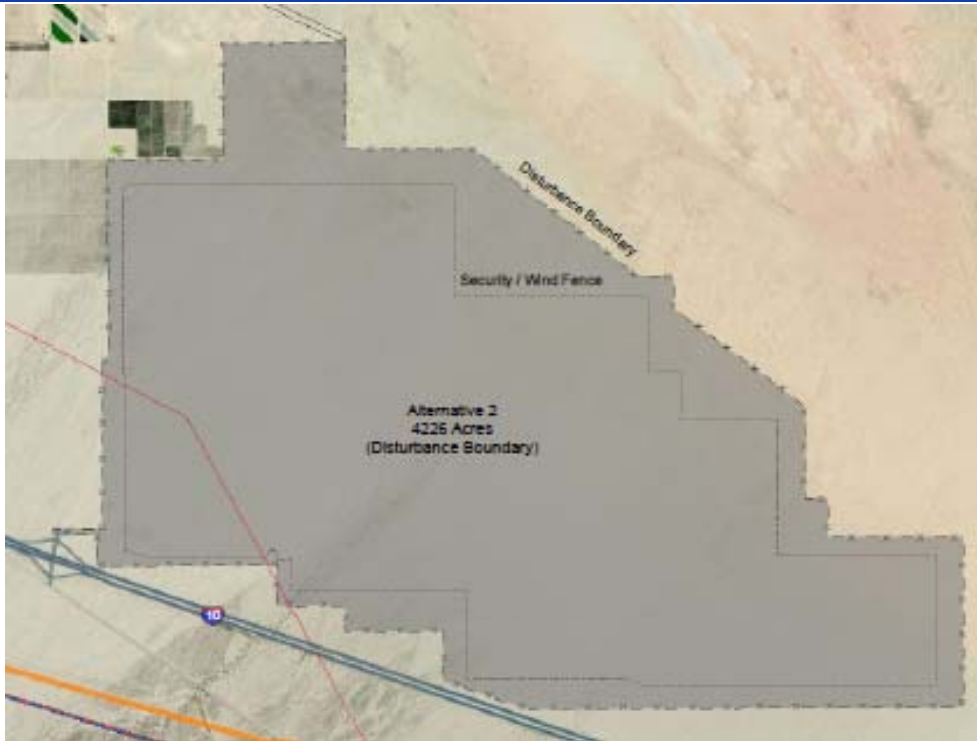
AUXILIARY GAS-FIRED BOILER

Regional Overview – Existing & Permitted Features



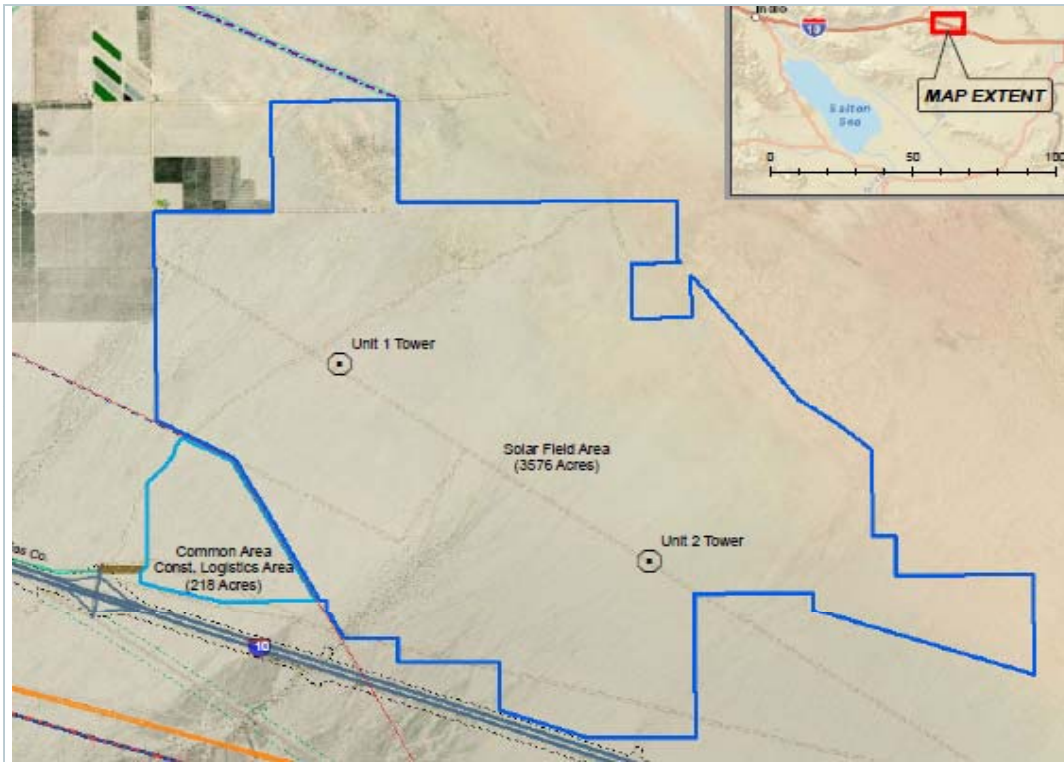
- Riverside SEZ
- Desert Sunlight
- Desert Harvest

