



# Mining the Sun

Nevada Mining Association Board Meeting  
April 19, 2021

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The Nature Conservancy in Nevada  
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The mission  
of The Nature Conservancy is to  
conserve the lands and waters  
on which all life depends.



We can't solve climate change without addressing energy and land use

Addressing climate change demands **rapid acceleration** of renewable energy deployment and natural climate solutions. We will **need 10 times the amount** of renewable deployment than present.





The Mining the Sun Initiative is a bright spot of climate action bridging **political**, **cultural**, and **economic** divides.

# America's greatest untapped clean energy resource:

## RE-Powering America's Land:

Siting Renewable Energy on Potentially Contaminated Land, Landfills and Mine Sites

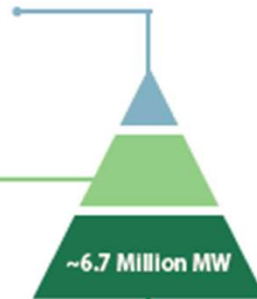
### Estimating Total Technical Potential

Solar technical potential for EPA tracked sites:  
over 6,700,000 MW

**Market potential** – The portion of the economic potential that could be achieved given current costs, policies and technical constraints.

**Economic potential** – The portion of the technical potential that is economically viable, but requires additional policies to break down market barriers.

**Technical potential** – Potential that is technically possible, without consideration of cost or practical feasibility.





For more information, visit [www.epa.gov/renewableenergyland](http://www.epa.gov/renewableenergyland) or contact [cleanenergy@epa.gov](mailto:cleanenergy@epa.gov)





February 7, 2012  
LEDA REDS


Lander County Economic Development Authority  
Renewable Energy Development Study  
Feasibility Evaluation Report



Prepared for:  
Lander County Economic  
Development Authority  
315 S. Humboldt Street  
Battle Mountain, NV 89820  
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2/7/12

# A small change with **big results**

## Barriers and Opportunities for Siting Solar Energy Projects on Contaminated Mine Lands in Nevada

Prepared for The Nature Conservancy  
By the Environmental and Regulatory Law Clinic at the University of Virginia School of Law<sup>1</sup>



SCHOOL of LAW



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## ACADEMICS

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One of the major issues was that renewable energy development and storage was **not officially recognized as a valid post-productive use of mine lands** in state of Nevada.  
**Cue the solution...**



# A small change with big results

**Sec. 2.** NAC 519A.070 is hereby amended to read as follows:

519A.070 “Productive postmining use of the land” means a use which supports activities

including:

1. Wildlife habitat;
2. Livestock grazing;
3. Agriculture and ranching;
4. Industry;
5. *Renewable energy development and storage;*





# Positive Media Hits



**Governor Sandoval**   
@GovSandoval

This would be good for the state! [#solarenergy](#)



Old Nevada mines may get new leases on life as solar arrays  
[reviewjournal.com](http://reviewjournal.com)

Already a print subscriber? [Register here](#) for unlimited digital access. Need help? Call 702-383-0400 from 6am to 5pm PT

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## Nevada's mines could hold key to Question 6 energy standard



