



THE ECONOMIC BENEFITS OF RENEWABLE ENERGY IN ARIZONA

AUGUST 2024 // PREPARED BY ROUNDS CONSULTING GROUP



THE WESTERN WAY



ABSTRACT

This economic impact report, prepared by Rounds Consulting Group, Inc., examines the solar energy industry's economic contributions in Arizona. The calculations are based on established industry standards and methodologies typical for such analyses. Our approach includes the use of a proprietary impact model leveraging IMPLAN multipliers, a widely accepted practice in economic impact assessments.

IMPLAN is a software and data provider specializing in input-output modeling. IMPLAN multipliers are used to estimate the economic impacts of various industries and activities by measuring direct, indirect, and induced effects on a regional economy. This methodology helps in understanding how economic changes in one sector ripple through to others within a specified geographic area.

Unless otherwise cited, all estimates in this report are based on calculations conducted by the authors using industry-standard methodologies and data sources. To accurately interpret the findings, it is essential to utilize the entire report. Partial use may lead to misinterpretations of the data and conclusions drawn from it.

While every effort has been made to ensure the accuracy and reliability of the information presented in this report, unforeseen factors or changes in economic conditions may impact the validity of the estimates over time. Users are advised to consider this report as a snapshot based on current data and to exercise caution when applying it to future scenarios or policy decisions without updated analysis.

EXECUTIVE SUMMARY

SECURING ENERGY STABILITY

Renewable energy is a \$269B market in the U.S. that accounts for 11% of all energy consumption in the country, with solar energy driving 48% of new electricity generating capacity.[1] Arizona has a relatively larger stake than the national average as 69% is derived from solar technology.[1]

In total, Arizona has a solar capacity of more than 7,500 megawatts ("MW") and a battery energy storage capacity of 948MW.[2] Solar capacity in this context refers to the maximum output or level of electricity generation.

The state's capacity makes Arizona the 5th largest solar producer in the U.S. behind California, Texas, Florida, and North Carolina.

Despite these economic development advances related to solar energy production and storage, the state is still yet to maximize its potential. Complications have arisen for many energy producers related to local government restrictions and issues related to the use of State Trust Land, among other development impediments.

[1] Solar Energy Industries Association, <https://www.seia.org/research-resources/solar-market-insight-report-q4-2023>

[2] U.S. Energy Information Administration, Form EIA-860M (February 2024)

Maximizing Arizona's local economic development potential relies on ensuring energy security to sustain current growth. The demand for power will only be expanded by recent influxes of large consumers of electricity like semiconductor firms, manufacturers, and other high-tech companies.

Recently, there has been a noticeable shift towards prioritizing clean energy practices in business operations. In 2023, \$303B in energy transition financing was deployed in the U.S.[3] By adopting these practices, companies are minimizing their impact on the environment, advancing economic growth, and supporting renewable energy production in the U.S.

Arizona's regulated electric utilities are required to generate 15% of their energy from renewable sources by 2025, setting ambitious targets for clean energy focusing on solar.[4] This shift reduces carbon footprints and ensures a stable energy supply and cost, mitigating energy price fluctuations. The financial stability of solar reinforces the economic viability of sustainable practices.

Additionally, it is crucial to prevent any scenario where brownouts or blackouts become even remotely frequent. The detrimental effects could surpass those of past water shortage fears and significantly hinder Arizona's economic growth.

[3] BloombergNEF, <https://about.bnef.com/blog/the-2024-sustainable-energy-in-america-factbook/>.

[4] Arizona Corporation Commission, <https://azcc.gov/utilities/electric/renewable-energy-standard-and-tariff#:~:text=These%20rules%20require%20that%20regulated,from%20renewable%20resources%20by%202025.>

EXECUTIVE SUMMARY

THE ADVANTAGES AND MULTIPLIER EFFECT OF SOLAR PROJECTS

The development of solar energy and battery storage projects presents a transformative opportunity for local economies, enhancing energy independence and reliability and economic growth.

These projects produce a profound multiplier effect on the local economies during both the construction phase and throughout their operational lifespan. The multiplier effects (i.e., direct, indirect, and induced effects) can be calculated utilizing input-output models such as the one developed by IMPLAN.

The initial construction phase provides immediate economic benefits through capital investments and job creation. This phase requires a diverse workforce, including engineers, construction workers, project managers, and support staff.

Additionally, the construction process requires services and materials from local businesses such as suppliers, transport companies, and contractors. This leads to further job creation and economic benefits known as indirect effects.

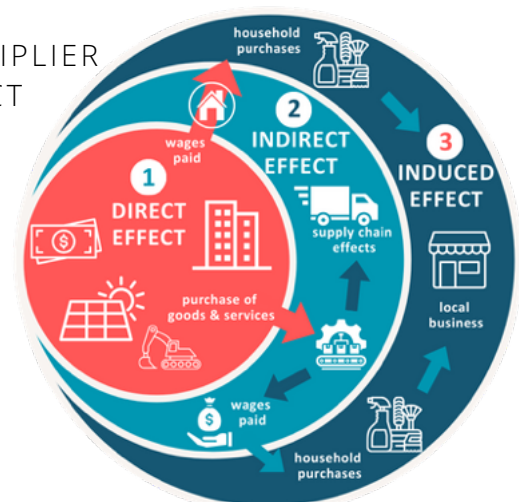
The influx of activity and spending further amplifies the impact and creates jobs at other local businesses such as diners, retailers, and other accommodations. This is known as the induced effect.

Once operational, solar projects continue to positively impact the economy. These facilities require ongoing maintenance and management, creating long-term job opportunities for technicians, engineers, and other personnel.

Additionally, direct operations require services and materials from local suppliers and boost sales at local diners, shops, etc. This leads to further indirect and induced impacts including job creation and tax revenue generation.

The additional tax revenues generated through property, sales, and income taxes can be used to enhance public services and reduce the tax burden on local residents.

THE MULTIPLIER EFFECT



Source: Rounds Consulting Group, Inc.

STATEWIDE ECONOMIC BENEFITS IN 2023

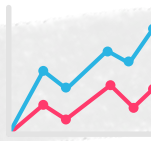
According to the Solar Energy Industries Association ("SEIA"), there are 360+ solar companies, including manufacturers, installation businesses, developers, and other solar-related companies, operating in Arizona that directly support approximately 8,300 jobs throughout the state in 2023.

In 2023, the solar industry's direct operations supported an additional 2,800 supplier-related jobs (i.e., indirect jobs) and 11,200 spending-induced jobs at local grocery stores, retail shops, vehicle repair shops, and restaurants, among many other businesses, across Arizona.

