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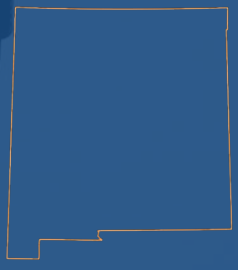
WESTERN RTO ECONOMIC IMPACT STUDY

NEW MEXICO RESULTS



Prepared for Advanced Energy Economy
by Energy Strategies, LLC, and Peterson & Associates

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Western RTO Economic Impact Study
New Mexico Results
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Prepared by:
Energy Strategies, LLC
Peterson & Associates

Energy Strategies, LLC
111 East Broadway, Suite 1200
Salt Lake City, UT 84111
801-355-4365

www.energystrat.com

EXECUTIVE SUMMARY

In July 2022, Advanced Energy Economy (AEE) released the *Western Regional Transmission Organization (RTO) Economic Impact Study: Region Wide Analysis*. That report provides a summary of the methodology and assumptions used to assess the non-energy economic impacts that might accrue to the West due to the development of a broad, West-wide organized electricity market or RTO. The report, prepared by Energy Strategies and Peterson & Associates, filled a research gap on the broader economic impacts that might result from the electricity cost savings and structural changes brought about by a potential RTO in the West. The region-wide analysis summarizes the total, combined economic impacts for the 11 Western states that were evaluated as part of the study effort.

This summary document provides the high-level economic impacts expected to accrue to New Mexico, specifically, from the development of a West-wide RTO. It demonstrates that operation of a West-wide RTO can bring substantial economic growth, including new jobs, new indirect business taxes, and increases to Gross State Product (GSP) to New Mexico.[1] This study focused on evaluating two broad categories of economic impacts that may occur in New Mexico from an RTO:

1. The economic impacts to New Mexico from **increased spending power for households** that would occur due to electricity prices being lower under an RTO than under the status quo for electricity markets in the region, and
2. The economic impacts from **new or expanded business activity** due to RTO development, including both:
    a. The impact of lower electricity prices for businesses, incentivizing them to expand in or locate to New Mexico, and
    b. Structural changes to the electricity market enabling new renewable energy development contracts to meet corporate clean energy demand, which is currently taking place primarily in regions with RTOs.

Studying the potential impacts of an RTO resulted in a range of expected economic impacts to New Mexico. This range reflects the uncertainty in how sensitive firms ultimately are to electricity prices and on how much additional clean electricity generating capacity would be built due to the new contracting structures enabled by the RTO. While the range of impacts is fairly wide, the results demonstrate that, even on the low-end, the economic benefits of an RTO to New Mexico are expected to be substantial. The range of economic impacts to New Mexico, in the 2030 timeframe, is illustrated below in Figure 1.

[1] All of the caveats, considerations, assumptions, and disclaimers discussed in the *Western RTO Economic Impact Study: Region Wide Analysis* also apply to this summary document. Readers looking for more detailed information, and to understand the qualifications of this study work, should refer to that report.

In summary, the creation of a West-wide RTO is expected to:

- Result in about **$114 million per year in electricity cost savings for New Mexico** compared to operation of the electrical grid without a West-wide RTO (after taking into account likely RTO operational costs for New Mexico)[2]

- Provide between **4,900 and 18,800** permanent jobs across the state, with those jobs averaging total compensation (payroll plus benefits) of roughly $47,000 per year

- Generate between **$426 million and $1.6 billion in additional GSP per year** on an ongoing basis across the state (equivalent to 0.4% to 1.7% of New Mexico's current GSP)