### Most Read

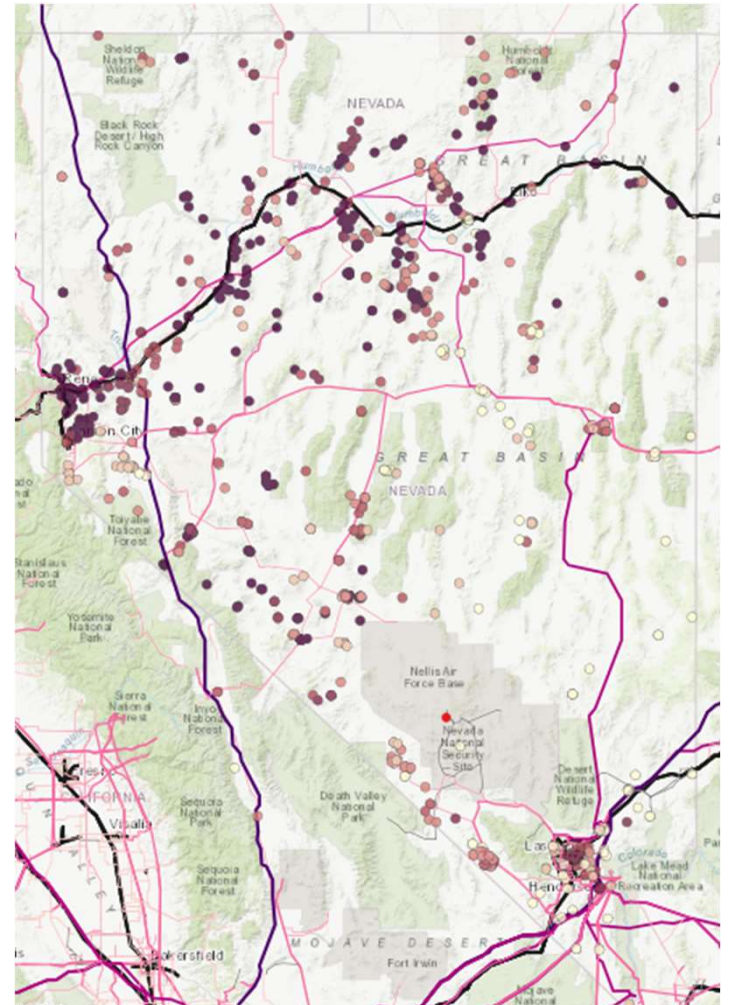
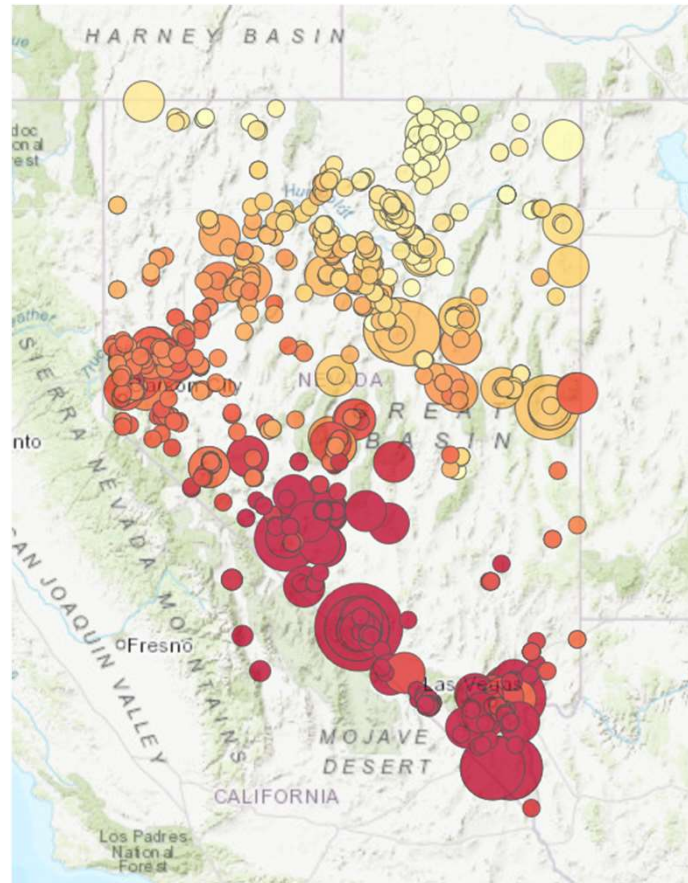
- 1 Land near Las Vegas Strip once planned for casino has new owners
- 2 Suspect in Las Vegas fatal shooting turned himself in
- 3 More snow, rain headed for Las Vegas Valley
- 4 Bonnie Springs Ranch home-building plan gets county approval
- 5 Mother of baby found rotting

