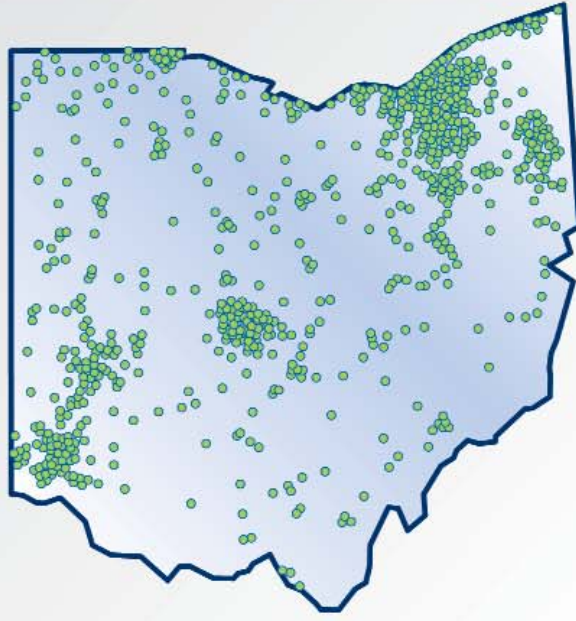
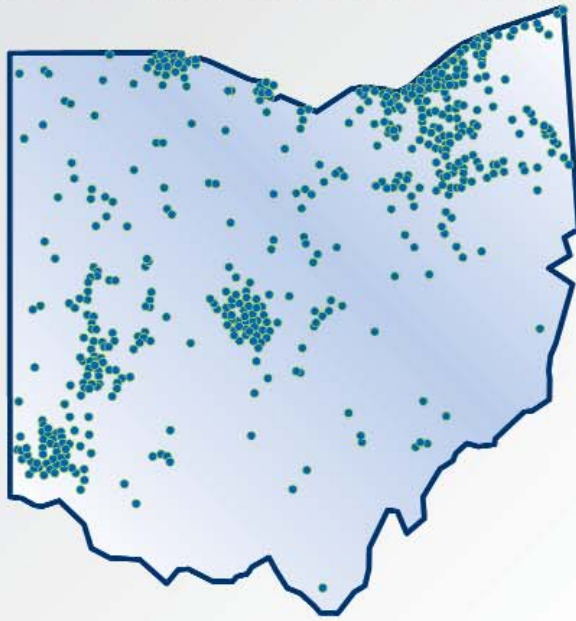


**POTENTIAL WIND POWER
COMPONENT MANUFACTURERS**



13,215 NEW JOBS

**POTENTIAL SOLAR POWER
COMPONENT MANUFACTURERS**



5,957 NEW JOBS

**OHIO'S ROAD
TO ENERGY
INDEPENDENCE**

**Job Growth in
Renewable Energy
Component
Manufacturing**



Summary of Findings
Renewable Energy Policy Project
Technical Report
October 2006



OHIO'S POTENTIAL FOR JOB GROWTH IN RENEWABLE ENERGY COMPONENT MANUFACTURING

A national strategy for investing in renewable energy will provide significant business benefits and job growth to states and regions by greatly stimulating demand for manufactured components.

States such as Ohio that have suffered the greatest loss of manufacturing jobs have a significant concentration of manufacturing potential to supply those components.

The Renewable Energy Policy Project's latest report, Component Manufacturing: Ohio's Future in the Renewable Energy Industry, produced for the Apollo Alliance, utilizes industrial codes from census data and a state of the art software program to identify the scope of potential job growth that would occur in Ohio. Here is a summary of the findings.

Ohio's Future: Manufacturing Renewable Energy Components

A national commitment to developing renewable energy will benefit the regions and states that have the best renewable resource base - solar, wind, biomass and geothermal. It would also create a demand for billions of dollars of components, the parts that make up the finished renewable plants.

If accompanied by appropriate incentives, this demand could provide important new markets for Ohio manufacturers

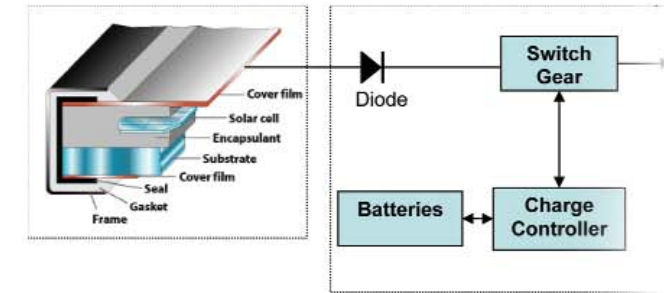
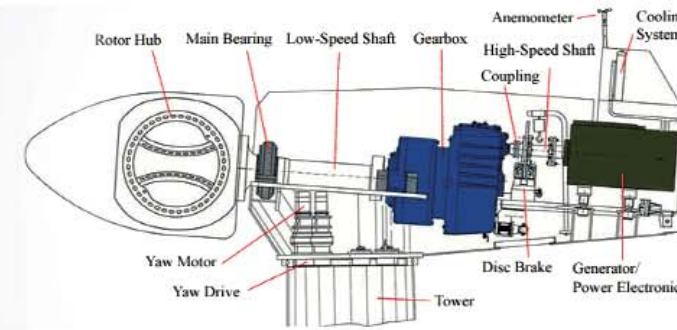
that are already manufacturing equipment similar to the components that go into new renewable generation. It is the intent of this Report to outline the potential for Ohio from a national commitment to accelerate renewable energy development.

