

**POTENTIAL WIND POWER
COMPONENT MANUFACTURERS**



24,350 NEW JOBS

**POTENTIAL SOLAR POWER
COMPONENT MANUFACTURERS**



6,644 NEW JOBS

Summary of Findings: Renewable Energy Policy Project Technical Report

MICHIGAN'S ROAD TO ENERGY INDEPENDENCE

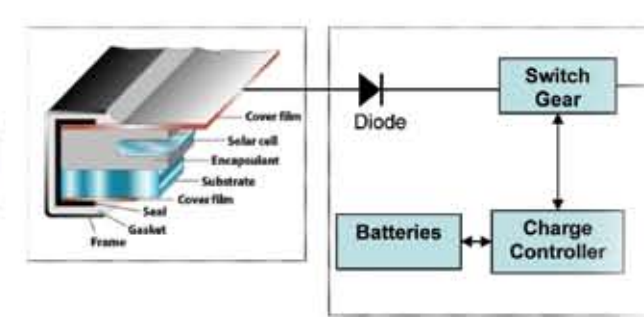
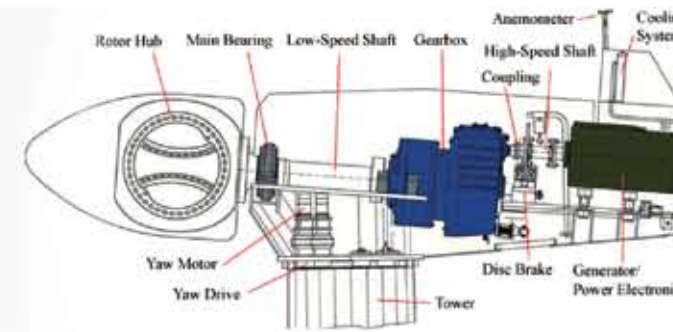
**Building on
Job Growth in
Renewable Energy
Component
Manufacturing**



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NEW CLEAN ENERGY JOB GROWTH



As a report developed by the Renewable Energy Policy Project clearly demonstrates, a major commitment to renewable electric generation will reduce our national security exposure, stabilize climate and provide a multi-billion dollar investment and reindustrialization program that will lead to new job growth in Michigan.

Analyzing the Demand for Components

The Renewable Energy Policy Project recently completed a state-by-state analysis of the job-creating potential of renewable energy technologies. The results of this analysis were very encouraging both for the country as a whole and for Michigan in particular.

A national program to develop renewable energy will benefit the regions and states that have the best renewable resource base – solar, wind, biomass and geothermal. It will also create a demand for billions of dollars of components, the parts that make up the finished renewable plants. This demand could, if accompanied by appropriate incentives, provide important new markets for domestic manufacturers that are already manufacturing equipment similar to the components that go into new renewable generation.

More than 75% of the potential new demand can be expected to flow to the 20 states that have suffered the greatest job losses. A program that supported the development of renewable energy projects while simultaneously supporting the development of a strong, advanced component manufacturing industry would benefit many states and regions.

The report breaks renewable generation technologies down into their component parts and then examines where traditional industries exist that could, if provided with appropriate incentives, become suppliers of the billions of dollars of new parts that will be necessary.

The Report analyses the renewable energy industry assuming that the United States moves to stabilize carbon emissions. Stabilizing emissions of carbon requires adding 18,500 MW of new renewable projects each year for the next ten years. The Report looks at the total demand generated by this ten-year stabilization program and tracks that demand down to the individual industries capable of manufacturing the components.

Revitalizing Michigan's Manufacturing

The national demand is allocated to individual states and eventually to the county level. This report outlines the potential for Michigan from a national commitment to accelerate renewable energy development.

In all, there are more than 457 firms in Michigan that are currently active in the industrial sectors that could supply the component parts to meet the demand necessary to deliver a 15% reduction in global warming emissions.

A major program to develop renewable energy will create a demand for the component parts that go into the

renewable developments. A major portion of the potential benefits flowing from the development of renewable energy will go to the manufacturers who supply the component parts. In order to capture as much of that potential as possible for domestic industry, the first step is to understand where the potential manufacturers are located and then devise the incentives that allow them to move efficiently into the industry.