THE SACRAMENTO BEE

Idaho Statesman



# Mining the Sun Map Tool



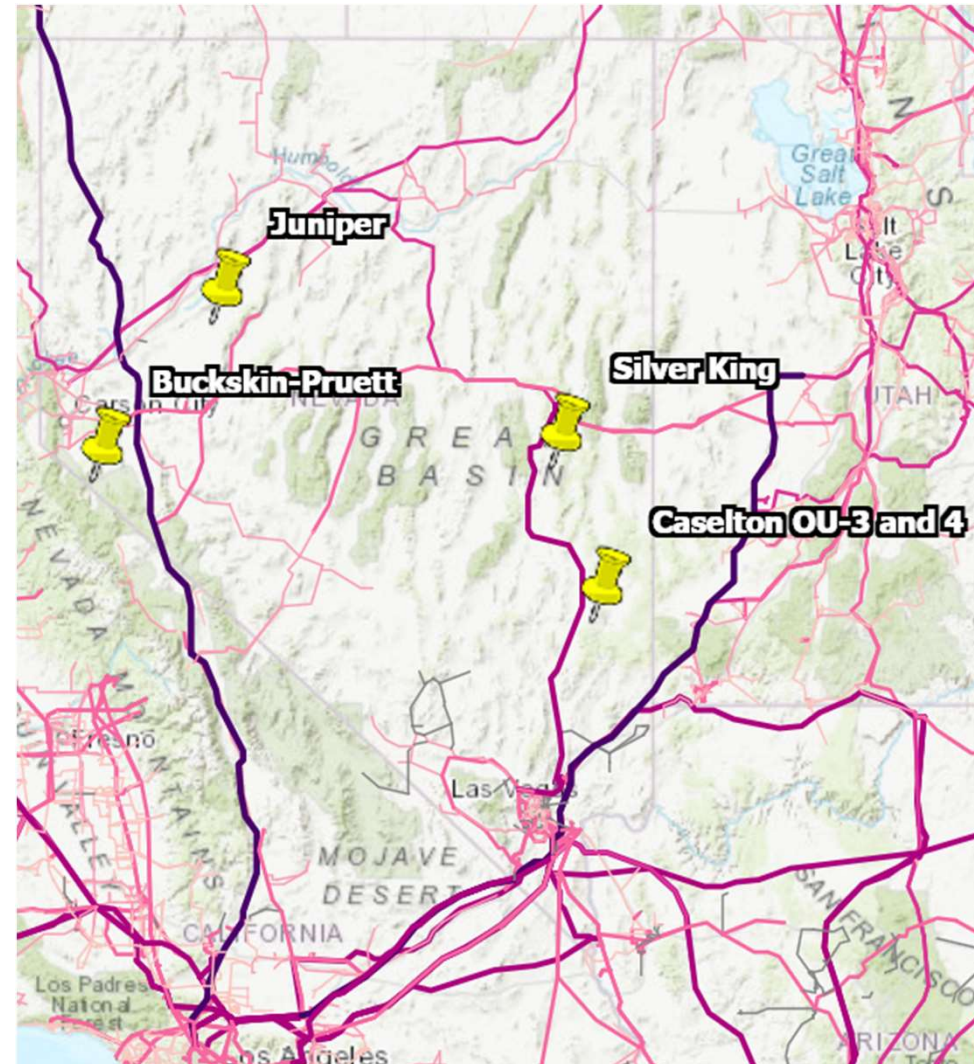
The Nature Conservancy 



**BARRICK**  
OPERATING NEVADA GOLD MINES

# Potential AML Sites in NV

- Buckskin-Pruett, Lyon County, near Yerington
  - Caselton OU3 and OU4, Lincoln County, near Pioche
  - Silver King, White Pine County, south of Ely, north of Ward charcoal ovens
  - Juniper, Pershing County, east of Lovelock
- \* Electricity infrastructure
  - \* Proximity to Transmission
  - \* Adequate acreage to support small utility-scale (a minimum of 100 acres is ideal)



**Mining  
the Sun**

**Getting  
Started**



## Land Considerations

- Closed waste rock or tailings sites?
- Acres available?
  - 5-7 MW/acre
- Sites available after closure?
  - Timing
- Condition of land area?
  - Substrate
  - Remediation required

# Mining the Sun

# Getting Started



## Electricity

- Electric utility provider, consumption, and cost
- Line drawing of electric distribution
  - Utility meters, substations, transmission lines

## Reclamation

- Requirements for potential renewable generation sites
- Estimated reclamation cost to calculate potential savings of deferred reclamation
  - NDEP-BMRR SRCE cost estimate model

# Challenges and Barriers



©Randuy Montaya

- Financial (lack of incentives, project financing)
- Perceived or actual liability
- Transmission and Infrastructure
- Permitting
- Uncertainty related to site-specific information
- Identifying off-takers

# Nevada Opportunities



“Proactive “smart from the start” planning posture to enhance the state’s support of optimized siting that better balances clean energy goals with impacts to natural lands, cultural resources, recreation, wildlife, and other conservation values...