The construction and operational activity of the solar industry contributed over \$2.2B and \$7.3B in labor income (i.e., \$97,700 avg. wage per worker) and economic output, respectively, to the state's economy in 2023.

In total, local governments and the state collected an estimated \$155.4M in tax revenues from the industry's activity in 2023. This includes personal income, sales, excise, and property taxes, among others.

Of the total tax revenues, the state collected approximately \$83.6M, counties collected \$21.2M, and local cities, towns, school districts, fire districts, and other property tax districts collected \$50.7M.



\$7.3B
ECONOMIC
IMPACT



22,300
TOTAL JOBS



\$2.2B
LABOR INCOME



\$83.6M
STATE REVENUES



\$21.2M
COUNTY
REVENUES



\$50.7M
LOCAL REVENUES

Note: Sum of direct, indirect, and induced impacts. May not sum to total due to rounding. Source: Rounds Consulting Group, Inc.

EXECUTIVE SUMMARY

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THE IMPACT OF PROSPECTIVE SOLAR & ENERGY STORAGE PROJECTS IN PINAL COUNTY

In addition to the statewide economic impact, the construction and ongoing operations impact of two prospective solar projects were calculated using proprietary modeling.

These case studies include -

- Case Study #1: A \$1.1B solar and energy storage (800MW solar + 800MW BESS) project in Eloy, AZ.
- Case Study #2: A \$400M solar and energy storage (150MW solar + 150MW BESS) project in Coolidge, AZ.

The impact estimates include the direct, indirect, and induced impact of construction and operations over a 30-year period.

CASE STUDY #1 - ECONOMIC IMPACT

The initial and ongoing construction of the \$1.1B project in Eloy is estimated to support 8,700 jobs, \$465.3M in labor income, and \$1.3B in economic output during the 30-year period.

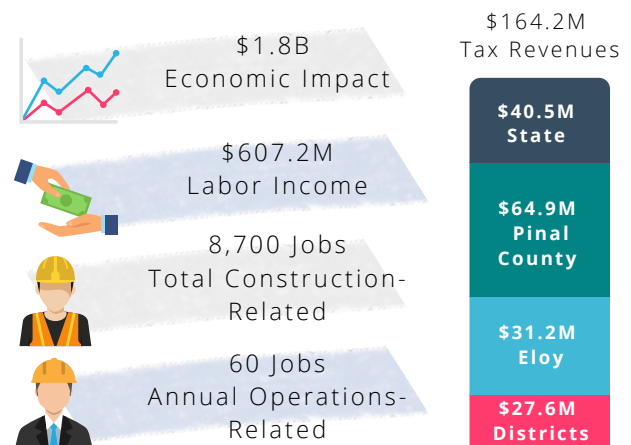
Additionally, the state is expected to collect \$35.1M, Pinal County is expected to collect \$9.2M, and Eloy is expected to collect \$15.4M in tax revenues from the construction activity.

This would include the tax revenues generated by direct construction expenditures and the indirect and induced activity.

The solar project's annual operations create demand for supplier businesses and other tangential businesses as local workers spend their income throughout the local economy. This ripple effect generates additional jobs, income, economic output, and tax revenues.

Annually, the project's operations are expected to support 60 jobs. Over 30 years, it is estimated that the project would produce \$141.9M in labor income, \$561.8M in economic activity, \$5.4M in state taxes, \$55.8M in Pinal County taxes, \$15.8M in Eloy taxes, and \$27.6M in local property taxes for the local school districts and the community college district, among other local jurisdictions.

CASE STUDY #1 30-YEAR CONSTRUCTION AND OPERATIONS IMPACT



Note: May not sum to total due to rounding. Estimates illustrate the aggregate direct, indirect, and induced impact of construction and operations over 30-years. Source: Rounds Consulting Group, Inc.

CASE STUDY #2 - ECONOMIC IMPACT

The initial and ongoing construction of the \$400M Coolidge project is expected to support 3,100 jobs and generate \$454.0M in economic output over 30 years.

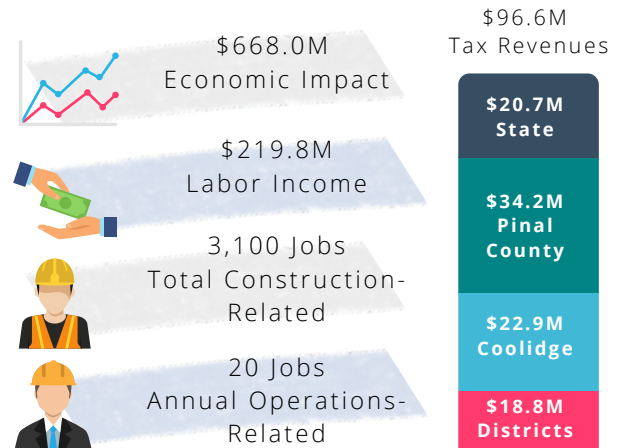
The state is estimated to collect \$11.6M, Pinal County would collect \$3.0M, and Coolidge would collect \$4.1M in tax revenues from construction of the project.

Annually, the project is expected to support 20 ongoing jobs, including technicians, engineers, maintenance, and supporting personnel.

Over 30 years, the project's ongoing activity is projected to generate \$54.1M in labor income and \$214.0M in economic output.

Annual operations of the project are estimated to generate \$2.1M in state taxes, \$31.3M in Pinal County taxes, \$18.8M in Coolidge taxes, and \$18.8M in property taxes for the local school district, community college district, library district, and flood district, among others, over 30 years.

These tax revenues would be generated by income, sales, and property taxes, which not only include commercial property taxes, but the revenues generated by employee spending over the 30-year operational lifespan of the solar project in Coolidge.

CASE STUDY #2
30-YEAR CONSTRUCTION AND
OPERATIONS IMPACT

Note: May not sum to total due to rounding. Estimates illustrate the aggregate direct, indirect, and induced impact of construction and operations over 30-years.

Source: Rounds Consulting Group, Inc.

“The commitment of these projects to provide reliable energy, rural workforce development, new technology, and economic security to Pinal County sends a strong message that sets us apart from many unprepared communities around the country.”