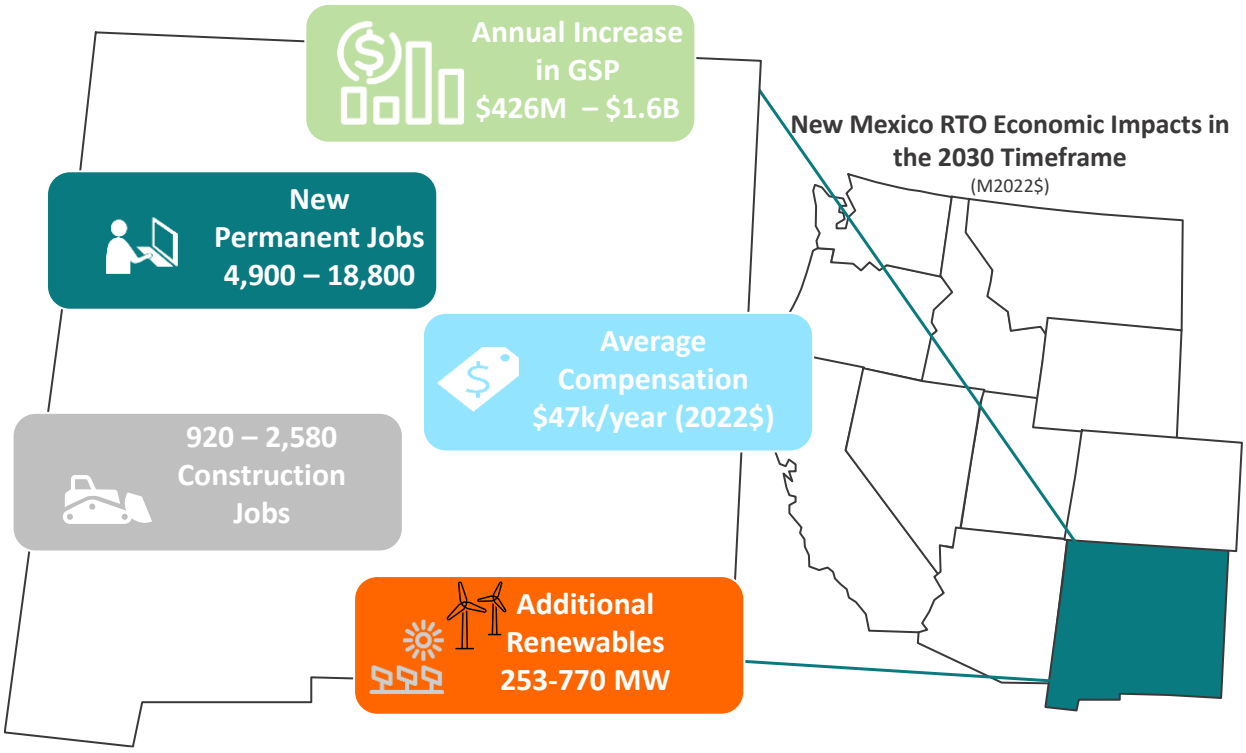
- Produce incremental state and local tax contributions ranging between **$33 million and $116 million per year**

- Create **920 to 2,580 temporary construction jobs in 2030** from the development of additional clean energy resources to meet corporate demand, resulting in an additional **$83 million to $233 million in GSP and $6.3 million to $17.6 million in taxes** on a temporary basis; and

- If an RTO were to locate in New Mexico, the incremental direct investments (in the form of hardware/software, office space and staffing to support the RTO's operations**), there would be additional economic benefits to the state**, the range of which is summarized in Appendix A of the Western RTO Economic Impact Study: Region Wide Analysis.

[2] This calculation of electricity cost savings does not account for ***all*** potential benefits or costs of RTO formation/operation that might affect individual utilities or states. The quantified RTO benefits include only a subset of potential benefit categories and do not account for, for instance, the benefits of centralized transmission planning or enhanced reliability offered by an RTO. The RTO operational costs also do not account for all cost impacts from RTOs. For instance, utility-level investments and staffing costs that may be required to participate in an RTO are highly dependent on the specifics of a utility's situation and have not been analyzed and netted from gross benefits in this study. Additionally, transmission cost shifts that may occur due to RTO formation (eliminating the need for one utility to pay another utility to utilize their transmission system) have not been evaluated in the context of this study.

Figure 1 Summary of Range of New Mexico's Non-Energy Economic Impacts Associated with RTO Formation



These benefits to the New Mexico economy would be driven by lower electricity prices (in comparison to a case without an RTO) for households and businesses, additional clean energy development across the state, and expansion of existing or attraction of new businesses to New Mexico, which may decide to locate or expand in the state from the competitive advantage gained from lower electricity prices. The industries affected by this advantage include those crucial to the state's long-term economic strategy, including the potential to expand construction of utility system, various manufacturing, and data center-type activities. The direct growth that may occur in various industries will also have indirect and induced effects (also called "multiplier effects") as the increased direct economic activity flows through the New Mexico economy.

