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# EIGHTH GENERATION CONSULTING

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# Indigenous Communities and Decommissioning:

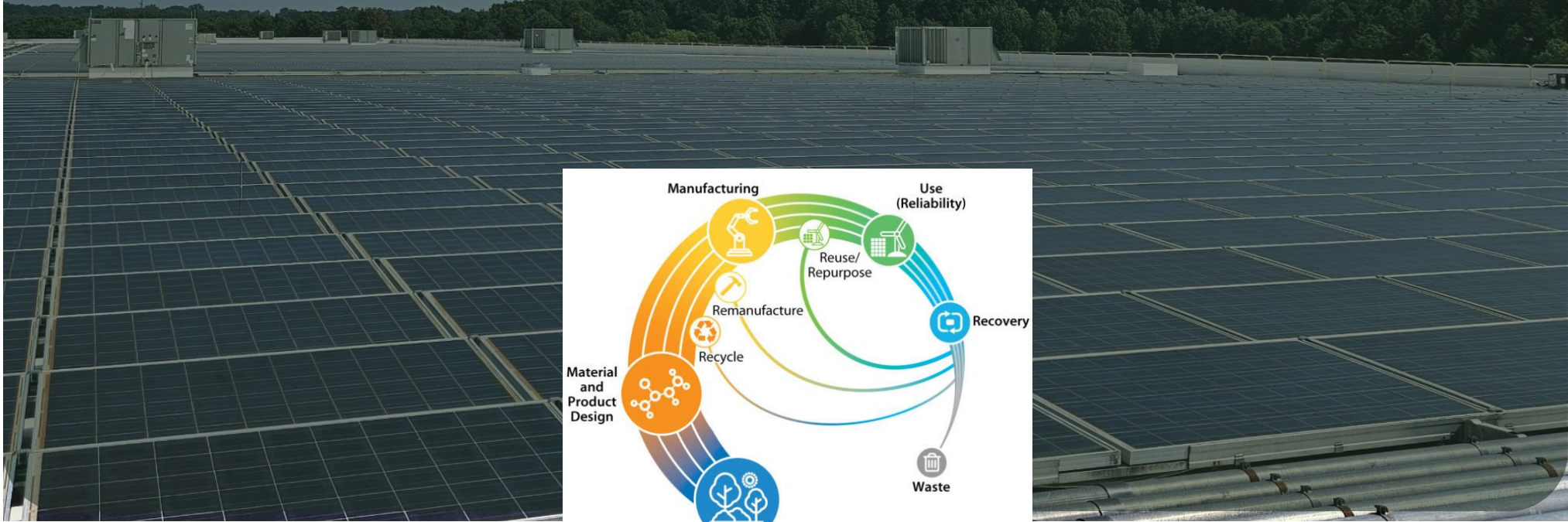
## Understanding the End of the Renewables Lifecycle for Community Optimization



## A Brief Introduction to Solar End-Of-Life/Circularity

What is decommissioning?

