

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. HOUSE PRINCIPLES ANALYSIS:

Provide Limited Government-

- HB 131 re-creates the Florida Technology Development Act which was repealed on July 1, 2004 by creating s. 1004.226, F.S., *Florida technology development; centers of excellence* to provide for the establishment of additional centers of excellence or the expansion of current centers subject to appropriation by the legislature. Also consistent with the Act, the bill creates the Emerging Technology Commission (commission) within the Office of the Governor to guide the establishment of the centers of excellence.

B. EFFECT OF PROPOSED CHANGES:

Background

“Technology Transfer” Defined and Described

“Technology transfer” is commonly used to refer to a complex commercialization process through which an entity that develops a new technology, but does not have the wherewithal or desire to bring it to market, transfers that raw technology to another entity that does. Many different types of donor-recipient pairings can engage in technology transfer, including university-to-business, business-to-business, and federal government-to-business.

Technology transfer between a university and a business can occur in many different ways. The Council on Governmental Relations describes six major models of technology transfer:

- **Sponsored Research:** Typically, a corporation provides funding for a specified statement of work for a limited period of time.
- **Collaborative Research:** Collaborative research, especially when partially funded by government, enables participants to leverage limited resources in the achievement of mutually beneficial research objectives.
- **Consortia:** In a university-based research consortium, participating companies join forces and contribute resources, often in the form of an annual fee, to support research in a technical area of common interest.
- **Technology Licensing:** Consideration for a university license agreement is offered by a licensee to obtain commercialization rights in intellectual property owned by a university.
- **Start-up Companies:** New companies are established to commercialize a university technology, rights to which are obtained through a license agreement.
- **Exchange of Research Materials:** Material transfer agreements generally stipulate that the materials are provided for research purposes only and not for commercialization.¹

A business' use of university faculty as consultants or its hiring of university students could also be considered forms of technology transfer.²

¹ Council on Governmental Relations, *A Review of University Industry Research Relationships*, at <http://www.cogr.edu/univ.htm>, 1996.

² Business-Higher Education Forum, *Working Together, Creating Knowledge: The University-Industry Research Collaboration*

Benefits of Technology Transfer

According to the Industrial Research Institute, technology transfer provides many benefits to both businesses and universities.³ Corporate benefits include accessing expertise not available in corporate laboratories, assisting in the renewal and expansion of a company's technological inventory, gaining access to students as potential employees, using the university as a means of facilitating the expansion of external contacts for the industrial laboratory, expanding pre-competitive research with universities and with other companies, and leveraging internal research capabilities. Technology-transfer benefits to universities include obtaining financial support for a university's educational and research missions; broadening the experience of students and faculty; identifying significant, interesting, and relevant problems; enhancing regional economic development; and increasing employment opportunities for students.

It is important to note, though, that, while technology licensed to either in-state or out-of-state businesses is valuable, it does not result in many of the aforementioned benefits that stem from close university-industry collaboration or from the spin-off of local, university-generated start-up companies. Many state governments recognize that it is through these mechanisms, as well as through the related attraction of research and development-oriented firms from other states, that "university-industry collaborations can play a central role in economic development efforts."⁴

Florida Research Consortium, Inc.

The Florida Research Consortium, Inc. is a strategic partnership between Florida's Universities and the business community focused on enhancing progressive research programs at Florida's public and private universities and adding to the diversity and strength of Florida's technology economy through the commercialization of research. The Consortium's program of work focuses on three primary goals: 1) enhancing the quantity and quality of Florida's university research; 2) increasing the commercialization of Florida's university research; and 3) ensuring that Florida university research is recognized as a significant strategic asset for the state.

Present Situation

Section 1004.225, F.S., the Florida Technology Development Act (Act), provides a mechanism to foster technology transfer, a complex commercialization process through which an entity that develops a new technology, but does not have the means or desire to bring it to market, transfers the new technology to another entity that does have the means. The Act begins the technology transfer process by creating centers of excellence for which the 2002 Legislature appropriated \$30 million. A center of excellence is an organization of personnel, facilities, and equipment established at or in collaboration with one or more universities in Florida that:

- Facilitates the identification of collaborative research opportunities between universities and businesses;
- Facilitates the acquisition of public and private funding for collaborative research opportunities and maximizes the leveraging of such funds;
- Creates partnerships between industrial and governmental entities to advance knowledge and research and to move technologies from academic laboratories and research centers to commercial sectors;

Initiative, 2001, p. 21.

