Economic Impacts of a Clean Energy Transition in New Mexico

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In 2018, San Juan Citizens Alliance commissioned **two studies** pertaining to **SJGS closure and economic development** in Northwest New Mexico

ECONOMIC OPPORTUNITIES IN THE FOUR CORNERS AREA

Evaluated the methods and conclusions of a 2017 economic assessment of SJGS closure and offered economic development alternatives

TAX AND JOBS ANALYSIS OF SAN JUAN GENERATING STATION CLOSURE

Used economic modeling to assess how redevelopment of the SJGS and SJM sites for utility-scale solar electricity generation could offset the fiscal and economic impact of SJGS closure on communities and taxing jurisdictions within San Juan County

Economic Opportunities in the Four Corners Area

CONTEXT

- Conversations about SJGS abandonment focused on negative economic impacts
- Discussion of economic mitigation strategies focused on finding new markets for coal and fossil-fuel derived products

OBJECTIVE

- Broaden the discussion to include a wider variety of environmentally-friendly economic mitigation strategies
- Consider the potential long-term economic ***benefits*** of movement away from a carbon-dependent economy

CONCLUSION

- Continued reliance on coal is counter-productive for the Four Corners economy:
  - Hitches the region's economic future to an economically volatile, declining industry
  - Forecloses other more viable opportunities for sustainable economic development

New Mexico's fossil fuel industries have been a mixed blessing...

PROS

Thousands of jobs and significant revenue to state and local governments

CONS

Economic dependence on depletable natural resources subjects communities to the "**boom and bust**" cycles of volatile international markets

These economic benefits have come at a **high cost** both to the **environment** and to the **economy**

Research indicates that heavy reliance on fossil fuel extraction **undermines long-term economic growth**. Resource-rich regions that depend heavily on extractive industries **demonstrate lower levels of long-term economic growth.** than otherwise comparable but less resource-dependent areas

Research comparing fossil fuel dependent counties in the western US to those with more diverse economies found that **energy-dependent counties lagged on key economic measures**, including **real personal income**, **employment**, and **population**.

Possible explanations for the “resource curse”

- **Less incentive** for community members to obtain in higher education or business/government leaders to pursue economic diversification
- Price **volatility** in global commodities markets **creates uncertainty** about future economic conditions that **discourages local investment**
- Abundant natural resources may **slow the transition** to a service-oriented, knowledge-based economy.
- **Environmental degradation -** Recreation and tourism are often major potential growth sectors in resource-rich areas. Extractive industries and related industrial activity **crowd-out growth** of these industries by **diminishing environmental quality**.

Economic Opportunities in the Four Corners Area: Key Findings

Investments in **quality of life** are key to **sustainable economic development**.

Economic recovery strategies **leverage local assets** and **prioritize quality of life**, with a focus on three key areas: **tourism and recreation, solar power generation** and **storage**, and **mine reclamation/plant decommissioning**.

The region's overarching development goal should be **maximizing the return on investment** in its **cultural and recreational assets** by **restoring**, **protecting**, and **promoting** them as recreational and tourist attractions

Coal-fired power and power production are **inconsistent with this goal** and **can impede other forms of economic development** by undermining population health and degrading the environment.

A utility-scale PV installation in the area would support the Farmington area's **Outdoor Recreation Industry Initiative** by helping to **meet the sustainability needs** of outdoor recreation companies and **fostering a green ethos** valued by guides, outfitters and recreation gear manufacturers.

Tax and Jobs Analysis of San Juan Generating Station Closure

Modeled redevelopment of the SJGS and SJM sites for utility-scale solar electricity generation

The SJM-SJGS complex lies within the boundaries of three major property taxing jurisdictions – San Juan County, San Juan Community College, and the Central Consolidated School District (CCSD)

Closure of the plant and mine will remove two substantial assets from the property tax rolls and decrease revenue to property tax beneficiaries

Redevelopment of the site for solar power generation could support a substantial number of jobs and replace much of the property tax base lost due to closure of the plant-mine complex.

Existing transmission capacity and high solar values position NW New Mexico to serve as **a major producer and exporter of solar electricity**.