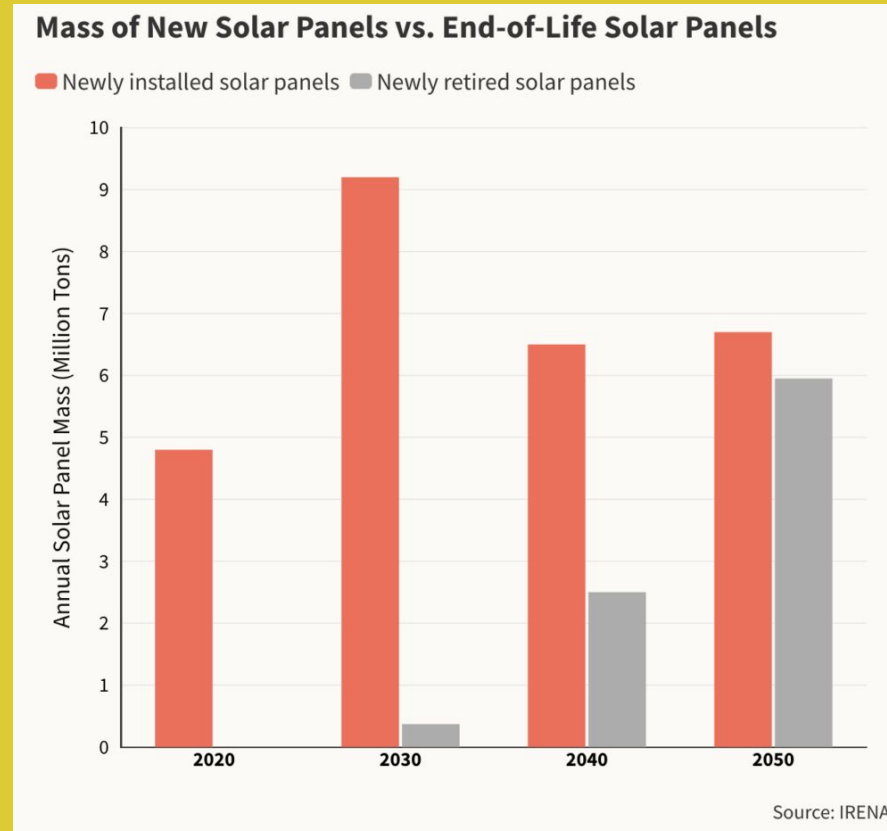




## Renewable Rebirth: Indigenous Stewardship in Decommissioning

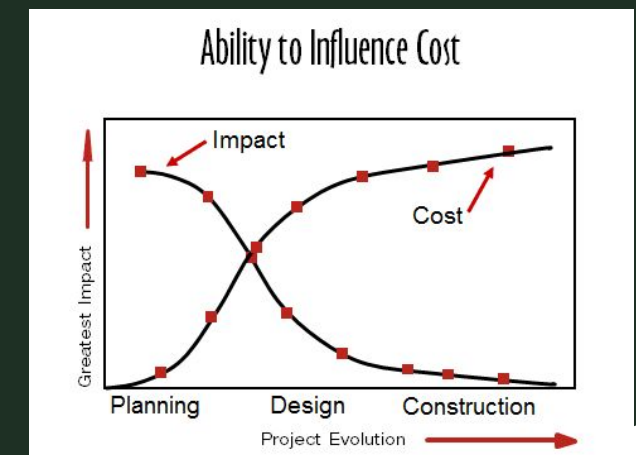
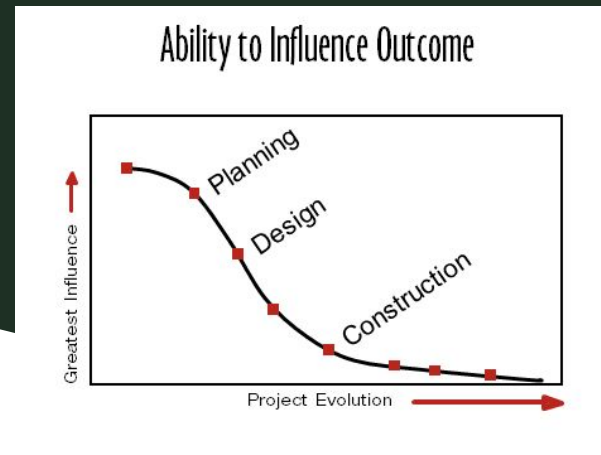
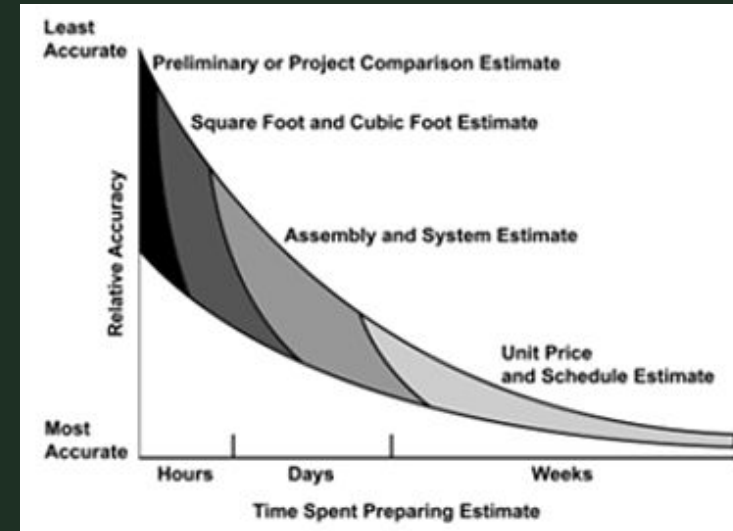
- The spiritual and cultural significance of decommissioning to indigenous tribes— Indigenous people are critically affected by environmental degradation and material extraction
  - Minimal resources to insulate themselves from the consequences
  - World Bank estimate: 80% of biodiversity maintained by indigenous people
  - University of Queensland: 54% of material for energy transition is on indigenous land
  - North America: 75% of lithium, copper and nickel reserves and resources are within 35 miles of Native American reservations.