- Andy Tobin, former Speaker of the Arizona House and Director of The Western Way's Arizona Rural Energy Network

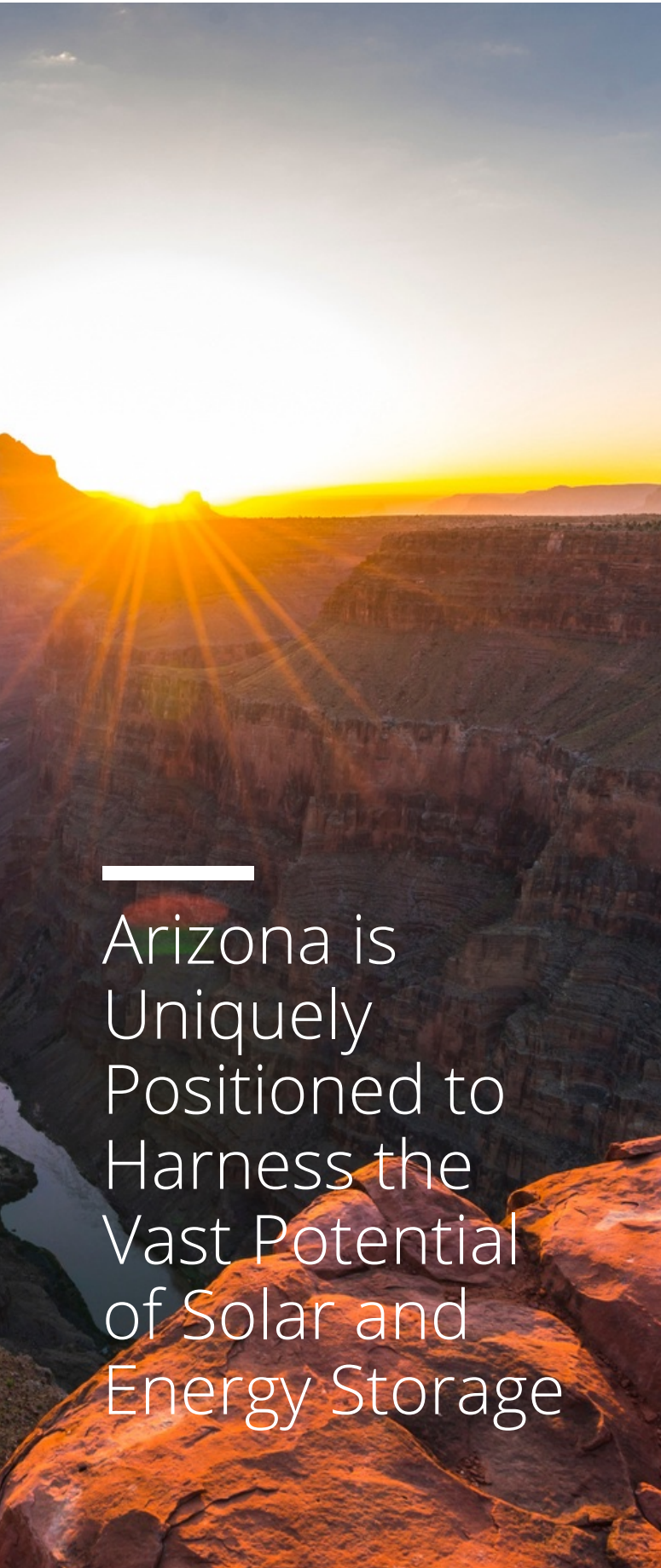
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Arizona is Uniquely Positioned to Harness the Vast Potential of Solar and Energy Storage

INTRODUCTION

At a critical juncture in the global shift towards clean energy, Arizona can either lead the charge in the transition or risk falling behind. With over 300 days of sunshine annually, the state is uniquely positioned to harness the vast potential of solar energy, alongside other renewable sources.

According to the U.S. Energy Information Administration ("EIA"), electricity generated from renewable energy provided about 17% of Arizona's total net generation. Almost 3/5th of that total comes from solar energy and the remainder is supplied through hydroelectric and wind.[5][6]

Although the clean energy sector is already more prominent in Arizona than many other parts of the U.S., there are substantial economic opportunities that support further enhancement in developing the sector, particularly in solar and energy storage as well as in the vast expanses of underutilized land in rural areas.

Such a strategic enhancement could not only yield significant economic benefits but also broaden the scope of the state's economic development efforts.

This report delves into the economic benefits of clean energy investments in Arizona, exploring how the industry is driving economic growth, improving grid reliability, reducing reliance on imported energy, fostering job creation, and generating tax revenues throughout the state and in rural areas.

Additionally, the analysis includes case studies to illustrate the potential construction and long-term benefits of prospective solar projects.

[5] U.S. Energy Information Administration, "Arizona State Energy Profile," <https://www.eia.gov/state/print.php?sid=AZ>

[6] U.S. Energy Information Administration, "Arizona State Profile and Energy Estimates," <https://www.eia.gov/state/?sid=AZ#:~:text=Arizona%20ranks%20second%20in%20the,solar%20thermal%20power%20plants%20together.>

THE CLEAN ENERGY INDUSTRY

GROWTH & TRENDS IN THE INDUSTRY

The solar industry in the U.S. has seen substantial growth over the last 10 years as it grew by an annual average rate of 24%, according to EIA.

As of 2023, solar produced enough electricity to power 30M homes.[7] Arizona's solar industry ranks among the top states, with enough solar installed to power more than 1M homes.[7]

A significant factor in the widespread adoption of solar energy generation is the dramatic downward trend in prices.

According to data from the National Renewable Energy Laboratory ("NREL"), utility-scale solar energy costs have declined by an average of 82% in the U.S. from 2010 to 2020.[8]

Utility-scale is defined by the generation of one or more MW of electricity.

[7] Solar Energy Industries Association, "Solar Industry Research Data," <https://www.seia.org/solar-industry-research-data>

[8] National Renewable Energy Laboratory, "Solar Installed Cost Analysis," <https://www.nrel.gov/solar/market-research-analysis/solar-installed-system-cost.html>

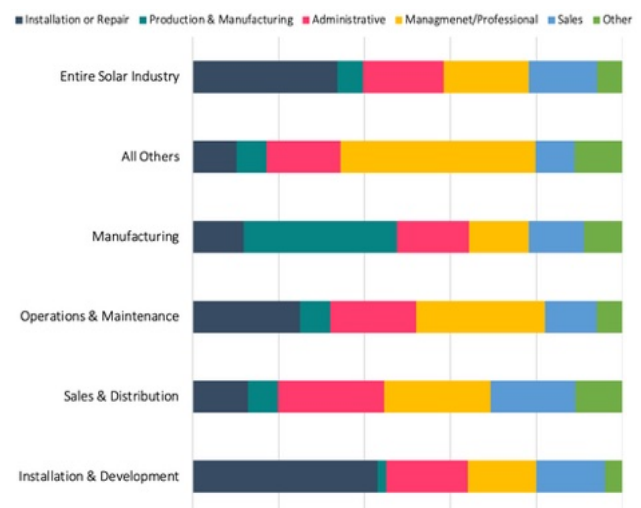
As of 2023, SEIA estimates that approximately 263,000 people are employed in various sub-sectors of the solar industry across the U.S., including manufacturing, installation, repair, and operations. In Arizona, around 8,300 individuals work in these sub-sectors.