In addition, the demand can support the creation of thousands more new jobs related to the expanded manufacturing activity.

Top 20 Counties in Michigan

County	Firms	Wind		Solar		Geothermal		Biomass		Total	
		Millions \$	Jobs	Millions \$	Jobs	Millions \$	Jobs	Millions \$	Jobs	Millions \$	Jobs
Wayne	228	\$300.80	1,976	\$193.50	1,055	\$28.90	174	\$33.80	226	\$557.00	3,431
Kent	172	\$336.70	2,478	\$104.50	648	\$22.00	117	\$50.80	332	\$514.00	3,575
Oakland	306	\$278.90	1,927	\$128.10	738	\$38.00	168	\$35.10	230	\$480.10	3,063
Macomb	260	\$357.70	2,603	\$75.30	437	\$9.40	43	\$22.70	144	\$465.10	3,227
Grand	30	\$283.20	1,917	\$148.60	1,032	\$1.10	5	\$6.20	45	\$439.10	2,999
Monroe	33	\$17.00	104	\$365.10	1,518	\$6.40	22	\$7.90	49	\$396.40	1,693
Saginaw	29	\$164.20	1,135	\$12.50	43	\$1.40	7	\$2.00	12	\$180.10	1,197
Muskegon	45	\$132.70	915	\$35.30	231	\$5.00	28	\$3.50	21	\$176.50	1,195
Berrien	62	\$52.70	382	\$6.20	45	\$66.40	411	\$13.50	85	\$138.80	923
Ottawa	65	\$93.80	701	\$6.50	52	\$4.90	35	\$25.50	178	\$130.70	966
Washtenaw	56	\$75.20	541	\$17.50	53	\$4.00	21	\$25.40	178	\$122.10	793
St. Joseph	31	\$103.10	769	\$0.80	5	\$0.00	0	\$2.60	16	\$106.50	790
Kalamazoo	61	\$39.40	303	\$12.40	37	\$40.60	216	\$13.80	77	\$106.20	633
Calhoun	33	\$80.80	588	\$3.00	19	\$9.50	50	\$2.70	15	\$96.00	672
Charlevoix	8	\$88.40	626	\$0.00	0	\$0.00	0	\$2.70	20	\$91.10	646
Clinton	8	\$82.00	536	\$0.00	0	\$1.10	5	\$0.50	3	\$83.60	544
Shiawassee	24	\$58.10	396	\$0.20	1	\$2.70	9	\$19.80	143	\$80.80	549
St. Clair	47	\$62.20	466	\$7.90	25	\$4.90	19	\$2.90	13	\$77.90	523
Allegan	37	\$42.50	267	\$28.30	144	\$1.70	12	\$2.00	12	\$74.50	435
Livingston	44	\$62.70	425	\$3.30	15	\$1.30	7	\$3.80	24	\$71.10	471

Manufacturing Jobs and Investment for 185,000 MW

Location	# of Firms	Jobs Wind	Jobs Solar	Jobs Geothermal	Jobs Biomass	Jobs Total
Illinois	2,289	30,010	19,298	3,396	3,875	56,579
Indiana	1,321	25,180	7,485	3,191	3,365	39,221
Wisconsin	1,331	25,179	4,943	2,037	2,974	35,133
Michigan	2,050	24,350	6,644	1,502	2,281	34,777
Missouri	785	10,260	7,532	2,907	2,097	22,796
Minnesota	1,070	9,246	5,238	1,477	2,444	18,405
Kansas	425	3,934	5,430	719	1,408	11,491
Iowa	457	4,914	2,889	648	779	9,230
Washington	790	3,902	3,190	618	852	8,562
Nebraska	200	2,817	2,368	294	731	6,210
South Dakota	109	2,253	64	944	217	3,478

REPP had recently completed a study of the labor that goes into renewables which included a detailed survey of employment related to wind and solar PV. The overall manufacturing jobs/MW numbers found using the NAICS census method and shown in the table above agree well

with the numbers found in the previous REPP study, giving confidence in the above method. Having obtained a jobs/MW number, the jobs are allocated geographically according to the census manufacturing in the exact same manner that the investment was allocated.