In 2004, the Renewable Energy Policy Project completed an analysis of modern, large wind turbine technologies. The results of this analysis were very encouraging both for the country as a whole and for Ohio in particular.

Ohio's Potential for Renewable Job Growth

Nearly 43,000 firms throughout the United States operate in industries related to the manufacturing of components that go into renewable energy systems. If the 74,000 MW of renewable energy assumed in this model were to be developed, these companies have the potential to fill the demand for new components that would be generated. This national development would represent nearly \$72 billion dollars of manufacturing investment, and would result in more than 381,000 new jobs.

Ohio is particularly well positioned to benefit from such a national development. As shown below, Ohio stands to receive nearly 23,000 new jobs and \$3.6 billion dollars of investment in manufacturing components to supply this national development of renewables.



Ohio Statewide and County Information

Ohio is particularly well positioned to benefit from wind energy development. When the picture is expanded to include other renewable energy technologies, the potential benefit to Ohio manufacturing industries is even greater. As in the case of wind technology, Ohio has a manufacturing base in most of the industries relevant to the production of renewable energy components.

Renewable Energy Investments Mean New Ohio Jobs

This report and the previous wind manufacturing report developed by the Renewable Energy Policy Project show that Ohio stands to benefit greatly from national renewable energy development through the chain of manufacturing. One important feature of the census information for manufacturing is that it goes down to the county level. The table above lists the 20 counties in Ohio that would receive the greatest investment in manufacturing from the national development of wind, solar PV, geothermal, and dedicated biomass.

Potential Manufacturing Benefit to Ohio

Ohio	Millions \$ Investment	New FTE Jobs
Wind	\$1,924.70	13,215
Solar	\$1,097.10	5,957
Geothermal	\$337.40	1,896
Biomass	\$287.50	1,854
Totals:	\$3.6 Billion in Investments	22,922 Jobs

New Manufacturing Jobs, Investment for 74,000 MW Renewable Energy Development

Location	# of Firms	New Jobs Wind	New Jobs Solar	New Jobs Geothermal	New Jobs Biomass	New Jobs Total
California	4,658	14,147	24,288	3,320	2,848	44,602
Texas	2,795	10,000	12,299	1,841	3,261	27,401
Illinois	1,961	11,303	8,472	1,455	1,715	22,946
Ohio	2,156	13,215	5,957	1,896	1,854	22,922
Pennsylvania	1,839	9,029	8,119	1,538	1,832	20,517
New York	1,605	7,876	6,318	3,136	2,683	20,013
Indiana	1,154	11,186	3,834	1,410	1,524	17,954
Wisconsin	1,123	11,335	2,193	845	1,844	16,218
Michigan	1,817	10,369	2,457	587	1,021	14,435
North Carolina	940	4,897	4,722	1,350	2,006	12,976

Location	# of Firms	Millions \$ Wind	Millions \$ Solar	Millions \$ Geothermal	Millions \$ Biomass	Millions \$ Total
California	4,658	2,350	6,058	842	511	9,762
Texas	2,795	1,593	4,008	363	497	6,460
New York	1,605	1,357	1,456	746	465	4,025
Pennsylvania	1,839	1,412	1,872	342	326	3,952
Ohio	2,156	1,925	1,097	337	288	3,647
Illinois	1,961	1,660	1,452	256	272	3,640
Indiana	1,154	1,681	694	267	240	2,882
Wisconsin	1,123	1,677	431	153	273	2,534
North Carolina	940	819	1,001	329	319	2,468
Michigan	1,817	1,468	480	105	155	2,207

Top 20 Counties in Ohio

County	Biomass		Geothermal		Solar		Wind		Totals	
	Millions \$	Jobs	Millions \$	Jobs	Millions \$	Jobs	Millions \$	Jobs	Millions \$	Jobs
Cuyahoga	19.3	130	20.7	141	117.5	641	257.1	1,743	414.6	2,655
Lorain	4.7	30	3.2	15	138.7	878	95.8	648	242.4	1,571
Hamilton	26.3	175	24.7	145	72.1	437	99.1	663	222.2	1,420
Summit	11.2	80	8.8	56	27.0	129	117.8	833	164.8	1,098
Miami	9.0	47	31.0	179	49.3	310	56.8	382	146.1	918
Lucas	4.5	29	3.0	14	88.6	463	34.2	222	130.3	728
Franklin	14.1	95	11.6	51	25.5	133	74.2	498	125.4	777
Montgomery	14.5	97	23.9	157	3.6	22	82.3	557	124.3	833
Wood	5.6	35	4.3	18	81.1	330	28.7	222	119.7	605
Warren	5.7	27	27.4	151	48.9	124	29.7	172	111.7	474
Stark	13.2	84	7.9	40	7.4	45	76.0	529	104.5	698
Sandusky	0.7	4	1.1	7	80.7	424	16.3	130	98.8	565
Lake	19.4	132	3.1	22	43.4	275	31.7	219	97.6	648
Mahoning	2.9	15	0.9	3	46.6	301	42.6	273	93.0	592
Richland	8.5	40	26.5	129	3.7	22	34.1	229	72.8	420
Butler	4.3	27	17.9	122	30.0	167	17.9	129	70.1	445
Tuscarawas	3.0	20	15.2	109	25.0	152	26.1	178	69.3	459
Williams	6.1	34	24.8	133	9.1	60	25.9	190	65.9	417
Fairfield	47.8	345	9.7	69	0.1	-	7.9	57	65.5	471
Wayne	8.5	56	2.7	17	6.9	48	42.7	305	60.8	426

The component breakdown used to determine the data in these findings may be found in the complete report, available online at <http://www.apolloalliance.org>.