ELECTRICITY PRICE BENEFITS NET OF RTO OPERATIONAL COSTS FOR NEW MEXICO

Table 1 illustrates the assumed gross RTO benefits for New Mexico,[3] the estimated RTO operational costs for New Mexico, and the benefits of RTO operation net of RTO operational costs. The assumed levels of savings associated with RTO operation were a key input into this study's economic impact analysis.

Table 1 Calculation of RTO Benefits Net of Operational Costs for New Mexico

New Mexico (Millions 2022$)	2025	2030	2035
Gross RTO Benefits	$90	$123	$123
RTO Administrative Costs	$9	$9	$10
Benefits of RTO Operation Net of RTO Operational Costs	$81	$114	$114

ECONOMIC IMPACT TO NEW MEXICO FROM INCREASED SPENDING POWER FOR HOUSEHOLDS

Table 2 presents the economic impacts to New Mexico from increased spending power for households due to lower electricity prices afforded by an RTO. These results factor in the "leakage" that is expected out of the economy,[4] as well as the impact of the direct and multiplier effects attributed to an increase in household expenditures that can occur when electricity prices in New Mexico are lower with an RTO than they otherwise would have been.

[3] These data points were generally taken from the "*State-Led Market Study*" (*Exploring Western Organized Market Configurations: A Western State's Study of Coordinated Market Options to Advance State Energy Polices*) dated July 30, 2021 which includes two companion reports: Technical Report, Market and Regulatory Review.

[4] Leakage accounts for the fact that some of the increased spending for goods and services will leave the economy and will not recirculate within it (for instance, it may be spent on goods overseas).

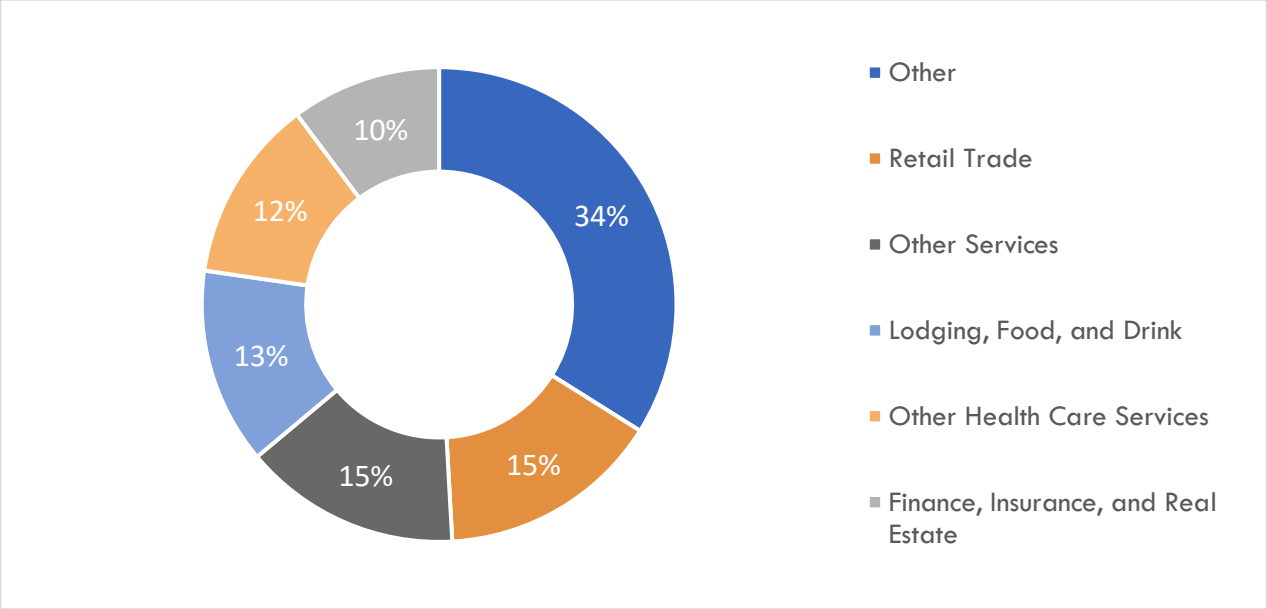
Table 2 Annual Economic Impact to New Mexico from Increased Spending Power for Households due to an RTO