Furthermore, solar accounted for 48% of all new electricity-generating capacity added to the U.S. grid for the first three quarters of 2023, showing resilience through recent price increases. The U.S. solar market increased its capacity by 35% year-over-year in Q3 2023.[9]

The U.S. solar industry is expected to remain strong and grow by 14% annually over the next five years.[9]

[9] Solar Energy Industries Association, "Solar Market Insight Report Q4 2023," <https://www.seia.org/research-resources/solar-market-insight-report-q4-2023>

U.S. SOLAR JOBS BY OCCUPATIONAL CATEGORY



Source: Solar Energy Industries Association

THE SOLAR INDUSTRY IN ARIZONA

According to data from the EIA, solar is the most prevalent renewable energy sub-sector in Arizona. In January 2024, solar energy represented about 69% of the utility-scale renewable energy generated in the state and 8% of the state's total utility-scale net output.[10]

According to data from the EIA there is a total of 88 utility-scale operable solar plants and 23 operable battery energy storage facilities in Arizona. There are also 8 utility-scale hydroelectric power plants. There is a total of 6 windfarms in Arizona – all of which are utility-scale.

Arizona's only solar thermal power plant is the Solana Generating Station in Maricopa County with a capacity of nearly 300MW. The state's largest solar farm is the Agua Caliente solar farm in Yuma County in the southwestern corner of Arizona. The solar farm has a capacity of 350MW.

Clean energy has long been dominated by conventional hydroelectric power in the state, but utility-scale solar installations surpassed hydroelectric generation for the first time in 2017. [11]

This follows a decades-long growth trend of solar energy production and the development of battery energy storage facilities in the state.

Battery storage is critical for Arizona's clean energy systems as it strengthens the resilience and stability of the state's electrical grid.

[10] U.S. Energy Information Administration, Electric Power Monthly (March 2024), Tables 1.11A, 1.11B, and 1.17A

[11] U.S. Energy Information Administration, "Arizona State Profile and Energy Estimates," <https://www.eia.gov/state/analysis.php?sid=AZ>



Solar Energy
Represents
69% of All
Renewable
Energy in
Arizona

According to SEIA, there is a total of 364 solar companies operating in Arizona (78 solar manufacturers, 166 installation and construction companies, and 120 other solar-related companies) that support 8,300 jobs in the state.

In 2022, Arizona was the 6th largest solar employer in the U.S., following California, Florida, New York, Texas, and Massachusetts.[12]

Among the largest companies that heavily invest in and rely on solar energy in the state are Meta (formerly Facebook), Google, Intel, Apple, and PayPal.

In 2023, Meta announced its Mesa data center will be supported by a new solar energy project, a 300MW solar and 300MW battery facility in Pinal County, through Salt River Project's ("SRP") power grid. Once online in 2024, this will be one of the largest battery energy projects built in a single phase in the U.S.[13]

It is estimated that Arizona's solar market is worth \$18.8B across the residential, commercial, community, and utility segments. This makes Arizona the 4th largest investor in solar behind California, Texas, and Florida.[14]

[12] Interstate Renewable Energy Council, "National Solar Jobs Census 2022," <https://irecusa.org/census-executive-summary/>

[13] Salt River Project, "Meta Teams up with SRP and Ørsted to Support Data Center with Clean Energy from New Solar and Battery Project," <https://media.srpnet.com/east-line-solar-plant-now-delivering-utility-scale-clean-energy-from-salt-river-project-to-intel/>

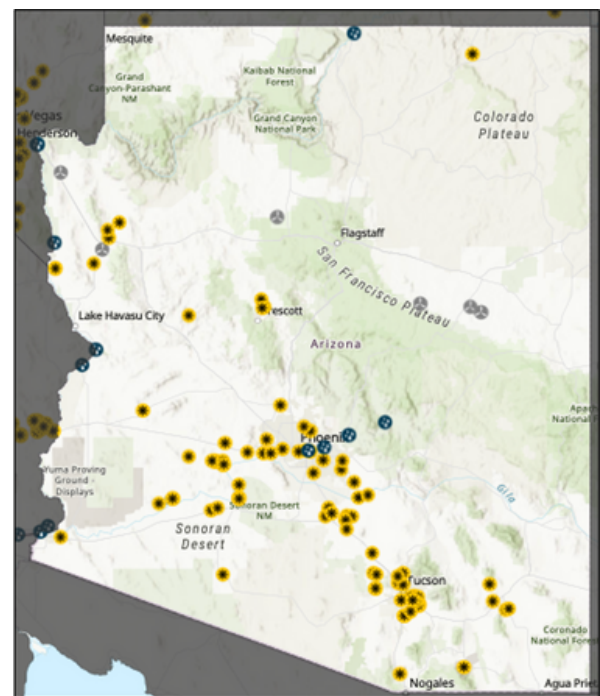
[14] Solar Energy Industries Association, "Solar State by State," <https://www.seia.org/states-map>

According to SEIA (2023), the state's solar capacity is expected to reach 9,100MW over the next five years. This represents an estimated 19% increase in solar capacity across Arizona.

Because of its growth potential, the EIA ranks Arizona 2nd in the nation for solar energy potential after Nevada.[15]

[15] U.S. Energy Information Administration, "Arizona State Profile and Energy Estimates," <https://www.eia.gov/state/analysis.php?sid=AZ#51>

ARIZONA UTILITY-SCALE CLEAN ENERGY POWER PLANTS



Source: U.S. Energy Information Administration

Solar Capacity in Arizona is
Expected to Grow 19% Over the
Next Five Years

ROLE OF LOCAL GOVERNMENT

Local and state governments play a critical role in advancing energy security. Developments in renewable energy not only enhance air quality but also improve grid reliability and advance economic development.

Renewable energy investments also support local jobs and keep energy expenditures within the community by reducing reliance on imported energy.

By embracing clean energy technologies, local governments can lead by example, encouraging innovation and setting a standard for economic growth.

Even with a pro-economic growth environment, there exists a number of issues related to the development of solar and energy storage sites in Arizona.

These issues range from state-level restrictions imposed by the Arizona State Land Department ("ASLD") to the individual counties where the proposed solar projects would be located.

The ASLD issues primarily relate to finding a balance between maintaining their primary charge of maximizing revenue to the State Trust Fund for education purposes, and the extent to which the Department should be restricting land sales due to speculation related to when an area might become in demand for residential or commercial development projects.