Creative solutions to land use and deployment of large-scale solar have been proposed, including using reclaimed mining lands and other degraded landscapes.”  
<https://climateaction.nv.gov/policies/complex-challenges/>

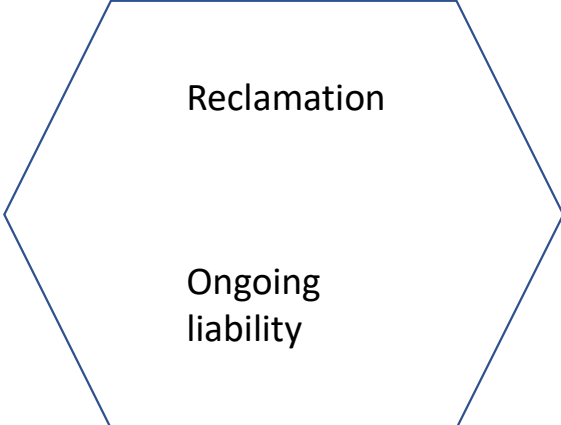
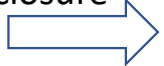


Thinking at the scale of an entire mine operation and over the life cycle of a mining operation:

Current model of mining closure



Post mining  
closure

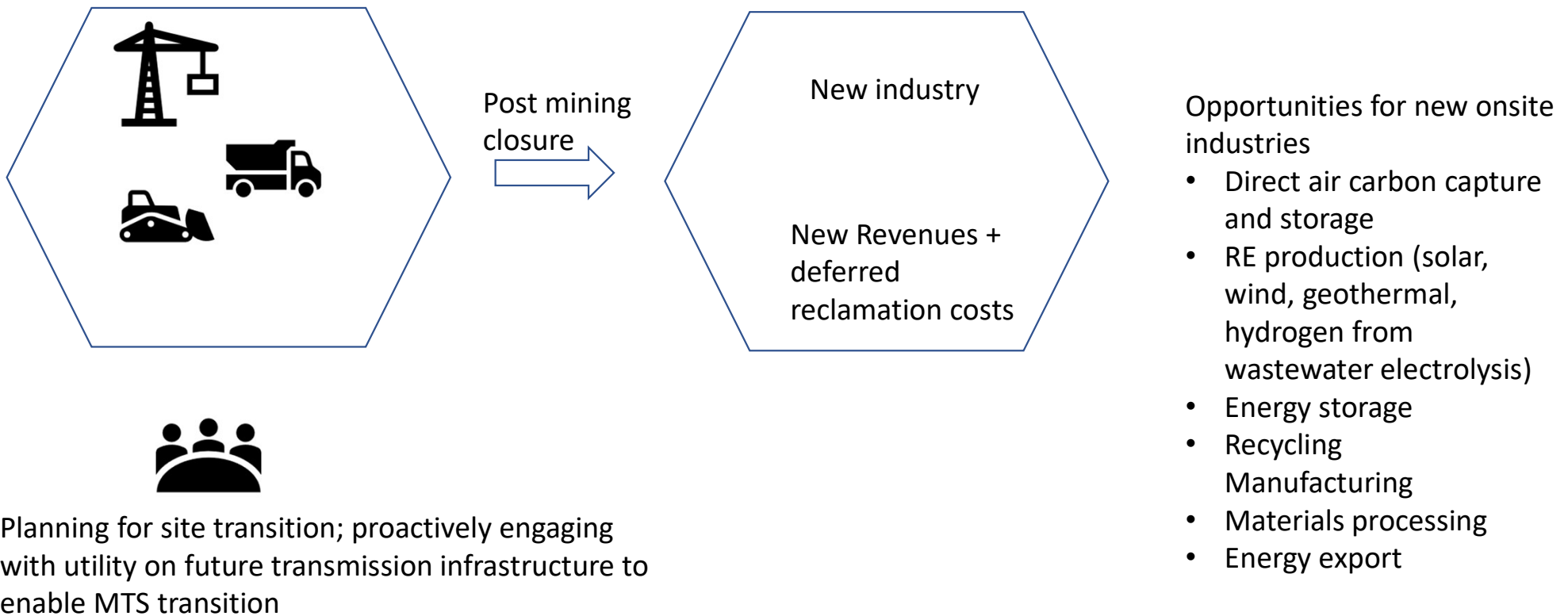


Planning for closure

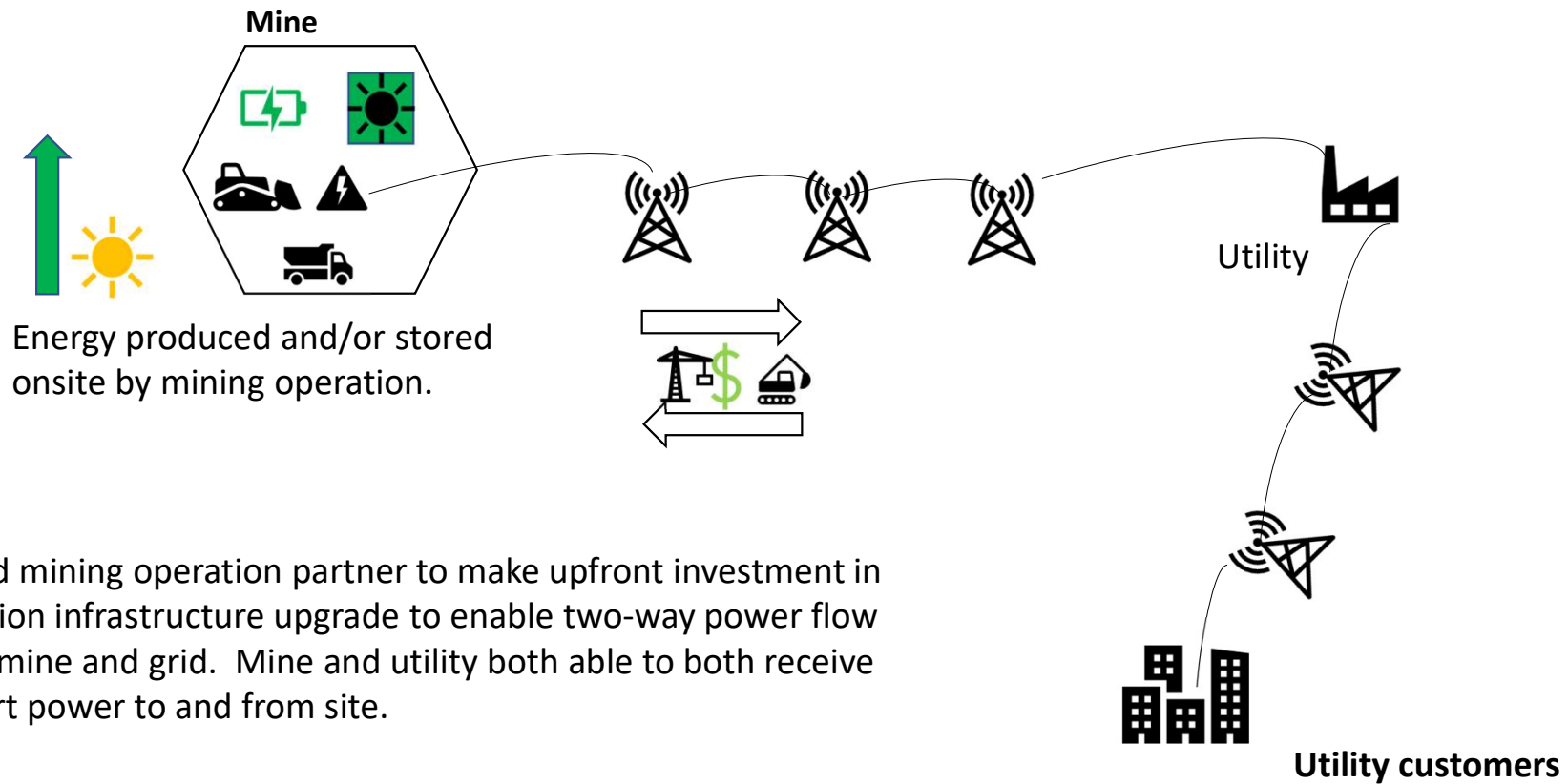


Thinking at the scale of an entire mine operation and over the life cycle of a mining operation:

