

ARIZONA'S PRO-BUSINESS CLIMATE:

A Magnet for Clean Energy Investment and Job Creation



THE WESTERN WAY

Arizona has a strong track record of attracting new business investment and job creation across a host of economic sectors, including aerospace, bioscience, financial services and technology. However, the state's commitment to low taxes, reasonable limits on business regulation and an affordable cost of living has also drawn considerable clean energy investment to the state. According to an economic analysis conducted by The Western Way, active and recently announced investments in Arizona's clean energy sector will be a major driver of job creation, both during the construction and operations phase of development:

CONSTRUCTION PHASE



87,000

Construction Jobs



Average Salary

\$55,000

OPERATIONS PHASE



22,400

Operations Jobs



Average Salary

\$60,000



"COVID highlighted how shipping costs and shipping availability can shift tremendously depending on what's happening on the global stage. ... We genuinely believe the North American market, especially the U.S. market, to be the world's largest and fastest-growing market for grid-scale batteries."

– [Peter Gibson, VP of Sales and Marketing, LG Energy Solution Vertech](#)

These figures reflect a rising trend following the COVID-19 pandemic: U.S. businesses and consumers are seriously rethinking the reliability of overseas supply chains and showing a strong preference towards products made here in the United States.

The energy sector is part of this economy wide trend, and the push to build more batteries, solar panels and other energy technologies domestically has resulted in a series of major investments in Arizona. For the purposes of this analysis, The Western Way assessed the investment and employment impacts of the following clean energy projects, using regional modeling tools developed by the U.S. Bureau of Economic Analysis:

Construction Phase Impacts				
Project	Area	Capital Investment (\$ millions)	Jobs (Direct & Indirect)	Labor Income (\$ millions)
ElectraMeccanica	EV Manufacturing	\$54.7	359	\$19.9
Lucid AMP-1 Factory 2021	EV Manufacturing	\$469.3	3,080	\$170.5
Lucid AMP-1 Factory Expansion	EV Manufacturing	\$177.5	1,165	\$64.5
Nikola Factory	EV Manufacturing	\$938.6	6,160	\$340.9
LG Energy Solution	Battery manufacturing	\$8,603.6	56,467	\$3,125.0
Evelution Energy	Battery manufacturing	\$312.9	2,053	\$113.6
American Battery Factory	Battery manufacturing	\$1,877.1	12,320	\$681.8
Cirba Materials/Heritage Battery Recycling	Battery recycling	\$78.2	513	\$28.4
Ecobat	Battery recycling	\$104.9	689	\$38.1
Sion Power	Battery recycling	\$533.4	3,501	\$193.7
JA Solar	Solar PV production facility	\$93.9	616	\$34.1

Operations Phase Impacts				
Project	Area	Capital Investment (\$ millions)	Jobs (Direct & Indirect)	Labor Income (\$ millions)
ElectraMeccanica	EV Manufacturing	245.49	873	50.90
Lucid AMP-1 Factory 2021	EV Manufacturing	701.40	2,493	145.43
Lucid AMP-1 Factory Expansion	EV Manufacturing	265.36	943	55.02
Nikola Factory	EV Manufacturing	210.42	748	43.63
LG Energy Solution	Battery manufacturing	1,718.27	12,246	743.49
Evelution Energy	Battery manufacturing	20.99	150	9.08
American Battery Factory	Battery manufacturing	424.79	3,028	183.81
Cirba Materials/Heritage Battery Recycling	Battery recycling	31.97	228	13.83
Ecobat	Battery recycling	19.27	137	8.34
Sion Power	Battery recycling	58.98	420	25.52
JA Solar	Solar PV production facility	158.20	1,128	68.45

CONCLUSION

This economic analysis is based on a snapshot of 11 different clean energy projects in various stages of development across the state of Arizona. It is not intended to be an exhaustive review of the clean energy sector's contribution to the overall economy of Arizona, however, even this limited snapshot shows that Arizona is already a major destination for clean energy investment and job creation.

The challenge before state policymakers and business leaders, therefore, is how to keep this trend moving in a positive direction for Arizona. The creation of a clean energy "game plan" that tackles complex issues – such as building and maintaining a skilled workforce for this sector and creating incentives for locally based research and development – will complement the decades of work that has made Arizona a highly attractive destination for investment from industries of all kinds.

"Arizona is experiencing unprecedented economic growth, delivering increasing economic opportunities to residents across the state. With a reputation as the premier destination to do business, Arizona continues to attract global companies in high-wage industries such as advanced manufacturing, life sciences, technology, and more."

– Sandra Watson, President and CEO of the Arizona Commerce Authority





APPENDIX- SUMMARY OF METHODOLOGY

This analysis examined 11 different projects in various stages of development across Arizona. The economic impacts of these projects were estimated using publicly available data, which was then entered into the Regional Input-Output Modeling System (RIMS II). RIMS II is a modeling tool developed by the Bureau of Economic Analysis (BEA) for use by “investors, planners, and elected officials to objectively assess the potential economic impacts of various projects.”¹

For the construction phase, it was assumed that two-thirds of the overall investment cost was to be absorbed by the cost of the advanced manufacturing and processing equipment necessary for these facilities. This assumption was consistent with an assessment conducted by the Pinal County Board of Supervisors² in regards to the Lucid I initial buildout and assumed to be a generally applicable ratio for the other projects, given similar advanced manufacturing and processing technologies.

This analysis further assumes 60% of the capital used for equipment was invested locally in equipment manufacturing, material sourcing, transportation, construction, installation, etc. For the operations phase, publicly issued assessments for the number of “permanent jobs” were applied to BEA-produced multiplier tables to assess a range of economic impacts, including total jobs created (direct, indirect and induced) and earnings associated with those new jobs.


For those projects that are involved with EV manufacturing, the aggregate “Motor vehicles, bodies and trailers, and parts manufacturing” industry multipliers were used. For the battery and solar PV projects, the aggregate, “Electrical equipment, appliance, and component manufacturing” industry multipliers were used.

1. <https://apps.bea.gov/regional/rims/rimsii/home.aspx>

2. <https://www.azcentral.com/story/money/business/energy/2020/12/01/lucid-motors-factory-az-completed-manufacturing-begin-2021/6407567002/>

ABOUT THE WESTERN WAY:

The Western Way is a nonprofit organization urging Western conservative leaders to acknowledge actual environmental challenges and deliver efficient, pro-market solutions. The Western Way engages policy makers across the Interior Rocky Mountain West region of our country to provide proactive and constructive solutions that grow our economy and benefit the environment. The Western Way works with leaders from Arizona, Colorado, Idaho, Montana, Nevada, Utah, and Wyoming. To learn more and to stay up to date with The Western Way, please visit <http://www.thewesternway.org>.



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