

**The Economic Effects on Michigan of the
Dow Corning Compound Semiconductor Solutions Research Center**

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

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Abstract

Dow Corning Compound Semiconductor Solutions is considering building a research center in Williams Township, Michigan. This facility would provide research and development services and manufacture and sell compound semiconductor wafer substrates, epitaxial deposition to meet the needs of device fabricators and users in commercial and defense markets. The new facility would employ up to 140 people by the end of 2009. We estimate that by 2014, this location will have generated a total of 164 jobs in the state. Total state government revenues through 2014, net of MEGA costs and adjusted for inflation, would increase by \$4 million (2003 dollars) due to the location of the Dow Corning Compound Semiconductor Solutions.

The purpose of this study is to estimate the potential economic and fiscal benefits to Michigan of Dow Corning Compound Semiconductor Solutions locating a research and development center in Williams Township. Investment activity would take place between 2003 and 2009 with an investment of \$15 million. The facility would employ an additional 140 people and would be at full production by 2010.

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 2003 to 2014, are shown in the attached table. The MEGA incentive package includes relief from 100 percent of the single business tax for the period 2005 to 2014, and 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 2005 to 2014.

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 2009, the first year of full operations, an additional 175 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 1.09 over the period 2003 to 2014. 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 Dow Corning Compound Semiconductor Solutions were to locate in Michigan under the incentive program, state personal income in 2009 would be higher by \$11.7 million (in current dollars) than it would be without the facility, and in 2014, it would be \$14 million higher. Adjusted for inflation, these numbers in 2003 dollars would be \$10.6 million in 2009 and \$11.7 million in 2014.

The gain in economic activity results in higher government revenues. We estimate that in 2010, the first year of full operations without investment activity, the facility would generate \$905,000 in additional gross state revenue, and that the MEGA package would provide a \$588,000 incentive to Dow Corning Compound Semiconductor Solutions. Thus, the new Dow Corning Compound Semiconductor Solutions facility would increase state revenues in 2010 by \$317,000, net of MEGA costs.

Over the period 2003 to 2014 state government revenue is projected to increase by \$9.5 million (in current dollars) due to the new Dow Corning Compound Semiconductor Solutions facility. The MEGA incentive package for Dow Corning Compound Semiconductor Solutions is forecast to cost \$5.1 million over the period, resulting in a net increase in state government revenue of \$4.4 million. Adjusted for inflation, the total net increase in state government revenue from 2003 to 2014 would be \$4 million in 2003 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.

Dow Corning
Economic and Fiscal Effects on Michigan - Net Benefits with the Incentive Package

Economic/Fiscal Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Total Employment											
Manufacturing	106	129	154	165	175	163	164	164	163	164	164
Non-Manufacturing	32	37	42	42	42	39	39	39	39	39	39
Retail Trade	74	92	112	123	133	124	125	125	124	125	125
Services	17	20	23	24	25	23	24	23	23	23	23
Other	39	50	64	73	82	79	79	80	80	81	81
	18	22	25	26	26	22	22	22	21	21	21
In Current Dollars (Thousands):											
Personal Income	\$6,287	\$7,874	\$9,583	\$10,650	\$11,720	\$11,750	\$12,330	\$12,850	\$13,370	\$14,010	\$123,638
Gross State Revenue	484	606	738	820	902	905	949	989	1,029	1,079	9,519
Mega Cost	194	297	380	469	563	588	616	645	676	710	5,138
State Revenue Net of MEGA Cost*	\$290	\$309	\$358	\$351	\$339	\$317	\$333	\$344	\$353	\$369	\$4,381
Adjusted for Inflation (Thousands of 2003 Dollars):											
Personal Income	\$6,093	\$7,508	\$8,988	\$9,824	\$10,632	\$10,482	\$10,820	\$11,091	\$11,347	\$11,689	\$111,637
Gross State Revenue	469	578	692	756	818	807	833	854	873	900	8,594
Mega Cost	188	283	357	432	510	525	540	557	574	593	4,559
State Revenue Net of MEGA Cost*	\$281	\$295	\$335	\$324	\$308	\$282	\$293	\$297	\$299	\$307	\$4,035

* 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.