New Mexico Economic Impacts from Increased Spending Power for Households	2025	2030	2035
Pre-Leakage Electricity Cost Savings (Millions 2022$)	$81	$114	$114
Post-Leakage Electricity Cost Savings (Millions 2022$)	$60	$85	$84
Gross State Product (Millions 2022$)	$57	$80	$79
Total Compensation (Millions 2022$)	$29	$41	$41
Total New Ongoing Jobs (FTEs)	701	986	983
Total Indirect Taxes (Millions 2022$)	$5.6	$7.8	$7.8

Figure 2 shows the top industries in New Mexico that are expected to be affected by increased spending power for households and which see new employment created in the state.[5]

[5] Industry names are reflective of the North American Industry Classification System (NAICS) two- and three-digit codes.

Figure 2 Jobs Created in New Mexico (2030) from Increased Spending Power for Households due to an RTO



ECONOMIC IMPACT TO NEW MEXICO ASSOCIATED WITH EXPANDED BUSINESS ACTIVITY AND CLEAN ENERGY INVESTMENT

New and Expanded Business Activity from Lower Electricity Prices

The *Western RTO Economic Impact Study: Region Wide Analysis* discussed the potential for increased economic activity from additional and expanded business activity associated with the competitive advantages offered by lower electricity costs. Figure 3 and Table 3 illustrate the range of potential direct employment impacts in New Mexico, by industry, from the RTO's ability to lower electricity prices from what they otherwise would be which, in turn, can increase business formation and business growth within New Mexico. Table 3 includes both low-end and high-end bookend values for 2030, along with the current employment and compensation by industry for context.

Figure 3 Composition of Direct Job Growth in New Mexico, by Industry, from Additional Business Activity