Approved Project VS Modified Project



Component	Approved Project (PSPP)	Revised Project (PSEGS)
Output	500 MW	500 MW
Disturbance Area	4,226 acres	3,896 acres
Cut & Fill	4,500,000 cubic yards	200,000 cubic yards
Evaporation Ponds	4 (16 acres)	2 (4 acres)
Water Use (per annum)	300 AFY	200 AFY
Construction Water Use	5,750 AF	1,139 AF

Modified Project Status



POI: Red Bluff Substation
Gen-Tie: 6.5 miles

Palen SEGS Status:

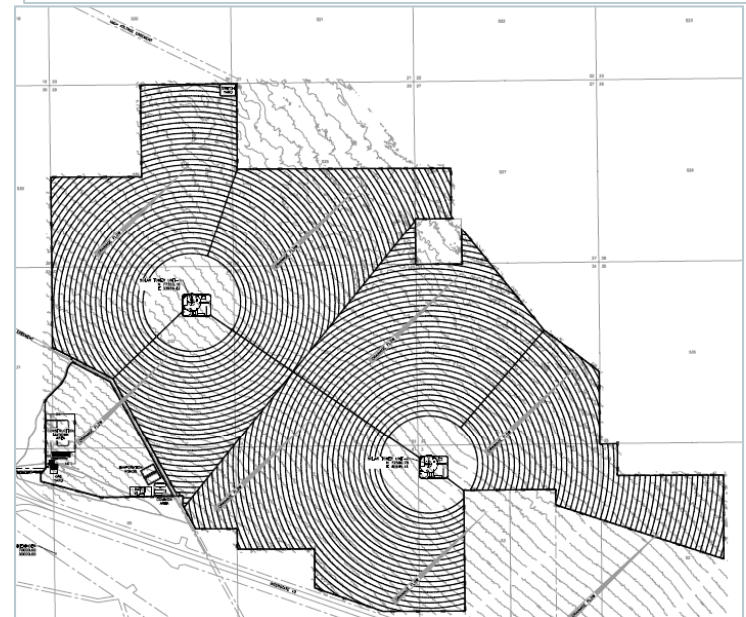
Land: BLM
I/C Status: LGIA Executed

CEC: Final Decision Issued 2010 (PSPP)
 PSH Amendment Submitted 12/12

BLM: Original FEIS published 2011
 PSH Revised PoD submitted 2/13

PPAs: PUC Approved & Assigned to project

COD: 6/2016



Site Specifications:

Heliostats	170,000
Output	Renewable Energy for 200,000 homes
JOBS:	Construction – 2,300 (at peak) Operations – ~100
Tax Benefit	~\$200 million (over 30 years)
Federal Royalty	\$200 million (over 30 years)

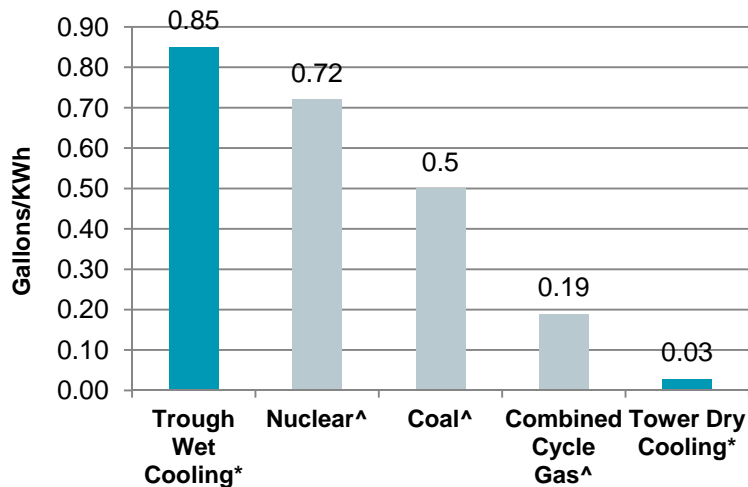
Technology Advantages of Power Tower

LAND DISTURBANCE



- Retains existing vegetation & land contours
- Eliminates use of concrete foundations
- Existing Vegetation co-exists with heliostats

