#### ARES Initial Unit of 5 MW<sub>AC</sub> / 1.25 MWh<sub>AC</sub> (1 track & 1 motor/generator)



# ARES Nevada Project – 50 MW / 12.5 MWh

ANIMATION: (https://youtu.be/KMRg4\_ZbqYQ)

ares

#### Motor/Generator (5 MW<sub>AC</sub> each)



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#### **Power Electronics & Equipment**

(Variable Frequency Drives, Transformers, Resistors, Balance of Plant)



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#### **ARES Supply Chain**





#### System Engineering





Project Engineering, Construction, Procurement

Construction

\* Lex Engineering and Potelco are Quanta Services, Inc. companies.



**Motor/Generator Manufacturer** 



#### Mass Car & Chain Drive Manufacturer

### ARES Siting Flexibility: U.S. Prospective Projects



					*	ÎÍ		
		Mountain -	Butte –	Near Generating Station –	Near Solar Farm –	Near Wind Farm –	Copper Mine	Coal Mine –
<b>Prospective Projects</b>	Hill - Nevada	Nevada	Arizona	Arizona	Arizona	Oregon	– Arizona	Wyoming
Elevation Gain (ft)	450	1,200	1,000	490	490	315	450	300
MW	50	400	130	125	170	150	130	50
Duration (hours)	9	24	24	10	8	4	8	5.5
MWh	450	9,600	3,120	1,250	1,360	600	1,040	275
Acres	90	885	300	231	270	178	217	80

# Siting Flexibility: *Hill - Nevada*





<b>Elevation Gain</b>	
(ft)	450
MW	50
Duration	
(hours)	9
MWh	450
Acres	90

## Siting Flexibility: Mountain - Nevada





Elevation Gain	
(ft)	1200
MW	400
Duration	
(hours)	24
MWh	9600
Acres	885

# Siting Flexibility: Butte – Arizona





<b>Elevation Gain</b>	
(ft)	1000
MW	130
Duration	
(hours)	24
MWh	3120
Acres	300

#### Siting Flexibility: Near Generating Station – Arizona







#### Siting Flexibility: Near Solar Farm – Arizona





**Elevation Gain** 

(ft)

MW

Duration

(hours)

MWh

Acres

#### Siting Flexibility: Near Wind Farm – Oregon





## Siting Flexibility: Copper Mine – Arizona





Elevation Gain	
(ft)	450
MW	130
Duration	
(hours)	8
MWh	1040
Acres	217

### Siting Flexibility: *Coal Mine – Wyoming*





(ft) MW

# Thank you





To the Thermal-Mechanical-Chemical Energy Storage Workshop organizers, including SwRI and EPRI

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