

**The Economic Effects on Michigan of the
BorgWarner Cooling Systems Research and Development Facility**

Prepared by the Michigan Economic Development Corporation utilizing Regional
Economic Models, Incorporated (REMI) software.

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Abstract

BorgWarner Corporation is considering building a cooling systems research and development facility in Marshall, Michigan. This would be a new facility for all U.S. based research for the Cooling Systems Division. The new facility would employ up to 59 people by the end of 2004. We estimate that by 2009, this location will have generated a total of 180 jobs in the state. Total state government revenues through 2009, net of MEGA costs and adjusted for inflation, would increase by \$5,653,000 (2000 dollars) due to the location of the BorgWarner Cooling Systems Research and Development Facility.

The purpose of this study is to estimate the potential economic and fiscal benefits to Michigan of BorgWarner Corporation locating a research and development facility in Marshall. Investment activity would take place between 2000 and 2001, with an investment of \$7,740,000. The facility would employ an additional 59 people and would be at full production by 2004.

The estimates of the benefits attributable to the project include the total number of jobs created in Michigan (by major industry, including spin-off jobs), and the associated personal income and state government revenue. Benefits net of the MEGA incentive package, from 2000 to 2009, are shown in the attached table. The MEGA incentive package includes a tax credit to the company equal to 100 percent of the state income tax rate on the payroll (gross wages) of employees hired at the facility for the period 2000 through 2009; relief from 100 percent of the Single Business Tax for the period 2000 through 2007; and relief of 20 percent of the Single Business Tax for the year 2008.

The total employment effects, reported in the first line of the table, include the direct jobs created at the facility itself plus spin-off jobs. The spin-off jobs are created from two sources, increased purchases from Michigan suppliers and spending by people who receive income due to the increased economic activity. In 2004, the first year of full operations, an additional 200 jobs are generated in the state. The total number of jobs (direct plus spin-off) for every direct job introduced constitutes the "employment multiplier." The employment multiplier for the expansion averages 3.07 over the period 2000 to 2009. Sectoral detail on the employment is also shown in the table.

Personal income is shown in the next section of the table. Personal income is defined as the income of Michigan residents from all sources, after deduction of contributions to social insurance programs but before deduction of income tax and other personal taxes. As shown in the table, if BorgWarner Corporation were to locate in Michigan under the incentive program, state personal income in 2004 would be higher by \$14.1 million (in current dollars) than it would be without the facility, and in 2009, it would be \$15.6 million higher. Adjusted for inflation, these numbers in 2000 dollars would be \$10.6 million in 2004 and \$10.2 million in 2009.

The gain in economic activity results in higher government revenues. We estimate that in 2002, the first full year of operations without investment activity, the facility would generate \$910,000 in additional gross state revenue, and that the MEGA package would provide a \$263,000 incentive to BorgWarner Corporation. Thus, the new BorgWarner facility would increase state revenues in 2002 by \$647,000, net of MEGA costs.

Over the period 2000 to 2009, state government revenue is projected to increase by \$10,262,000 (in current dollars) due to the new BorgWarner facility. The MEGA incentive package for BorgWarner is forecast to cost \$2,574,000 over the period, resulting in a net increase in state government revenue of \$7,688,000. Adjusted for inflation, the total net increase in state government revenue from 2000 to 2009 would be \$5,653,000 in 2000 dollars. These calculations do not include any revenue losses due to the property tax abatement or the investment tax credit. If the costs of the abatement and the tax credit were included, the net revenue gain to state government would be slightly less.

None of the estimates include the nonmeasurable effects that would produce additional economic and fiscal benefits for Michigan, such as the intangible advantages of influencing other location and expansion decisions.

Borg Warner Cooling Systems
Economic and Fiscal Effects on Michigan - Net Benefits with the Incentive Package

Economic/Fiscal Indicator	2000	2001	2002	2003	2004	2005	2006	2007	2009	Total
Total Employment										
Manufacturing	66	247	180	189	200	194	189	184	180	
Non-Manufacturing	12	69	70	74	80	78	78	77	76	
Retail Trade	54	178	110	115	120	116	111	107	104	
Services	9	35	27	29	30	29	27	26	26	
Other	13	54	42	44	47	46	45	43	44	
	32	89	41	42	43	41	39	38	34	
In Current Dollars (Thousands):										
Personal Income	\$2,930	\$12,510	\$11,380	\$12,600	\$14,070	\$14,340	\$14,710	\$14,890	\$15,630	\$128,290
Gross State Revenue	234	1,001	910	1,008	1,126	1,147	1,177	1,191	1,250	10,262
Mega Cost	62	243	263	289	305	310	315	320	227	2,574
State Revenue Net of MEGA Cost*	\$172	\$758	\$647	\$719	\$821	\$837	\$862	\$871	\$1,023	\$7,688
Adjusted for Inflation (Thousands of 2000 Dollars):										
Personal Income	\$2,930	\$10,634	\$9,104	\$9,639	\$10,553	\$10,468	\$10,371	\$10,349	\$10,199	\$94,527
Gross State Revenue	234	851	728	771	845	837	830	828	816	7,562
Mega Cost	62	206	211	221	228	226	222	222	148	1,909
State Revenue Net of MEGA Cost*	\$172	\$645	\$517	\$550	\$617	\$611	\$608	\$606	\$668	\$5,653

* These estimates do not include any state government revenue losses due to the Investment Tax Credit, the Renaissance Zone Credit or the property tax abatement.