

THE ECONOMIC EFFECTS OF THE
RENEWABLE ENERGY SECTOR
IN IMPERIAL COUNTY

Vince Vasquez



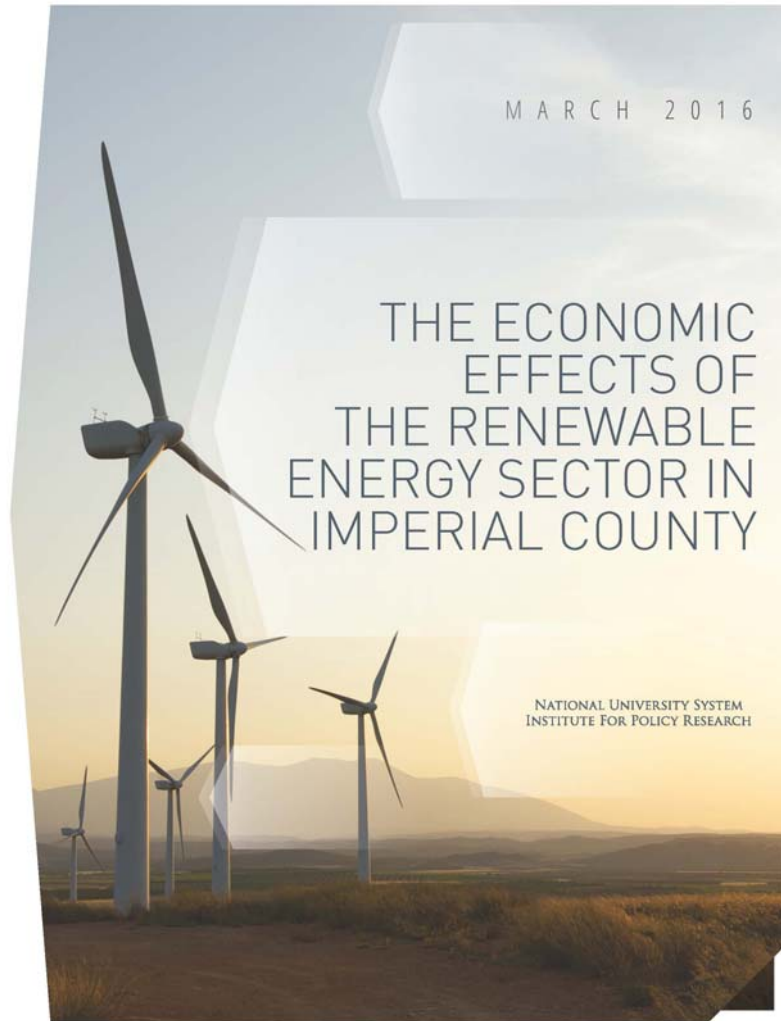
ABOUT ME

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NEW REPORT RELEASE!

*Renewable Energy Sector
Investments*

Regional Economic Development

Job Creation

KEY FINDINGS



Major policy changes have facilitated industry investment.

- *Renewable Portfolio Standards*
- *Section 1603 Grant Program*
- *Sunrise Powerlink*

IMPERIAL COUNTY RPS PROJECTS

Commission Approval Date	Projects Approved and Online	Min. MW	Technology
2008	ORNI 18	50	Geothermal
2012	Ocotillo Express Wind Project	265	Wind
2007	Campo Verde /Mt. Signal Solar	49	Solar PV
2011	Imperial Solar Energy Center-South	130	Solar PV
2011	Centinela Solar (expansion)	30	Solar PV
2011	SG2 Imperial Valley	150	Solar PV
2011	Imperial Solar Energy Center-West	130	Solar PV
Commission Approval Date	Approved Contracts in Development	Min. MW	Technology
2013	Seville Tallbear LLC	20	Solar PV
2013	Calipatria	20	Solar PV
2014	Midway Solar Farm I	50	Solar PV
2015	Mt. Signal Solar II and IV	154/ 252	Solar PV

KEY FINDINGS

Renewable energy projects are creating demand for higher-wage jobs.