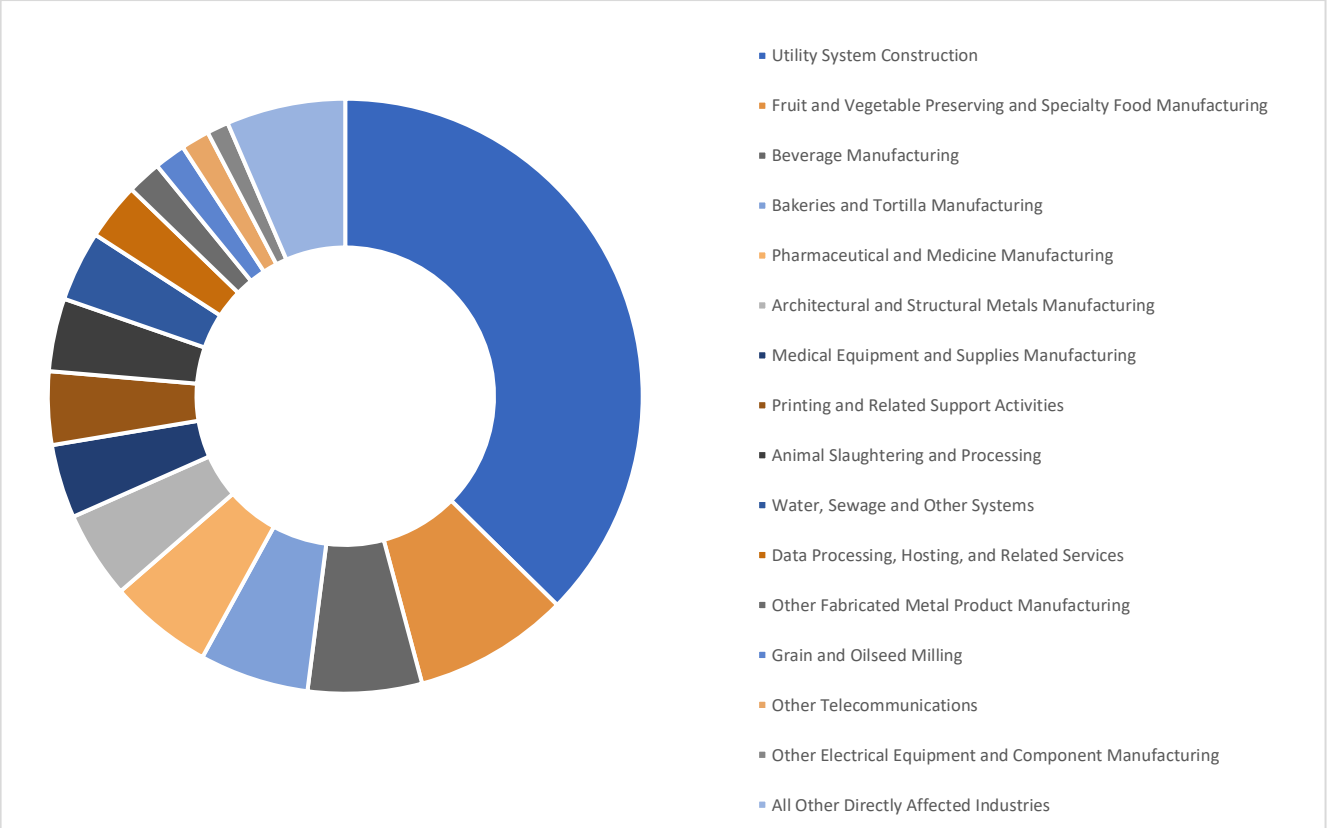


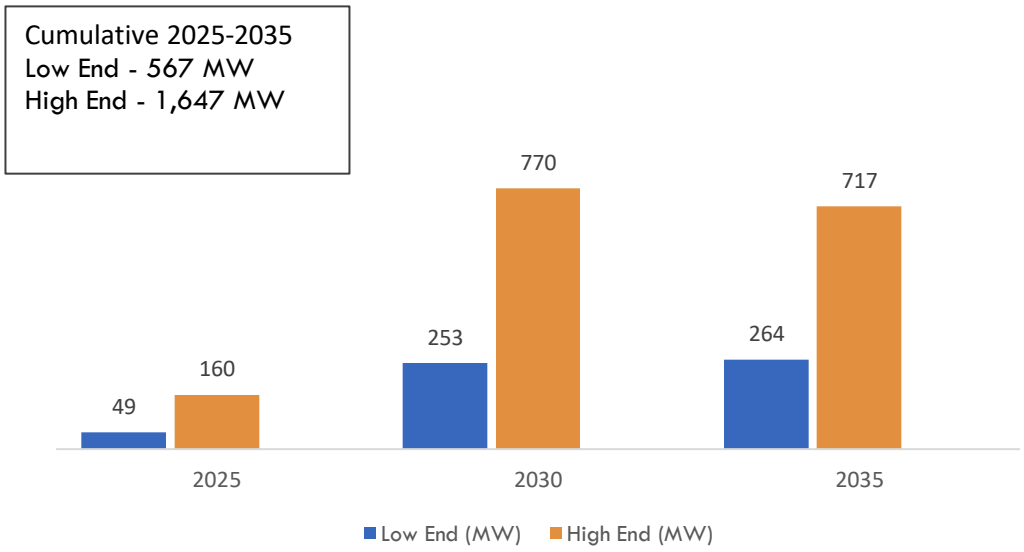
Table 3 Key Industries Expected to Grow or Locate in New Mexico Due to Lower Electricity Prices from an RTO