The ASLD evaluation process will be implementing more advanced analysis moving forward. Including the establishment of procedures to identify which land sales or lease practices are truly maximizing revenue to the State Trust Fund.

Additional local-level problems exist. However, the county and local concerns are more complicated. On the one hand, local control related to what is being developed is still important to be maintained.

Alternatively, if county supervisors or other local officials restrict the sale or lease of land for purposes other than economic, it could potentially be judged as an effective "taking of the land."

A more refined process for dealing with these issues is needed throughout the state since supporting clean energy projects fuel job growth, economic growth, and prosperity.



AVAILABILITY + RELIABILITY + AFFORDABILITY = ECONOMIC GROWTH

Over the last few years, there has been a noticeable shift towards prioritizing clean energy practices and energy reliability in business operations, particularly among Fortune 500 companies.

By adopting these practices, companies are not only enhancing operational efficiencies but also contributing to economic development.

This shift has led to the implementation of various initiatives, such as using clean energy sources, reducing waste, and promoting ethical business practices.

The adoption of these practices has not only helped companies to achieve their clean energy goals but has also enhanced their reputation and helped attract more customers as well as improve the energy reliability of local communities.

This means that businesses are increasingly seeking locations with access to sufficient and reliable power supplies, made feasible through solar and energy storage systems.

For example, LG Energy Solutions is investing \$5.5B in Queen Creek, Arizona, to build a major battery manufacturing complex and has emphasized its focus on utilizing the abundant solar energy of the state.[16]

Several other major companies, such as Amazon, Macy's, Ikea, Costco, Kohl's, Apple, Walmart, and Target, have adopted solar energy and implemented sustainable business practices.[17]

Google, another prominent corporation opening operations in Mesa, Arizona, has placed great emphasis on mitigating its carbon footprint through the adoption of renewable energy and other sustainable practices.[18]

Access to reliable energy is essential for these large companies, which would not consider locating in Arizona without it. Their presence contributes significantly to local economies by creating thousands of high-quality jobs.

[16] "Sustainability." LG Global, www.lg.com/global/sustainability/.

[17] Frangoul, Anmar. "10 Massive Corporations Going Big on Solar Power." CNBC, CNBC, 28 May 2018, www.cnbc.com/2018/05/28/10-massive-corporations-going-big-on-solar-power.html.

[18] Newman, Logan. "Google Breaks Ground on Arizona Data Center." GPEC, 6 Sept. 2023, www.gpec.org/news/press-releases/google-mesa-data-center-groundbreaking/#:~:text=September%206%2C%202023%20%E2%80%93,physical%20presence%20in%20the%20state.



The Absence of Clean Energy Could Deter Business Relocations & Expansions

STATEWIDE IMPACT

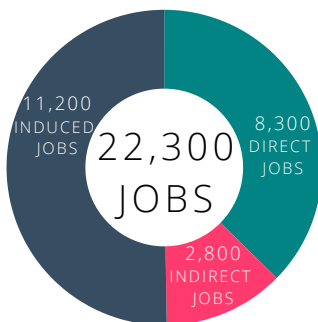
THE ECONOMIC IMPACT OF THE CLEAN ENERGY INDUSTRY IN ARIZONA

It is estimated that Arizona's solar industry directly generated \$5.2B in economic output in 2023 throughout Arizona.

The industry supported 8,300 direct jobs (according to SEIA) earning over \$1.5B in labor income at power plants, manufacturing facilities, installation and construction companies, and other renewable energy-related businesses across the state in 2023.

Each year, the economic activity of Arizona's renewable energy industry supports tangential industries and supplier companies, which increases its economic impact further.

In 2023, the industry supported an additional 2,800 indirect and 11,200 induced jobs across all industries.



Indirect and induced activity added \$691.5M in labor income and \$2.1B in economic activity to the statewide economy.

In total, the 2023 construction and operational activity of Arizona's solar industry supported 22,300 jobs, added \$2.2M in labor income, and generated \$7.3B in economic output across the state.



Note: Sum of direct, indirect, and induced impacts. May not sum to total due to rounding.
Source: Rounds Consulting Group, Inc.

Tax Revenue Benefits (in 2023)

State Taxes	\$83.6 M
Income Taxes	\$45.5 M
Sales Taxes	\$34.2 M
Vehicle Taxes & Fees	\$3.9 M
County Taxes	\$21.1 M
Sales Taxes	\$5.9 M
Property Taxes	\$4.3 M
State Shared Revenues	\$10.9 M
Municipal Taxes	\$38.8 M
Sales Taxes	\$21.5 M
Property Taxes	\$1.2 M
State Shared Revenues	\$16.0 M
Local Jurisdiction Taxes	\$12.0 M
Property Taxes	\$12.0 M
Total Tax Revenues	\$155.4 M

Note: Sum of direct, indirect, and induced impacts. May not sum to total due to rounding. Source: Rounds Consulting Group, Inc.

ADDITIONAL FISCAL IMPACTS

Advancing the state's solar infrastructure has far-reaching positive effects that stretch beyond energy security, it also impacts a community's financial stability.

Solar energy-producing facilities and battery energy storage sites require substantial capital investments that generate significant tax revenue benefits for Arizona and the state's counties, cities, towns, school districts, fire districts, and other local jurisdictions.

Income, sales, and excise taxes are generated through construction activity, as employees earn wages and spend their income at local businesses, and through ongoing repair, maintenance, and operational expenses.

Property tax revenues are generated through the taxes levied on energy production, energy storage, manufacturing, and construction equipment. Additional property taxes are collected from land, buildings, and employee-owned residential homes.

Property taxes are used to satisfy the bonded debt of local jurisdictions and fund specific projects and investments such as new educational facilities, school bus purchases, public safety infrastructure, assisted living for the elderly and disabled, and more.

In 2023, Arizona's solar industry generated approximately \$83.6M in state taxes, \$21.1M in county taxes, \$38.8M in municipal taxes, and \$12.0M other local property tax jurisdiction taxes.

Note: Sum of direct, indirect, and induced impacts. May not sum to total due to rounding.
Source: Rounds Consulting Group, Inc.

CLEAN ENERGY IN RURAL ARIZONA

In 2022, approximately 64% of Arizona's solar energy sites were located in rural areas, significantly boosting the local economies, as identified by the authors using information from EIA.

Locations in rural Arizona are ideal for solar energy generation. The state's Sonoran Desert to the south contains large, sparsely populated areas with high levels of sunlight for many consecutive days.