Construction

Operations

Maintenance



CONSTRUCTION JOBS

Entry-level journeymen = \$25 to \$33/hr

Entry-level apprenticeship = \$17 to \$31/hr

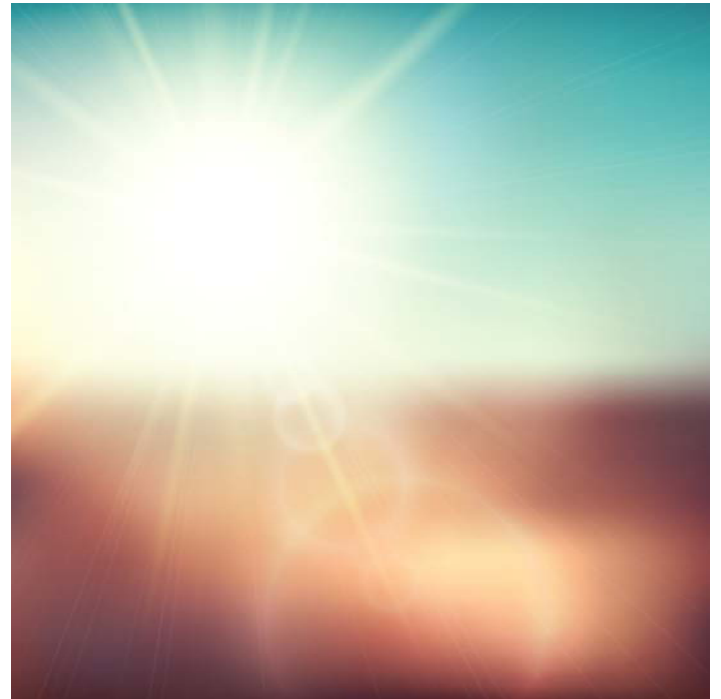
Union electricians = \$39.25/hr

IMPERIAL COUNTY JOB GROWTH & WAGE RATES

	2011	2012	2013	2014	2015
Total Payroll Employment	50,290	49,530	51,960	51,990	55,540
Mean Hourly Wage	\$19.25	\$19.94	\$19.64	\$19.79	\$19.68
Mean Annual Wage	\$40,034	\$41,468	\$40,867	\$41,164	\$41,325
Construction and Extraction Occupations	1,460	1,190	1,290	1,470	1,860
Mean Hourly Wage	\$21.15	\$22.75	\$22.76	\$23.73	\$26.21
Mean Annual Wage	\$43,994	\$47,322	\$47,342	\$49,352	\$54,520

OPERATIONS & MAINTENANCE JOBS

Geothermal Power Plant Operator	\$18.00/hr
General Power Plant Operator	\$24.73/hr
Instrument and Control Technician	\$21.00/hr
Control Room Operator	\$16.00/hr





OTHER ECONOMIC BENEFITS

Other Economic Benefits

Economic Impact Analysis

NREL JEDI Models

JEDI ECONOMIC ANALYSIS OF 2015 PROJECTS

Project Name	Megawatts	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs	Operating Jobs	Construction Output (\$000)	Total Annual Output (\$000)
Seville 2	30	736	745	112	1,592	6	\$ 100,795	\$ 251
Imperial Solar West	150	3,680	3,724	558	7,962	28	\$ 503,973	\$ 1,256
Centinela Solar	100	2,453	2,483	372	5,308	19	\$ 335,982	\$ 837
Calipat Solar Farm I	20	491	497	74	1,062	4	\$ 67,196	\$ 167
Imperial Valley Solar 2	20	491	497	74	1,062	4	\$ 67,196	\$ 167
TOTAL	320	7,850	7,945	1,190	16,985	59	\$ 1,075,141	\$ 2,678

FINAL THOUGHTS

Projected job impacts from renewable projects need further verification.

Most industry jobs are temporary, not permanent.



QUESTIONS?

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