	Industry	Low Direct Growth FTE (2030)	High Direct Growth FTE (2030)	Current Employment (2022)	Average Annual Payroll and Benefits
1	Utility System Construction	647	2,940	7,123	$74,839
2	Fruit and Vegetable Preserving and Specialty Food Manufacturing	146	665	1,597	$45,574
3	Beverage Manufacturing	107	487	1,146	$40,003
4	Bakeries and Tortilla Manufacturing	103	467	1,091	$38,314
5	Pharmaceutical and Medicine Manufacturing	98	444	1,036	$70,718
6	Architectural and Structural Metals Manufacturing	82	373	943	$55,067
7	Medical Equipment and Supplies Manufacturing	69	315	774	$63,470
8	Printing and Related Support Activities	69	313	772	$42,213
9	Animal Slaughtering and Processing	69	312	688	$33,203
10	Water, Sewage and Other Systems	66	300	725	$66,523
11	Data Processing, Hosting, and Related Services	54	244	621	$112,997
12	Other Fabricated Metal Product Manufacturing	32	147	354	$61,275
13	Grain and Oilseed Milling	29	134	334	$78,736
14	Other Telecommunications	27	122	330	$88,490
15	Other Electrical Equipment and Component Manufacturing	20	93	223	$56,916
	All Other Directly Affected Industries	112	509	1,163	$70,128
	Total in Directly Affected Industries	**1,731**	**7,865**	**18,921**	**$57,645**

Incremental Clean Electricity Resource Investment

Development of an RTO may also result in increased clean electricity resource development in the West, including in New Mexico. Figure 4 shows the new clean electricity investments (in MW) in New Mexico for the low-end and high-end cases by year. This incremental investment is expected to occur because the structural changes to the electricity market resulting from RTO formation provide greater opportunities for meeting corporate clean energy demand. This type of renewable energy development is currently taking place primarily in regions with RTOs.

Figure 4 Additional Clean Electricity Construction Estimated in New Mexico with an RTO



COMBINED RESULTS FROM NEW/EXPANDED BUSINESS ACTIVITY AND INCREMENTAL CLEAN ELECTRICITY INVESTMENTS

Tables 4 and 5 report the economic impacts from the new business activity and new clean energy investments broken out by year and by permanent or temporary construction impacts. Note that Tables 4 and 5 do *not* include the impacts from lower electricity prices on households, which are included later in the document (in Tables 6 and 7).

Table 4 Low-End Economic Impact from New/Expanded Business Activity and Clean Electricity Investments in New Mexico

New Mexico Low-End New Business Economic Impacts	Type	2025	2030	2035
Gross State Product (Million 2022$)	Permanent	$256	$346	$342
	Construction/Temporary	$20	$83	$82
Total Compensation (Million 2022$)	Permanent	$143	$191	$186
	Construction/Temporary	$12	$48	$48
Total Jobs (FTE)	Permanent	2,963	3,944	3,833
	Construction/Temporary	221	920	913
Total Indirect Taxes (Million 2022$)	Permanent	$17	$25	$26
	Construction/Temporary	$1.5	$6.3	$6.2

Table 5 High-End Economic Impact from New/Expanded Business Activity and Clean Electricity Investments in New Mexico

New Mexico High-End New Business Economic Impacts	Type	2025	2030	2035
Gross State Product (Million 2022$)	Permanent	$1,159	$1,552	$1,515
	Construction/Temporary	$62	$233	$206
Total Compensation (Million 2022$)	Permanent	$650	$864	$837
	Construction/Temporary	$36	$136	$120
Total Jobs (FTEs)	Permanent	13,453	17,842	17,265
	Construction/Temporary	691	2,580	2,282
Total Indirect Taxes (Million 2022$)	Permanent	$79	$108	$108
	Construction/Temporary	$4.7	$17.6	$15.6

RANGE OF TOTAL ECONOMIC IMPACTS FOR NEW MEXICO

This section provides the **total** range of anticipated economic impacts, including impacts from increased household spending power and impacts to businesses (both new/expanded business activity from more competitive electricity prices and new clean electricity resource development). Table 6 illustrates the low-end total economic impacts, by year and Table 7 illustrates the high-end impacts.