Specifically, Yuma County was found to have some of the highest levels of solar insulation (sunlight) in the U.S., making it one of the best locations for solar power generation.[19]

Rural counties like Pinal, Yavapai, Gila, Cochise, Mohave, and Santa Cruz are strategically located near major metropolitan centers and existing infrastructure - which presents an ideal opportunity for additional renewable energy investments.

[19] U.S. Department of the Interior Bureau of Land Management, "Nation's Clean Energy Future Unfolds Under the Arizona Sun," <https://www.blm.gov/blog/2023-09-22/nations-clean-energy-future-unfolds-under-arizona-sun>

Clean energy offers significant benefits for rural areas. For example, solar projects create jobs in rural areas where employment opportunities may be in short supply. These projects require workers for installation, maintenance, and ongoing operations – providing long-term employment opportunities.

In total, the solar industry in rural counties supported 9,700 jobs, contributed \$946.3M in labor income, and generated \$3.2B in economic output in 2023.

Additionally, the solar industry produced \$36.6M in state tax revenues, \$10.1M in county tax revenues, \$17.7M in municipal tax revenues, and \$7.6M in local jurisdiction tax revenues in 2023.

The tax revenues generated by the industry bolster local government budgets and can be strategically redirected to fund economic development initiatives, enhance public services, and reduce local tax burdens for residents.

For example, these funds could enhance education, workforce training, transportation, and other services in rural communities where resources are limited, increasing local economic growth.

The tax revenue infusion could also allow local governments to lower taxes for residents, effectively putting more money back into the pockets of residents and the community.



The Solar Industry Supports 9,700 Jobs in Rural Communities Across Arizona



The Negative Impact of an Unreliable Power Supply Could Cost the State \$500M

ECONOMIC RISKS

An underappreciated but significant challenge related to maximizing the state's local economic development potential is whether the state will be able to generate enough power to maintain its current momentum in attracting high-wage semiconductor companies and other high-tech, high-volume electric power users.

Each of the major state utilities have aggressive goals related to the use of clean energy (with emphasis on solar) that will need to be met by purchasing energy from solar energy and battery storage providers.

Furthermore, it is important to avoid ANY situation where it becomes even mildly common for brownouts or blackouts to occur. The negative impacts would dwarf the negative press in Arizona that was received when people believed the state was nearly out of water. This would also severely dampen the state's rate of economic growth going forward.

For context on the risks associated with a slowing economy, if electricity demand exceeds supply and the state loses its favorable status as a reliable energy provider, each 0.1 percentage point decline in the rate of job growth (i.e., 1/10th of 1%) translates to nearly \$100M in lost state and local tax collections over a 20-year period.

The state suddenly having an unreliable energy supply would result in an estimated 0.3 to 0.5 percentage point slowing in job growth, and the 20-year fiscal impact grows to between \$300M and \$500M in lost tax revenue.



PROSPECTIVE PROJECTS

PROSPECTIVE SOLAR & ENERGY STORAGE SITES - CASE STUDY #1

The following analyses detail the construction and operational impacts of two prospective solar projects, aimed at assessing their potential benefits within the context of projects currently in the development pipeline in Arizona.

The first case study is a \$1.1B utility-scale solar and battery storage facility planned for Eloy, Arizona. Once completed, the project would have an electric generating capacity of 800MW and a battery storage capacity of 800MW.

The impact estimates include the direct, indirect, and induced impacts over a 30-year period.

CASE STUDY #1 CONSTRUCTION IMPACT

The initial and ongoing construction of the project is estimated to support 8,700 jobs, \$465.3M in labor income, and \$1.3B in economic output over the 30-year period.

Additionally, the state is expected to collect \$35.1M, Pinal County is expected to collect \$9.2M, and Eloy is expected to collect \$15.4M in tax revenues from the construction activity.

This would include the tax revenues generated by direct construction expenditures as well as the taxes generated as a result of money circulating throughout the local economy.

CASE STUDY #1

ANNUAL IMPACT OF OPERATIONS

Once operational, the Eloy project would significantly enhance the region's energy capacity and could serve as a catalyst for local economic development.

The solar project's annual operations create demand for supplier businesses and other tangential businesses as local workers spend their income throughout the local economy. This ripple effect generates additional jobs, income, economic output, and tax revenues.

Annually, the Eloy solar project's operations are expected to support 60 jobs, add \$4.7M in labor income, and generate \$18.7M in economic activity.

Over the first 30 years of operations, it is estimated that the project would produce \$141.9M in labor income and generate \$561.8M in economic activity.

Yearly operations over 30 years are estimated to generate \$5.4M in state taxes, \$55.8M in Pinal County taxes, \$15.8M in Eloy taxes, and \$27.6M in local property taxes for the local school districts and the community college district, among other local jurisdictions.

Tax Revenue Benefits

Construction & Operations (30-Years)

State Taxes	\$40.5 M
Income Taxes	\$14.9 M
Sales Taxes	\$23.8 M
Vehicle Taxes & Fees	\$1.8 M
Pinal County Taxes	\$64.9 M
Sales Taxes	\$6.7 M
Property Taxes	\$57.8 M
State Shared Revenues	\$0.4 M
Eloy Taxes	\$31.2 M
Sales Taxes	\$15.4 M
Property Taxes	\$15.6 M
State Shared Revenues	\$0.2 M
Local Jurisdiction Taxes	\$27.6 M
Property Taxes	\$27.6 M
Total Tax Revenues	\$164.2 M

Note: Sum of direct, indirect, and induced impacts. May not sum to total due to rounding. Source: Rounds Consulting Group, Inc.

CASE STUDY #1

30-YEAR IMPACT

In total, the construction and operations of the Eloy project are estimated to support 8,700 total construction jobs and 60 annual operations jobs per year, and produce \$607.2M in labor income, \$1.8B in economic output, and \$164.2M in tax revenues over 30 years.



\$1.8B
ECONOMIC
IMPACT



8,700 JOBS
TOTAL CONSTRUCTION-
RELATED
60 JOBS
ANNUAL OPERATIONS-
RELATED



\$607.2M
LABOR INCOME



\$40.5M
STATE REVENUES



\$64.9M
COUNTY REVENUES



\$58.8M
LOCAL REVENUES

Note: May not sum to total due to rounding. Estimates illustrate the direct, indirect, and induced aggregate impact of construction and operations over 30-years.
Source: Rounds Consulting Group, Inc.

PROSPECTIVE SOLAR & ENERGY STORAGE SITES - CASE STUDY #2

The second case study is a \$400M solar and battery storage facility proposed for Coolidge in Pinal County. Once completed, the project is estimated to have an electric generating capacity of 150MW and 150MW of battery storage.