# It's a Big Issue, and Big Business



# Best Time to Plan?

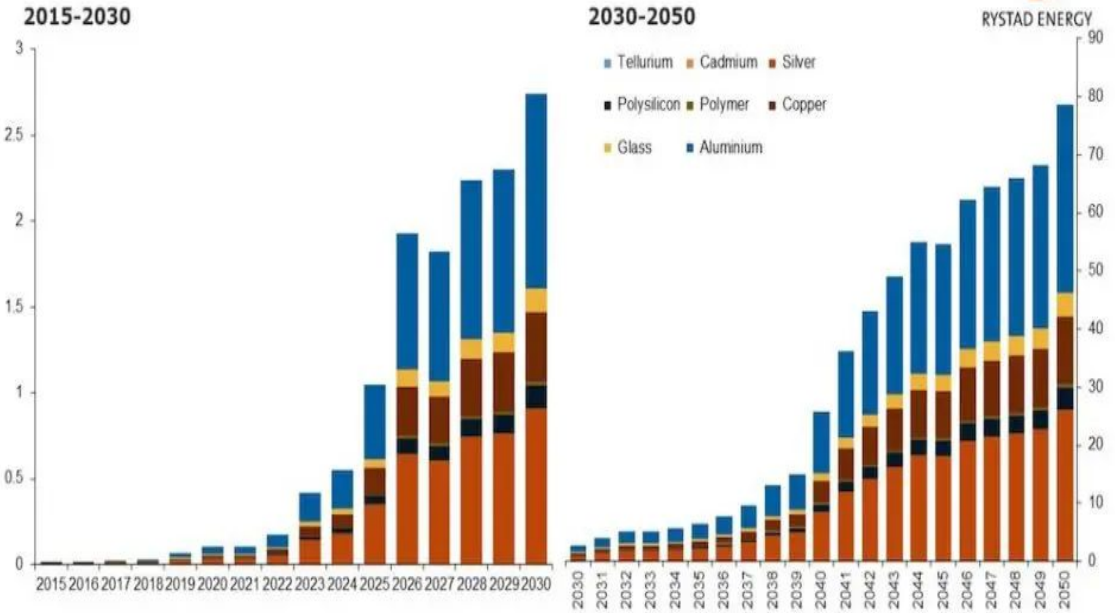
- Before you've even estimated the price of a project
- What happens if you don't?
  - Excess onsite storage of material
  - Bad estimates
  - Last minute pricing
  - Reduced project efficiencies
  - Frustrated clients
  - Bad press and bad photos



# Economic Impacts of Decommissioning



Estimated PV panel recyclable material value\*  
Billion USD



\*Forecasted value from material recovered from PV panels as current implementations reach end-of-life  
Source: Rystad Energy SolarSupplierCube, EnergyScenarioCube, Rystad Energy research and analysis