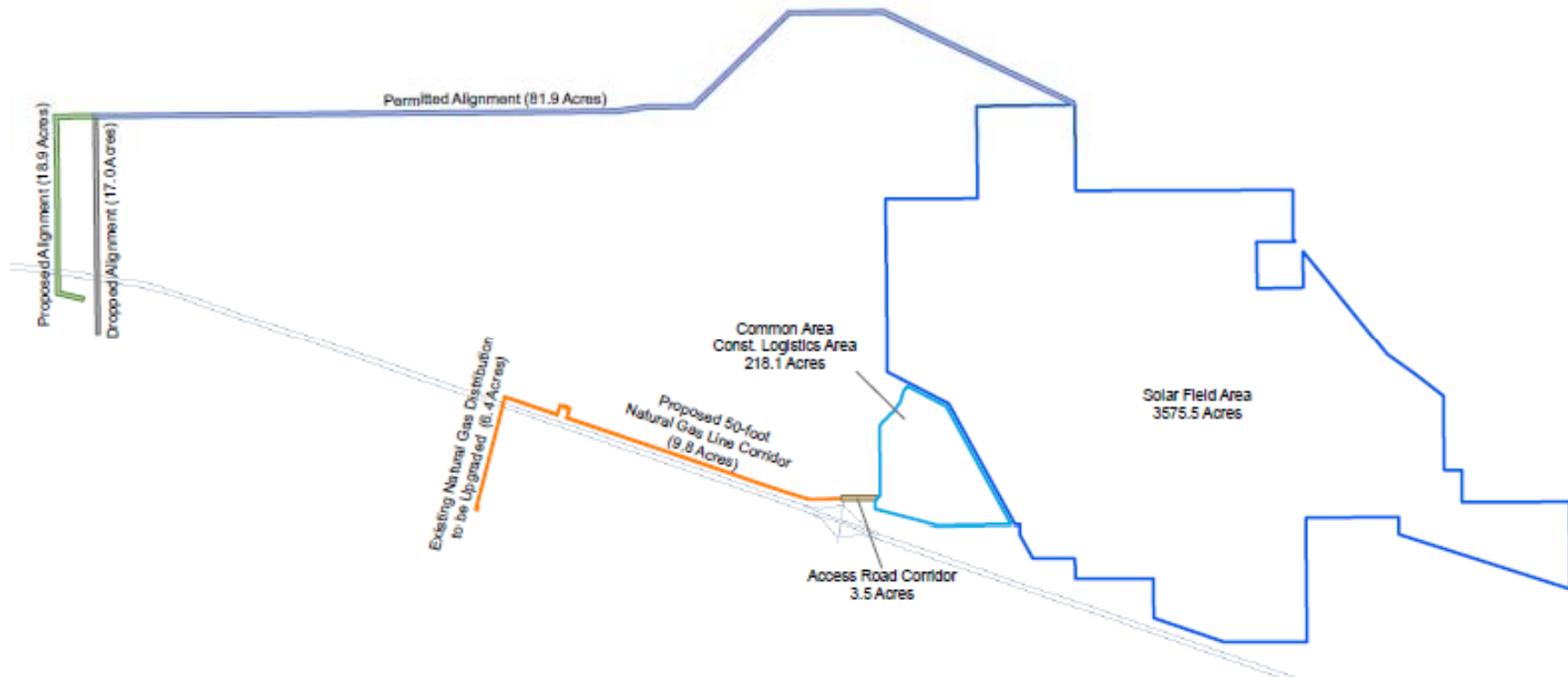
WATER USE



POWER QUALITY

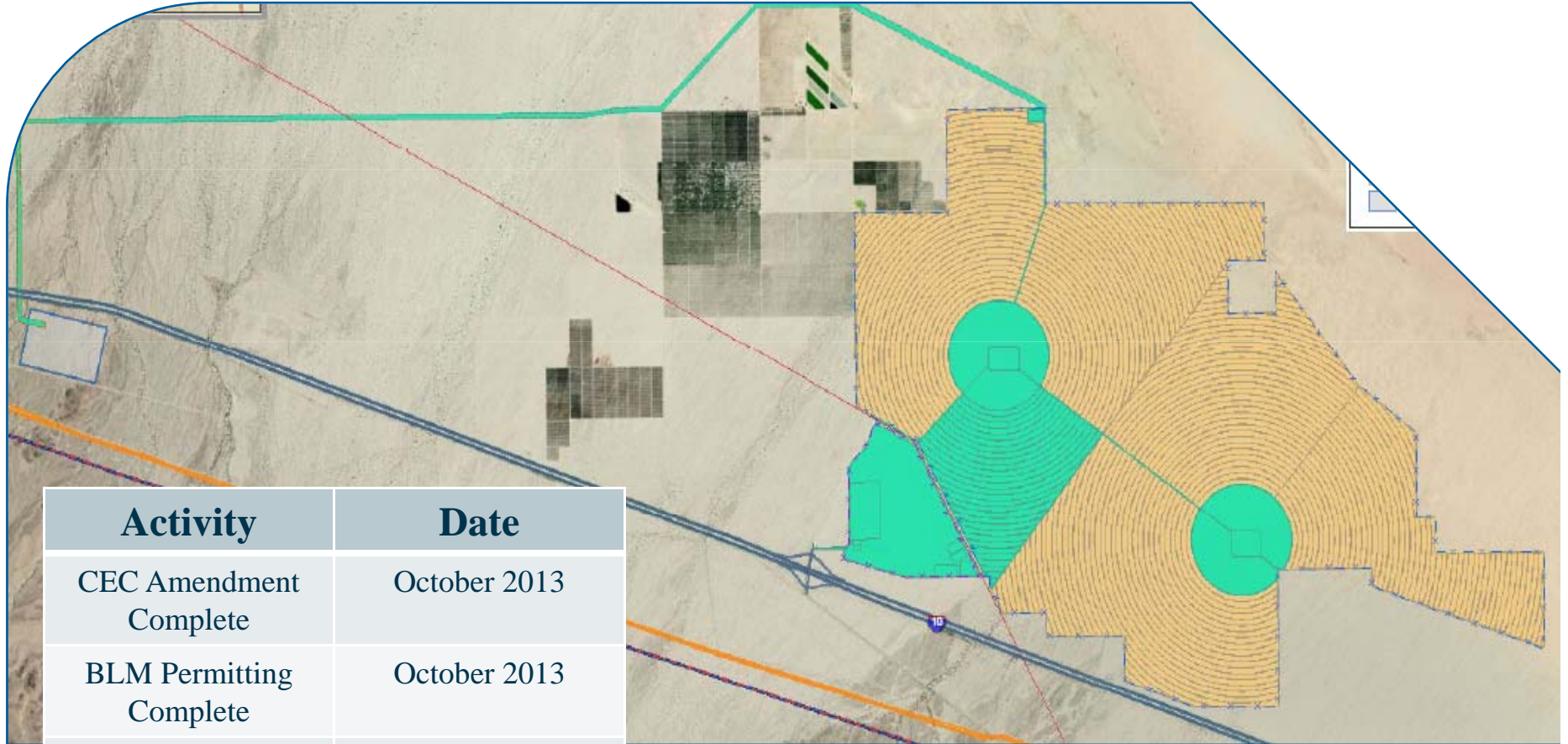
- Enhanced Grid Integration
 - Voltage support
 - Reactive Power
 - Frequency Response
- Reduced Output Variability due to Natural Gas back-up

Proposed Modifications



Component	Replacement	Potential Impact delta
Solar Field	Parabolic Trough <-> HelioStat	<ul style="list-style-type: none"> • Eliminates grading • Eliminates foundation requirements
Heat Conversion	HTF system <-> Power Tower	<ul style="list-style-type: none"> • Eliminates on-site therminol • Increases maximum height of facility
Gen-Tie	Re-route last mile into Red Bluff	<ul style="list-style-type: none"> • Minimizes cumulative impact of T-line

Phasing & Schedule



Activity	Date
CEC Amendment Complete	October 2013
BLM Permitting Complete	October 2013
Construction Commencement (Phase 1)	October 2013
Commercial Operation	June 2016
ITC Expiration	2016

Thank You

Contact Info as
Appropriate