The impact estimates include the direct, indirect, and induced impacts over a 30-year period.

CASE STUDY #2 CONSTRUCTION IMPACT

Construction of the project is expected to support 3,100 jobs and generate \$454.0M in economic output over 30 years.

The state is estimated to collect \$11.6M, Pinal County would collect \$3.0M, and Coolidge would collect \$4.1M in tax revenues from construction of the project.

“We currently have up to a 1-MW capacity solar power system in Arizona... The energy generated goes directly into powering our plant... [to] light our parking lots... Lucid recognizes the need to increase the use of renewable or carbon-free energy and we are actively working to increase renewable energy generation and purchases where possible.”

- Peter Rawlinson, CEO of Lucid Motors

CASE STUDY #2

ANNUAL IMPACT OF OPERATIONS

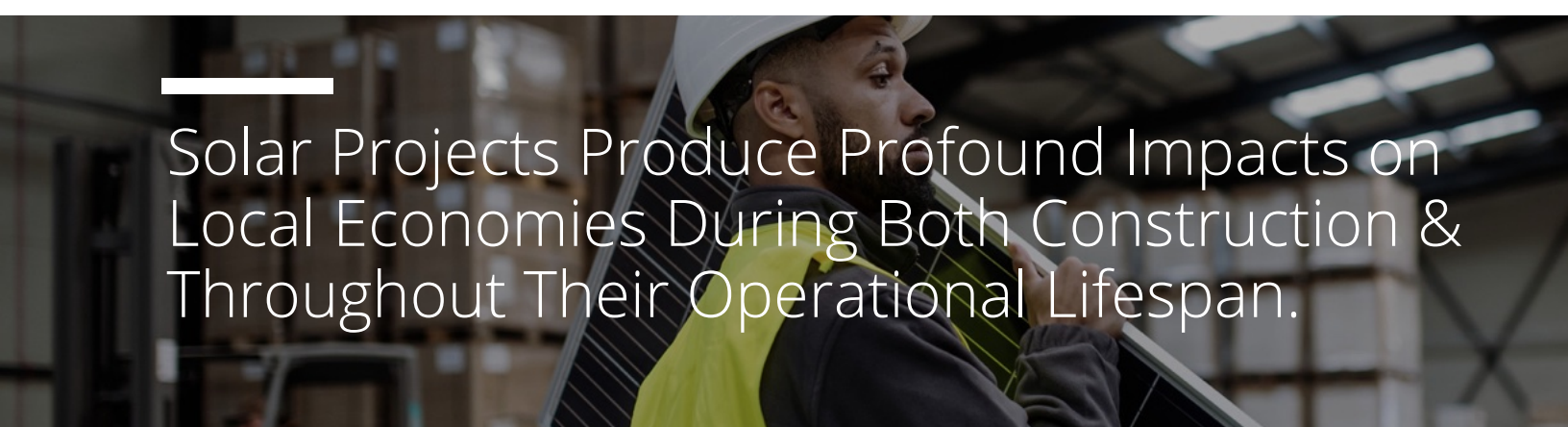
In its operational phase, the Coolidge project in Pinal County would promote energy security and resilience against power outages, contributing to sustainable economic growth in the region.

Annually, the project is expected to support 20 ongoing jobs, including technicians, engineers, maintenance, and supporting personnel.

Over the first 30 years of the project's operational lifespan, ongoing activity is projected to generate \$54.1M in labor income and \$214.0M in economic output.

Annual operations of the project are estimated to generate \$2.1M in state taxes, \$31.3M in Pinal County taxes, \$18.8M in Coolidge taxes, and \$18.8M in property taxes for the local school district, community college district, library district, and flood district, among others, over 30 years.

These tax revenues would be generated by income, sales, and property taxes, which not only include commercial property taxes, but the revenues generated by employee spending over the 30-year operational lifespan of the solar project in Coolidge.



Solar Projects Produce Profound Impacts on Local Economies During Both Construction & Throughout Their Operational Lifespan.

Tax Revenue Benefits

Construction & Operations
(30-Years)

State Taxes \$13.6 M

Income Taxes \$5.4 M

Sales Taxes \$7.6 M

Vehicle Taxes & Fees \$0.7 M

Pinal County Taxes \$34.2 M

Sales Taxes \$2.1 M

Property Taxes \$32.0 M

State Shared Revenues \$0.1 M

Coolidge Taxes \$22.9 M

Sales Taxes \$3.9 M

Property Taxes \$18.9 M

State Shared Revenues \$0.2 M

Local Jurisdiction Taxes \$18.8 M

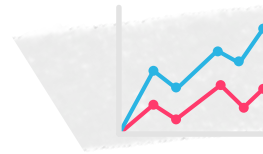
Property Taxes \$18.8 M

Total Tax Revenues \$89.5 M

Note: Sum of direct, indirect, and induced impacts. May not sum to total due to rounding. Source: Rounds Consulting Group, Inc.

CASE STUDY #2 30-YEAR IMPACT

In total, construction and operations of the Coolidge project are estimated to support 3,100 total construction jobs and 20 operations jobs per year, and produce \$219.8M in labor income, \$668.0B in economic output, and \$89.5M in tax revenues over 30 years.