Solar plant construction is highly labor intensive and thus **a good source of transitional employment** for the two or more years it typically takes to build a utility-scale solar plant

The solar industry is driving job creation nationwide

3x more people are employed by US wind and solar industries than the country's coal industry.

20% annual average increase in solar employment for each of the past several years.

Nationally, the solar industry is growing fast enough to **employ most of the workers displaced by the decline of coal.***

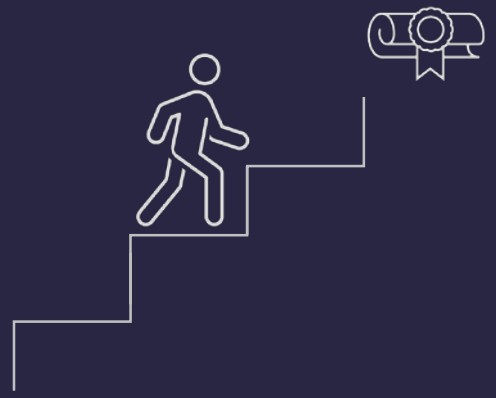
***** Joshua Pearce, "What if All US Coal Workers Were Retrained to Work in Solar," Harvard Business Review (August 8, 2016) available at https://hbr.org/2016/08/what-if-all-u-s-coal-workers-were-retrained-to-work-in-solar

PRC Docket 1: Abandonment and Securitization

Abandonment coupled with **support for transitioning workers** and their families can **ease the transition** away from coal and **support the region's long-term economic health**.

The Energy Transition Act provides a framework for the closure of the San Juan Generating Station and is the means by which to implement sustainable economic strategies.

Funds available through the ETA can help the **355 displaced coal miners and power plant workers** match their **skills and interests** to other occupations and industries and **obtain the training they need to successfully transition into other employment**



To help ensure that NM workers benefit from the construction of replacement generation, the ETA establishes an **apprenticeship program** for the construction of new electric generation facilities.

Enhanced renewable standards and the replacement power directive **support sustainable economic development** in NW New Mexico by **increasing demand** for domestically produced solar power and **ensuring** that some replacement generation is sited in the region most impacted by the closures.

PRC Docket 2: Replacement Portfolios

Sought to identify the replacement portfolio most consistent with ETA priorities

- location in the CCSD,
- environmental impacts,
- system reliability, and
- cost

Stakeholders submitted portfolios of SJGS replacement resources for consideration by the hearing officers.

June 24 Recommended Decision – Highest ranked portfolio (CCAE-1), was 100% renewable

- 430 MW of solar and storage in the Central Consolidated School District (CCSD),
- 450 MW of solar and storage in unincorporated McKinley County, and
- 70 MW of solar and storage in Jicarilla Apache tribal lands in Rio Arriba County.

The 100% renewable portfolio **distributes replacement assets across three counties** affected by the closure of San Juan Generating Station (SJGS)

The four projects will invest **over $1 billion** in northwest New Mexico:

- **$500 million** in McKinley County,
- **$80 million** in Rio Arriba County, and
- **$447 million** in the CCSD.

100% Renewable Replacement Portfolio

Construction Phase Economic Impacts

- **Over half a billion dollars** to New Mexico’s gross state product
- **3,545** job years
- **$170.4 million** in wages, salaries, and other employee compensation
- **$52.3 million** in new tax revenue for state and local taxing jurisdictions in New Mexico

100% Renewable Replacement Portfolio

Operations Phase Economic Impacts

- **$14 million in** gross state product annually
- **55** permanent full-time jobs
- **$4.3 million** in wages, salaries, and other employee compensation.
- **$8.1 million** in new tax revenue for state, local, and tribal jurisdictions annually

Solar plants can generate **replacement tax revenue for the foreseeable future**, whereas natural gas plants can only be relied upon for tax revenue through 2040.

Commercial solar installations are not particularly labor intensive once operational but **the permanent jobs they do support are good ones**

Training in solar-specific technologies enables workers in relatively low-wage construction and laborer jobs to **rapidly increase their skills** and **move into better-paying jobs**

In 2016, non-residential solar PV technicians earned a **median annual salary of $61,580/year**, electricians with solar experience made around $47,180/year, and solar PV installers averaged around $40,020 annually.

Questions?

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