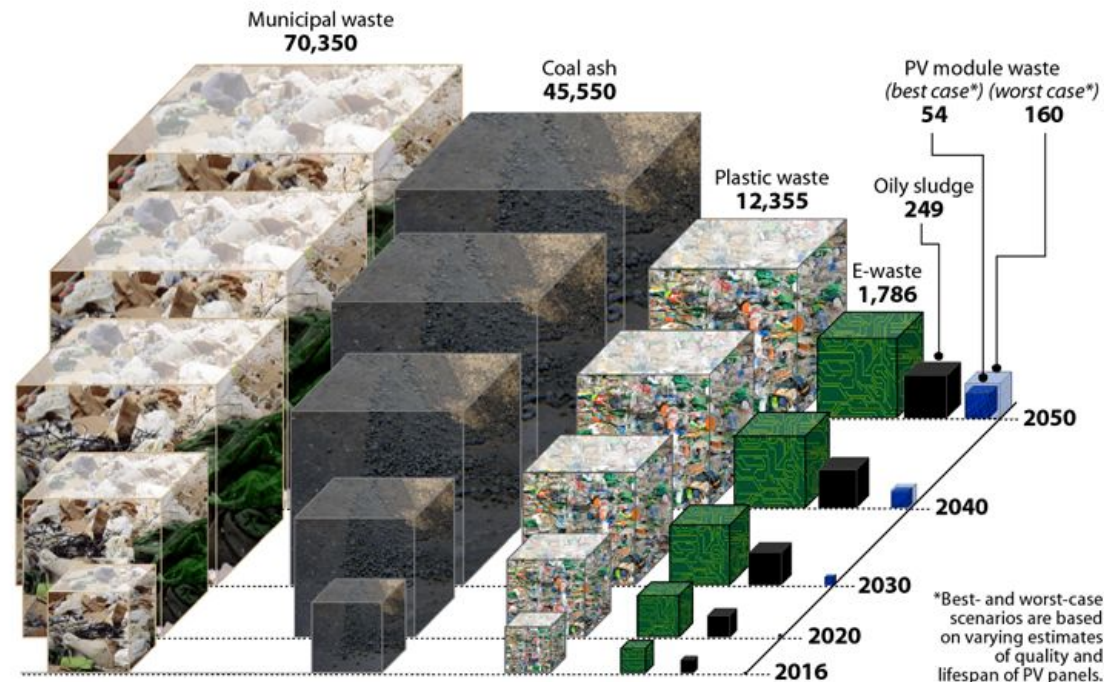
- Financial implications
- Benefits of material recovery

# History and Future of Waste

## Solar Panel Waste in Context

Researchers compared global waste estimates generated from landfills, fossil fuel production and e-waste. While waste from electronics and photovoltaic modules will certainly grow in the coming years, they will remain a fraction the amount of other sources.

**GLOBAL CUMULATIVE WASTE**  
In millions of metric tons, 2016-2050



SOURCE: Heather Mirlletz et al., *Nature*

Inside Climate News



# Closing the Loop: Sustainable Decommissioning for Indigenous Communities

- 40% of all new panels could be made with material from decommissioning by 2050
- Bad installations and bad siting is waste
- Waste kills - people and communities