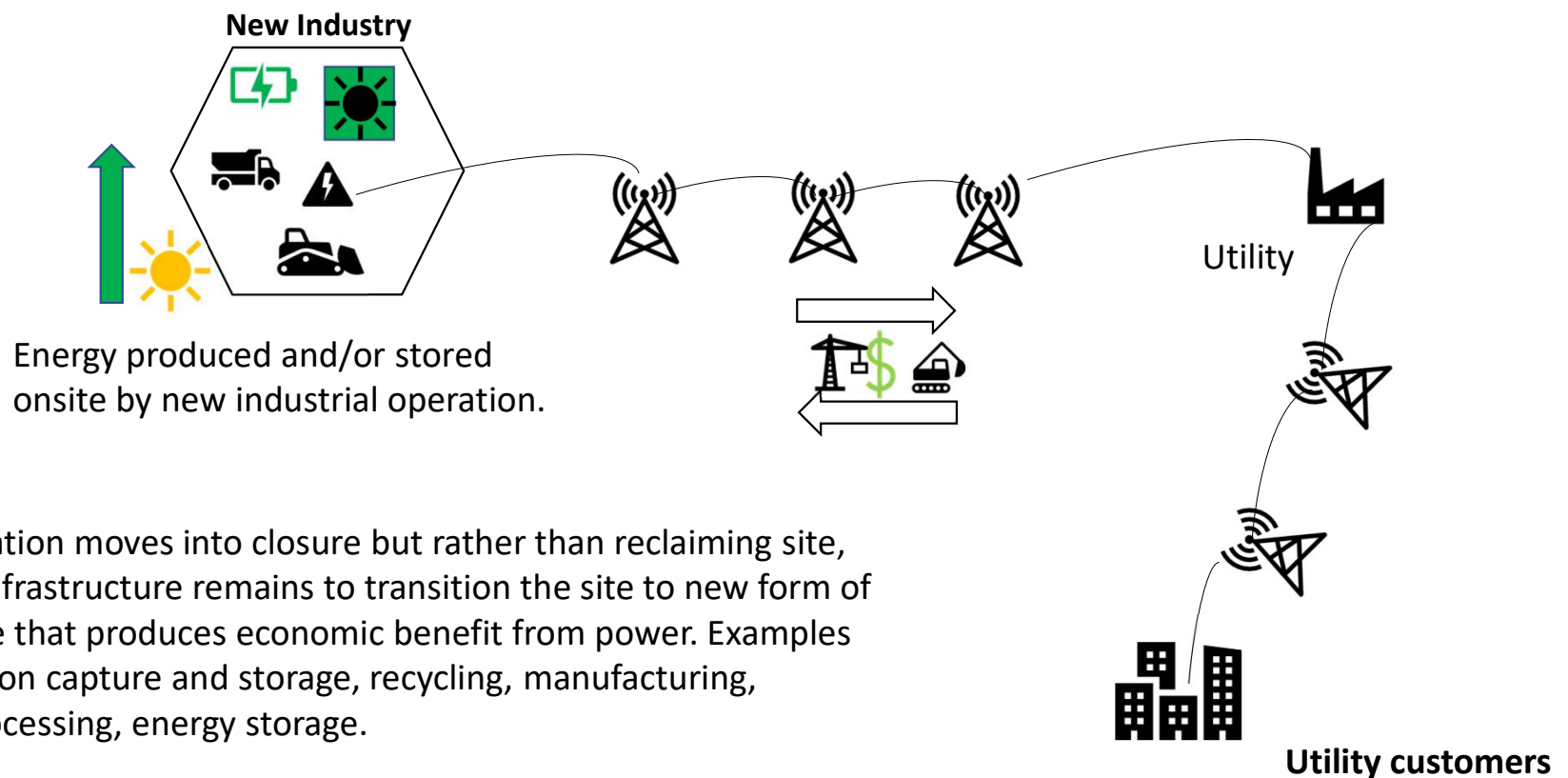
**Mining the Sun paradigm shift:** think of closure as *transitioning* the form of industrial site use, not in ending it