³ Industrial Research Institute, *A Report on Enhancing Industry-University Cooperative Research Agreements* (Washington, D.C., 1995), p. 1, as cited by the Business-Higher Education Forum, *supra* note 2, at 22.

⁴ Business-Higher Education Forum, *supra* note 2, at 22-23.

- Stimulates and supports new venture creation through partnerships with venture capital firms and other business, governmental, and educational entities;
- Assists in the enhancement of advanced academic curricula through improved communication between academia and businesses;
- Increases the number of graduates and faculty researchers in advanced technology programs while ensuring that a larger percentage of such graduates pursue careers in Florida industries;
- Recruits and retains eminent scholars in advanced technology disciplines; and
- Provides capital facilities necessary to support research and development.

The Act created the Emerging Technology Commission (commission) within the Executive Office of the Governor. The commission consists of:

- Nine regular members who must be recognized business leaders, industrial researchers, academic researchers, scientists, or engineers. The regular members include four members and the chair appointed by the Governor; two members appointed by the President of the Senate, and two members appointed by the Speaker of the House of Representatives;
- The Commissioner of Education as an ex officio nonvoting member; and
- The state senator and state representative who serve as members of the Florida Research Consortium, Inc., as ex officio nonvoting members.

Commission members serve without compensation but are entitled to receive certain per diem and travel expenses while performing their duties. The Governor's Office provides staff support for the commission and per diem and travel expenses for commission members.

The commission held three meetings to receive public comment on the recommended criteria for selecting a center of excellence. During these meetings the consortium debated the merits and value of the recommended criteria. Based upon these meetings, the commission developed criteria for evaluating university-submitted proposals for creating centers of excellence. The adopted criteria are:

- Vision for technology transfer
- Research Focus
- Economic Impact Potential
- Economic Climate Issues
- Regional economic structure and climate
- Leadership and Management
- Leveraging Resources
- Center Collaboration with Other Entities
- Workforce Development

Based upon the final report of the Commission, the commission received 16 proposals for centers of excellence. The proposals were as follows:

- Florida Atlantic University's Proposal for a Center for Intermodal Transportation, Safety and Security.
- Florida Gulf Coast University's Proposal for a Florida Gulf Coast University Triad.
- Florida International University's Proposal for a Florida Information Security Center.
- The University of Central Florida's Proposal for a Modeling and Simulation Center of Excellence.
- The University of North Florida's Proposal for a Center for Innovation in Information Technology.
- Florida Agricultural and Mechanical University's Proposal for a Center of Excellence for Atomic, Molecular, and Plasma Physics.
- The Florida Space Research Institute's Proposal for a Center for Spaceport Technology, Biotechnology, Remote Sensing, and Telecommunications.
- The Florida Solar Energy Center's Proposal for a Center of Excellence for Hydrogen Research.

- Florida State University's Proposal for Securing Florida and the Nation's Electrical Energy Systems.
- The University of Central Florida's Proposal for a Florida Photonics Center of Excellence.
- Florida Atlantic University's Proposal for a Center for Biomedical and Marine Biotechnology.
- Florida State University's Proposal for the Bio-Nanotechnology Nexus.
- The University of Florida's Proposal for a Center of Excellence in Regenerative Health and Biotechnology.
- The University of Florida's Proposal for a NanoBio Science and Engineering Center of Excellence.
- The University of Miami's Proposal for a Center for Biotechnology Development in Cellular Therapies, Tissue Engineering, and Reparative Medicine.
- The University of South Florida's Proposal for a Center of Excellence in Bioengineering and Life Science.