\$668.0M
ECONOMIC
IMPACT



3,100 JOBS
TOTAL CONSTRUCTION-
RELATED
20 JOBS
ANNUAL OPERATIONS-
RELATED



\$219.8M
LABOR INCOME



\$13.6M
STATE REVENUES

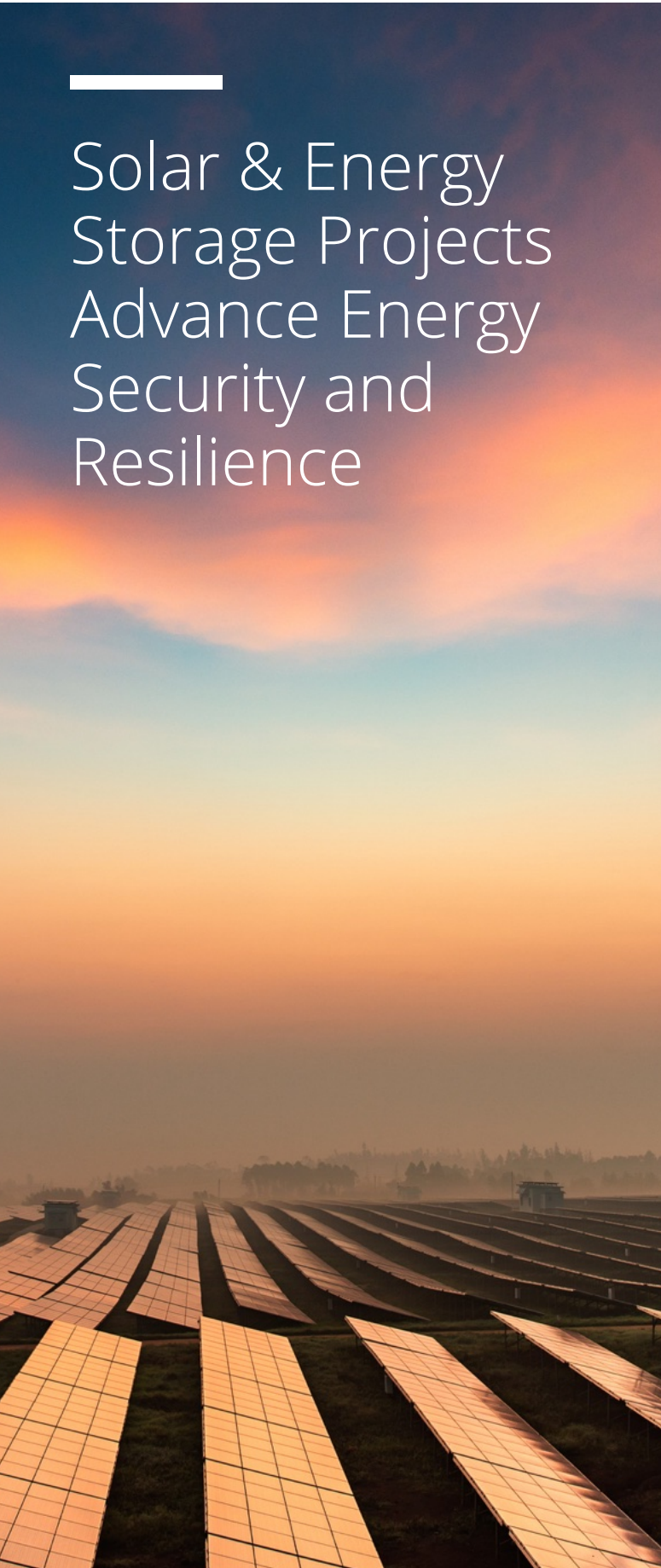


\$34.2M
COUNTY REVENUES



\$41.7M
LOCAL REVENUES

Note: May not sum to total due to rounding. Estimates illustrate the direct, indirect, and induced aggregate impact of construction and operations over 30-years. Source: Rounds Consulting Group, Inc.



Solar & Energy Storage Projects Advance Energy Security and Resilience

THE DELICATE BALANCE OF ENERGY SUPPLY & DEMAND

An imbalance in energy supply and demand poses a risk to the local economy's momentum with minor declines in job growth potentially leading to substantial tax revenue losses. This is especially true for Pinal County and other rural counties.

For context on the risks associated with a slowing economy, if energy demand exceeds supply, each 0.1 percentage point decline in the rate of job growth in Pinal County results in a decline of \$57M in state tax revenues, \$14M in county taxes, and \$16M in local tax revenues over 20 years.

Note: Sum of direct, indirect, and induced impacts. May not sum to total due to rounding.
Source: Rounds Consulting Group, Inc.

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“[Our] collaboration with SRP and NextEra Energy Resources is accelerating decarbonization in Arizona and our own carbon-free journey in the region. Plus helping advance the transition from fossil fuels to carbon-free energy sources is necessary as we work together to address the climate crisis and ensure stable, affordable access to clean energy.”

- Amanda Peterson Corio, Global Head of Data Center Energy at Google

— ” —

APPROACH TO ANALYSIS

METHODOLOGY

Economic and fiscal impact models can be used to measure existing activity and potential expansions or contractions of an area's economy.

Typically, the level of economic effects resulting from the activity is estimated in terms of *output*, *labor income*, *jobs*, and *tax revenues*.

Output captures the broader level of economic activity, or the total value of goods and services produced in the region. This is similar to how statistics like gross domestic product ("GDP") capture economic volume.

Labor income measures the total change in employee-earned wages throughout the economy. The *jobs* estimate represents the total annual number of full-time (or equivalent) jobs.

Tax revenue estimates are derived by identifying the economic activities subject to taxes (such as sales, income, and property) and applying the relevant tax rates to these activities to calculate the total tax contribution.

The economic effects of the initial activity create additional activity in the regional economy. This relationship is known as the "multiplier" or "ripple" effect.

The basis for multiplier effects is the interdependencies between industries, how one industry impacts other sectors, and the cycle of spending and re-spending within the regional economy.

Direct effects, or impacts, measure business activity at an individual site or the initial economic change attributed to the development under consideration.

Indirect impacts capture additional output, earnings, and employment changes generated by increased demand in the industries that supply services or products to the direct business or development under consideration.

Induced impacts capture additional impacts generated by increased spending in the local economy by the households of both the direct and indirect employees.

The Rounds Consulting Group proprietary economic impact model employs this input-output methodology and uses Arizona-specific IMPLAN multipliers and adjustments, a standard practice in economic impact modeling.

The assumptions and data used in this analysis are subject to marginal uncertainty and variation. Therefore, actual impacts may vary, and some impacts may not materialize due to unanticipated events and changing circumstances.

ABOUT THE AUTHORS

Rounds Consulting Group is a leading economic and policy advisory firm founded by economists, Jim Rounds and Luis Cordova.

Our firm excels in translating complex economic data into actionable insights for policymakers, government agencies, private companies, and non-profit organizations.

We specialize in creating detailed impact models that forecast the economic and government tax revenue effects of proposed policies, business expansions/relocations, real estate developments, and industry-wide activity, to name a few.

Our expertise extends to robust data collection, advanced research, strategic planning, and sophisticated revenue forecasting for state, county, and city governments.

For more details about our services and expertise, please visit us at: www.roundsconsulting.com

This report was prepared by Jim Rounds, Luis Cordova, and Ethan Burke for The Western Way.



JIM ROUNDS
PRESIDENT & CEO

Jim regularly provides advice to policymakers at the Arizona State Capitol, mayors throughout the state, city council members, county board members, and other public and private leaders.



LUIS CORDOVA
SENIOR VP & COO

Luis is the company's specialist in developing market analyses and impact modeling to help shape policy, economic, and business development.



ETHAN BURKE
ECONOMIC ANALYST

Ethan is responsible for data collection and analysis. This research provides data-driven insights to help inform decision-making.

The impact estimates and findings contained in this report are based on independent data analyses and assumptions derived from a variety of sources. This report is intended to be used in its entirety and not in parts.

