



Senate Fiscal Agency
P. O. Box 30036
Lansing, Michigan 48909-7536



Telephone: (517) 373-5383
Fax: (517) 373-1986
TDD: (517) 373-0543

Senate Bill 1195 (as reported without amendment)
Sponsor: Senator Gerald Van Woerkom
Committee: Agriculture

Date Completed: 7-16-08

RATIONALE

As gas and diesel fuel prices continue to rise, there is great interest in expanding the biofuel industry in Michigan, to capitalize on the strength of the State's agricultural and automotive sectors. Fuels such as ethanol or biodiesel may provide an alternative to petroleum-based fuels, easing demand and potentially lowering fuel prices, but the technology is still in the process of being developed. Most current ethanol plants, for example, rely on corn as a feedstock, but technologies are being developed to produce ethanol from any substance containing cellulose, including grasses and wood chips. Further technologies are being developed to produce biodiesel from algae. Much of this primary research is done at universities. To facilitate the transfer of these new technologies to the marketplace, a 2005 amendment to the Michigan Strategic Fund Act requires the Fund to create and operate a technology transfer program. Due to funding issues, however, that program has not been implemented. Some people remain dissatisfied with the pace of technology transfer between university research and business. They also point out that the Act does not target the program to any particular industry. It has been suggested that a new program should focus on the acceleration of biotechnology transfer.

CONTENT

The bill would amend the Michigan Strategic Fund Act to replace the technology transfer program with a technology transfer acceleration program that would focus on the bioeconomy.

The Act requires the Michigan Strategic Fund to create and operate a program to assist institutions of higher education with university

technology transfer, including the transfer of competitive edge technology to the private sector for commercialization.

The bill instead would require the program to accelerate technology transfer from Michigan's institutions of higher education to the private sector for commercialization, with a specific focus on technologies that would accelerate and solidify the bioeconomy. The technology transfer acceleration program would have to facilitate the following:

- Bundling of inventions from individual institutions of higher education into packages that could be of interest to private sector firms for commercialization opportunities.
- Expansion of business formation efforts in institution higher education technology transfer offices to increase the number of institution of higher education-related start-up companies.
- Incentives for faculty who participate in technology transfer and commercialization activities.

MCL 125.2088o

ARGUMENTS

(Please note: The arguments contained in this analysis originate from sources outside the Senate Fiscal Agency. The Senate Fiscal Agency neither supports nor opposes legislation.)

Supporting Argument

The technology transfer program was created in statute in 2005, but has not gotten off the ground due to the lack of funding. The slow pace of technology development and transfer continues to be frustrating. Michigan faces an opportunity to become a center for biofuel development and production, and if that goal is to be met, technological development must proceed quickly. To take advantage of that

opportunity, the bill would replace the existing program with a technology transfer acceleration program that would focus on the bioeconomy, identifying potentially viable ideas and connecting university research with business interests that might be able to develop them.

Greater cooperation is needed between universities that are doing basic research and entrepreneurs who can commercialize those new ideas. In many cases, the basic science research has been done and universities have processes for making biofuels that work perfectly well in the laboratory, but it is unknown whether those processes can be implemented in a cost-effective way to produce biofuels on a commercial scale.

In the process of transforming basic research into a commercially viable enterprise, there is a middle ground sometimes called the "valley of death". Universities fund and conduct the basic research, while companies look for fully developed new technologies that will reduce costs, streamline processes, or open up new markets. In between, the phase in which the basic research is developed into commercially viable technology can present tremendous cost and risk. Many companies either do not have the resources to invest in speculative ventures or are unwilling to take on that risk. As a consequence, many promising technologies never make it past the conceptual stage, instead perishing in the valley of death because of a lack of funding.

Although funding research and development directly is beyond the scope of the technology transfer program, it can act as a liaison between universities and business interests, helping researchers to understand what areas of research might lead to marketable developments based on current demands, and making business interests aware of new research results that could be of interest to them. Because of competitive pressures from other states as well as record-high energy prices, it is essential that new technologies be brought to market as quickly as possible. The bill would help to accelerate that process and focus research on the most promising areas for commercial application.

Legislative Analyst: Curtis Walker

FISCAL IMPACT

The bill would alter the existing technology transfer program requirement created as part

of the 21st Century Jobs Trust Fund program to concentrate on technologies in the bioeconomy, and would require the program to include several specific strategies. These changes would increase the responsibilities of the Michigan Strategic Fund (MSF) and the Michigan Economic Development Corporation, which provides staff to the MSF.

Public Act 225 of 2005 included a \$2.0 million appropriation for university technology transfer; however, when the funding for the 21st Century Jobs Trust Fund programs was reduced by \$50.0 million in FY 2006-07 due to a transfer of \$50.0 million from the 21st Century Jobs Trust Fund to the General Fund, the university technology transfer earmark was not funded.

Funding for this program would be allocated from the 21st Century Jobs Trust Fund program. This program received an appropriation of \$75.0 million in FY 2007-08. The statute and the appropriations bill for this program include a number of earmarks totaling \$56.9 million. They include \$30.0 million for Competitive Edge Technology Grants and Loans, \$3.0 for administration, \$3,750,000 for Business Development and Marketing, and \$1.4 million for the Small Business Technology Development Centers to administer the Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Federal matching grant programs. The MSF board also has allocated \$18,750,000 for the Choose Michigan Fund, a new loan enhancement program that is required to include the Michigan Film and Digital Media Investment Loan Program pursuant to Public Act 80 of 2008, part of the film industry package. The unallocated balance of the \$75.0 million appropriation is \$18.1 million. The Michigan Economic Development Corporation has proposed using these funds for the Centers of Excellence Program, which would provide grants to companies that collaborate with universities to commercialize alternative energy technology. Statutory changes would be needed to authorize this program.

Fiscal Analyst: Elizabeth Pratt
Maria Tyszkiewicz

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.