Table 6 Low-End Total Economic Impacts Results for New Mexico Attributed to RTO Formation

New Mexico Low-End TOTAL Economic Impacts	Type	2025	2030	2035
Gross State Product (Millions 2022$)	Permanent	$312	$426	$422
	Construction/Temporary	$20	$83	$82
Total Compensation (Millions 2022$)	Permanent	$172	$232	$227
	Construction/Temporary	$12	$48	$48
Total Jobs (FTEs)	Permanent	3,664	4,930	4,816
	Construction/Temporary	221	920	913
Total Indirect Taxes (Millions 2022$)	Permanent	$23	$33	$33
	Construction/Temporary	$1.5	$6.3	$6.2

Table 7 High-End Total Economic Impact Results for New Mexico Attributed to RTO Formation

New Mexico High-End TOTAL Economic Impacts	Type	2025	2030	2035
Gross State Product (Millions 2022$)	Permanent	$1,216	$1,631	$1,595
	Construction/Temporary	$62	$233	$206
Total Compensation (Millions 2022$)	Permanent	$679	$905	$878
	Construction/Temporary	$36	$136	$120
Total Jobs (FTEs)	Permanent	14,154	18,828	18,248
	Construction/Temporary	691	2,580	2,282
Total Indirect Taxes (Millions 2022$)	Permanent	$84	$116	$116
	Construction/Temporary	$4.7	$17.6	$15.6

The charts below (Figures 5, 6, and 7) illustrate the range of economic impacts that might be expected to accrue to New Mexico based on the low-end and high-end cases assessed in the study. They represent, in chart format, the same information that can be found in Tables 6 and 7. Figure 5 illustrates, by representative year, the expected increases in **ongoing** GSP, total compensation (payroll and benefits,) and indirect business taxes that could be added in the state due to the existence of an RTO. Figure 6 illustrates the **construction/temporary** economic impacts, based on the year in which the construction is expected to take place. And Figure 7 shows the range of both **permanent and temporary jobs** that could be created in the state.