# Decommissioning Best Practices: A Tribal Perspective



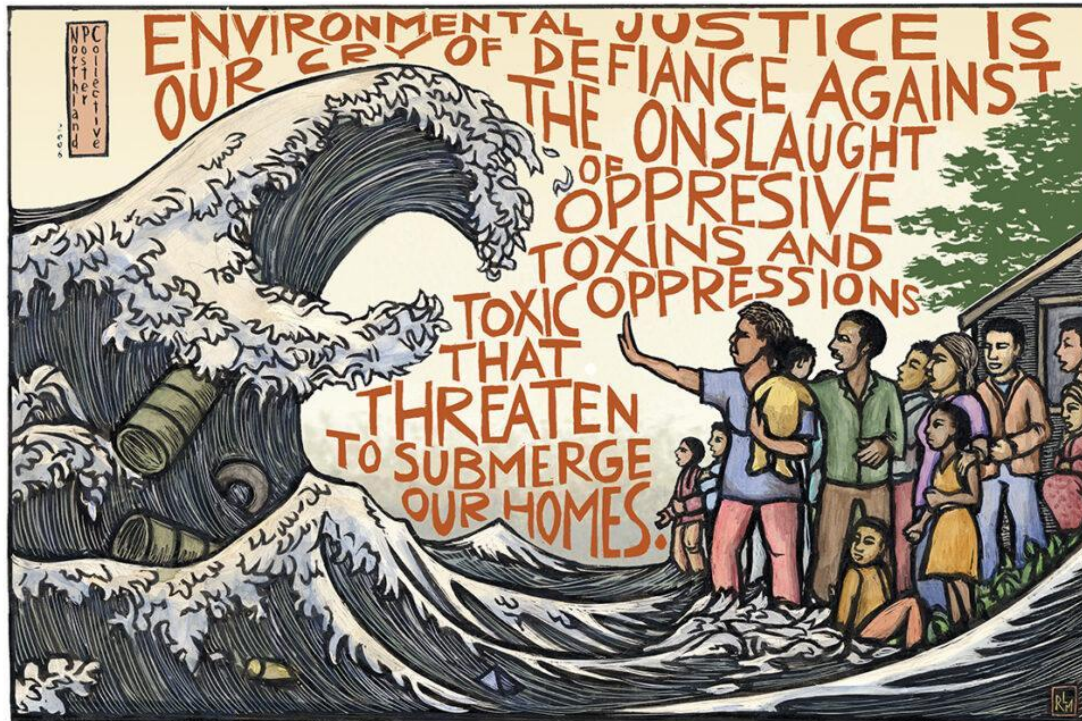
- Community Sensitivity
- Community Engagement

# Empowering Tribes: Renewable Energy Lifecycle and Decommissioning

- The reality is that waste affects indigenous people
  - 90's report: 50% of all tribes were being solicited for hazardous waste
  - History of uranium on Navajo land
- Capacity building is key



# Decisions Shouldn't Be Accidents



- The choice of a project location will dictate how the project is built, maintained, and treated at end of life
- Infrastructure doesn't just appear
- Decommission planning set and budgeted for decades in advance

# Maximizing Community Benefits: Indigenous Decommissioning Strategies

- Community benefits are real
- Indigenous involvement can enhance these benefits



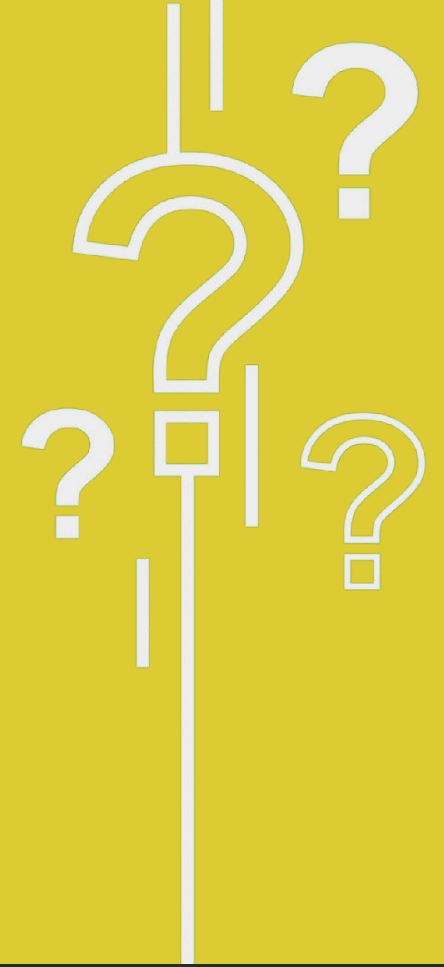
# Closing the Gap: Tribes and Renewable Energy Decommissioning



- Collaboration is possible
- Partnerships
  - Industry
  - Policymakers



# Questions?





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**THANK YOU**

**For Attending!**