# Scenario E: The diamonds in the sky model of mining industry and utility cooperation. Slide 1

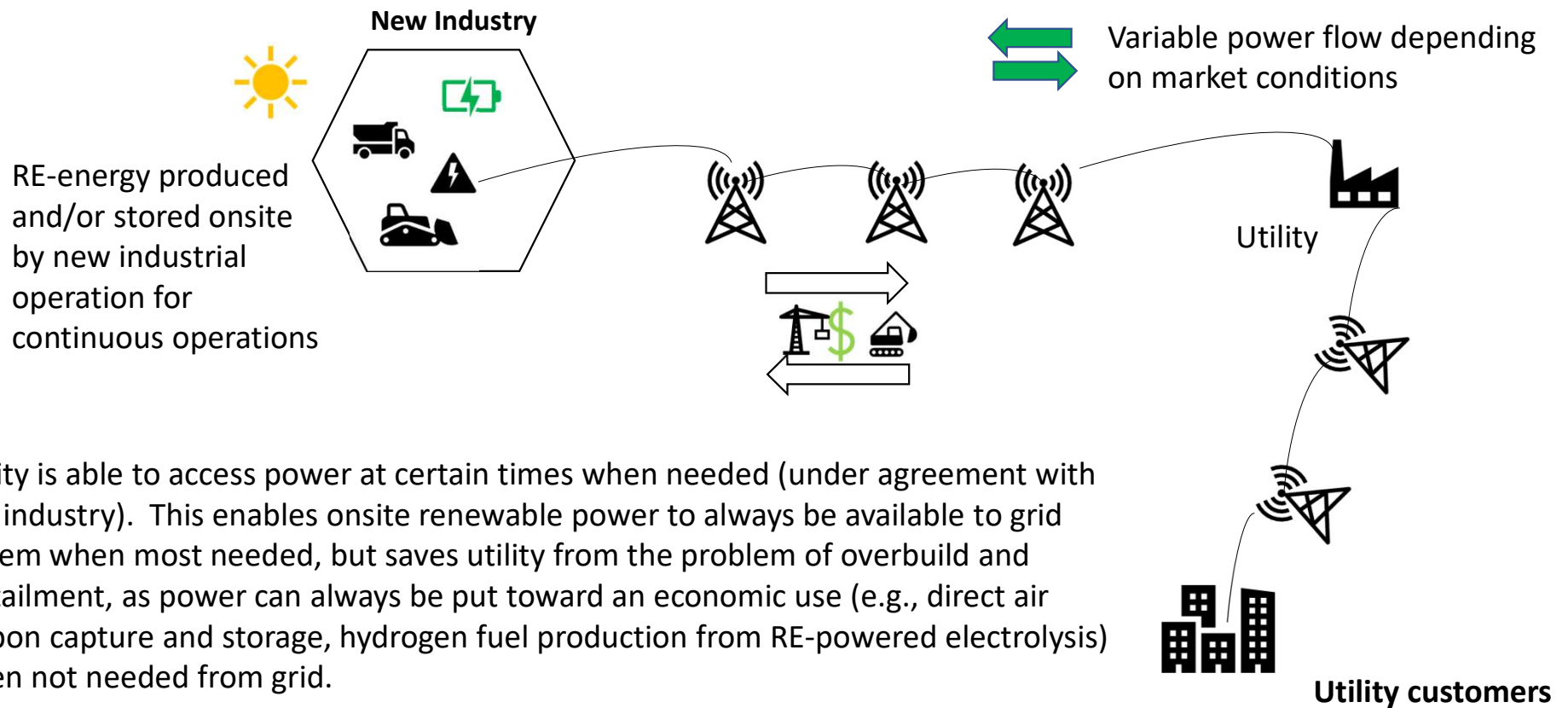


# Scenario E: The diamonds in the sky model of mining industry and utility cooperation. Slide 2



Mining operation moves into closure but rather than reclaiming site, the energy infrastructure remains to transition the site to new form of industrial use that produces economic benefit from power. Examples include: carbon capture and storage, recycling, manufacturing, materials processing, energy storage.

# Scenario E: The diamonds in the sky model of mining industry and utility cooperation. Slide 3



Utility is able to access power at certain times when needed (under agreement with site industry). This enables onsite renewable power to always be available to grid system when most needed, but saves utility from the problem of overbuild and curtailment, as power can always be put toward an economic use (e.g., direct air carbon capture and storage, hydrogen fuel production from RE-powered electrolysis) when not needed from grid.

## Key Points for Mining the Sun



- Mining the Sun can happen at all stages: exploration, planning, closure, and post-mining
- Reduce carbon footprint for mining and potential reclamation cost savings
- Explore co-benefits!
- Actively engage on long-term planning with transmission and utilities

# Federal Legislative Opportunities



Senator Catherine Cortez  
Masto



Senator Jacky Rosen

Proposed REDEVELOP Act  
Codify EPA Re-Powering  
program  
American Jobs Plan  
\$5 Billion for cleaning up  
Superfund sites and  
brownfields, but no  
mention of renewable  
energy

# Mining the Sun

## How you can help



- Help us foster dialogue between industry and other stakeholder groups
- Suggestions for Pilot/demo projects?
- Express Support
  - Supportive quotes
  - Letters
  - Media
  - Contact policymakers



Thank You!