Figure 5 Permanent Economic Impacts to New Mexico from an RTO

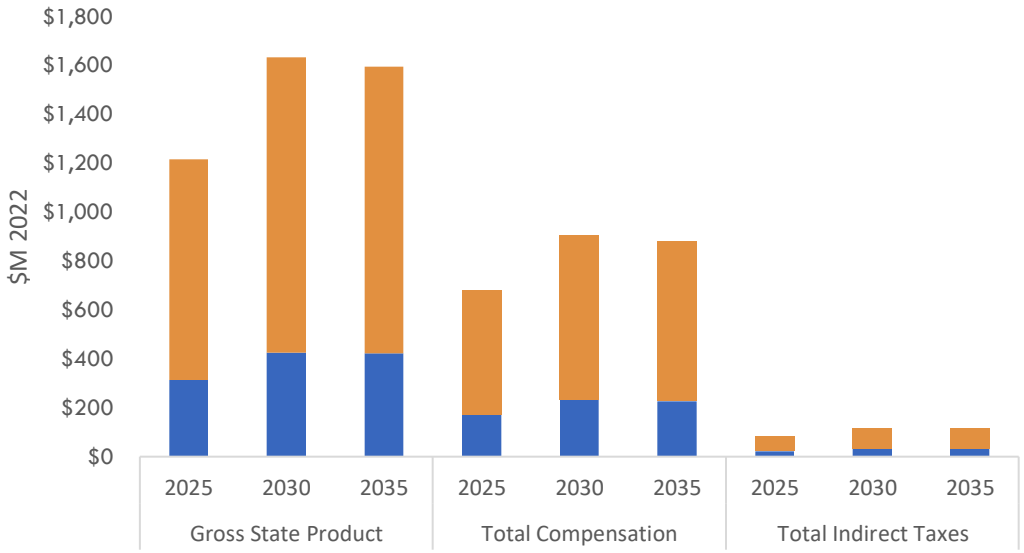


Figure 6 Construction/Temporary Economic Impacts to New Mexico from an RTO

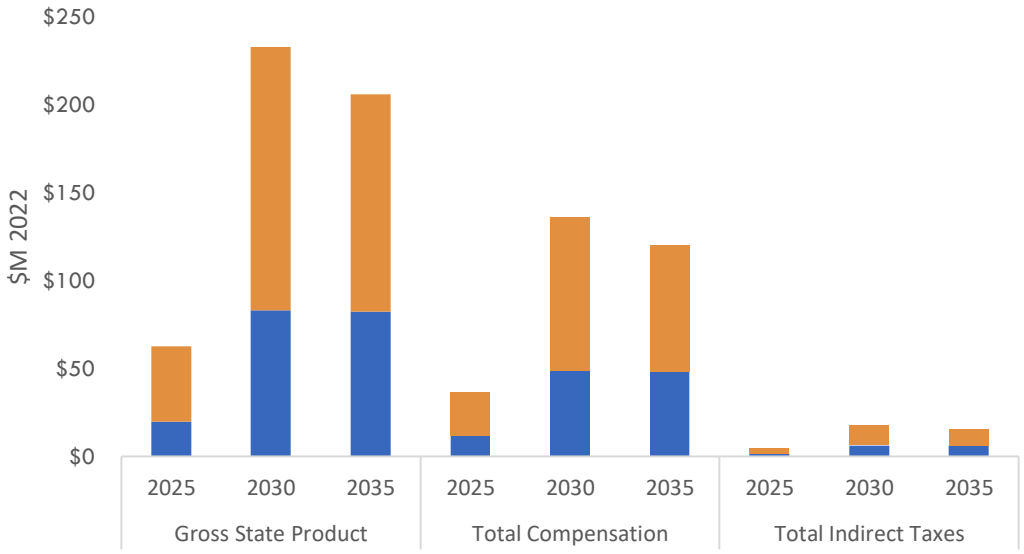
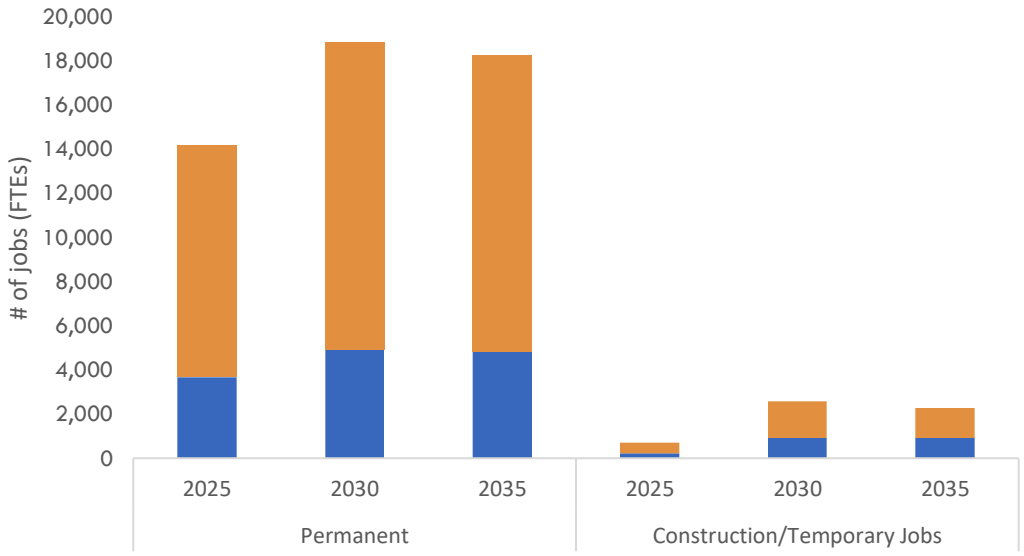


Figure 7 Permanent and Temporary New Mexico Jobs (FTEs) Created by an RTO



ADDITIONAL IMPACTS FROM DIRECT RTO INVESTMENTS

Additional, positive economic impacts could also result if incremental RTO investments were to take place in New Mexico. While no attempt was made to identify in which state(s) these investments would occur, the West-wide report provides a general range for the magnitude and types of impacts that a state such as New Mexico might expect if the incremental RTO investments needed for a West-wide RTO were to occur in the state.

CONCLUSION

Based on the results of this study work, the State of New Mexico can expect significant economic benefits from a West-wide RTO. Benefits to the economy are anticipated to be driven by:

- Electricity cost savings providing higher levels of disposable income for households than they would have in a continuation of the current electricity market structure;
- Expansion of existing or attraction of new businesses to the Western states, including New Mexico; and
- The potential for additional clean electricity resource development in the state to meet corporate demand.

The sooner RTO development occurs, the sooner New Mexico can begin to realize these economic benefits.