Following three public hearings with access to public policy and technology experts, the commission recommended three centers of excellence to the State Board of Education. The three, with the rationale for their selection, are:

- Florida Atlantic University's Proposal for a Center of Excellence for Biomedical and Marine Biotechnology at \$10 million. This center would focus on the discovery and development of compounds and medicines capable of treating various diseases including cancer, cardiovascular disease, and arthritis. Collaborative efforts with industry and other universities would be used in a long-term commercialization strategy, and the center would house faculty capable of attracting research funds at levels necessary for continued research.
- The University of Central Florida's Proposal for a center of excellence for a Photonics Center of Excellence at \$10 million. This center would build upon efforts already underway at UCF to make Florida the world leader in optics, lasers, and photonics research and education. The center would also expand its research into the areas of nanophotonics and biophotonics. The center would work closely with existing industry, the High Tech Corridor Council, and the UCF Technology Incubator to commercialize new applications.
- The University of Florida's Proposal for a Center of Excellence for Regenerative Health Biotechnology at \$10 million. The center would house two facilities for microbial fermentation and vector production. Both facilities would be used for developing probiotics and gene therapies for treating cancer and genetic diseases. It would also provide technological advances in gene therapy and adult stem cell transplantation. The very nature of the research and production being performed at the center would have immediate and long-term economic impact and would serve as a magnet for future state and federal funds.

The commission is directed to report quarterly to the Commissioner of Education on the progress of the implementation of the final plan and the success of the centers of excellence established under that plan.

Section 1004.225, F.S. expired July 1, 2004.

Effect of Proposed Changes

HB 131 re-creates the 2002 Florida Technology Development Act (Act) which was repealed on July 1, 2004 by creating s. 1004.226, F.S., *Florida technology development; centers of excellence* to provide for the establishment of additional centers of excellence or the expansion of current centers subject to appropriation by the legislature.

The bill re-defines the term “centers of excellence” and the purpose and objectives of the centers of excellence consistent with the Act. Also consistent with the Act, the bill creates the Emerging Technology Commission (commission) within the Office of the Governor to guide the establishment of the centers of excellence. The Commissioner of Education is replaced by the Chancellor of the Division of Colleges and Universities as an ex officio nonvoting member of the commission. All other members are consistent with the Act.

The bill provides that the Florida Research Consortium, Inc. (consortium) review the report submitted to the commission under s. 1004.225, F.S., and revise the factors contributing to the success of a center of excellence as the consortium considers necessary. In reviewing the report, the consortium needs to consider activities and progress related to the establishment of the centers of excellence designated under s. 1004.225, F.S., and factors contributing to the success of an expansion of a center of excellence designated under s. 1004.225, F.S.

By August 1, 2005, the consortium must submit a revised report to the commission.

By September 1, 2005, the commission is to develop and approve criteria for evaluating proposals for establishing or expanding one or more centers of excellence. The commission is to consider the criteria developed under former s. 1004.225, F.S., and the revised report submitted by the consortium under subsection (3) of the bill. The commission is required to hold at least one public hearing for the purpose of receiving expert testimony on the evaluation criteria.

By September 15, 2005, the commission must provide a list of the approved criteria to each university in the state and to the State Technology Office for publishing on the Internet within 24 hours after the office’s receipt of the list. The commission must notify each university in the state, in writing, of the opportunity to submit to the commission a written proposal for establishing a center of excellence or expanding a center of excellence designated under the former s. 1004.225, F.S. The bill does not prevent a university that is the site of a center of excellence currently designated from submitting a proposal to establish a new center of excellence or to expand the existing center of excellence.

By November 1, 2005, a proposal from a university must be submitted to the commission.

By January 1, 2006, the commission must submit to the Board of Governors a recommended plan for establishing or expanding one or more centers of excellence. The recommended plan must address the evaluation criteria developed by the commission and specify how funding would be used to establish or expand each center of excellence. When developing the recommended plan, the commission must consider all proposals submitted and hold at least two public hearings at times and locations designated by the chair of the commission for the purpose of receiving expert testimony and viewing presentations of university proposals.

By February 15, 2006, the Board of Governors must develop and approve a final plan for establishing or expanding one or more centers of excellence and authorize expenditures for implementing the plan. The final plan approved by the Board of Governors must allocate at least \$10 million to each center of excellence established or expanded under the plan.

The final plan must include:

- Designating one or more centers of excellence, in addition to any previously designated centers;
- Expanding one or more of the previously designated centers of excellence;
- Designating one or more new centers of excellence and expanding one or more of the previously designated centers of excellence;

- Performance and accountability measures that can be used to assess the progress of plan implementation and the success of each center of excellence that receives funding under the final plan.

By March 1, 2006, the Board of Governors must provide a copy of the final plan to the Governor, the President of the Senate, and the Speaker of the House of Representatives.

Beginning July 1, 2006, the commission must report semi-annually, in writing, to the Commissioner of Education on the progress in implementing the final plan approved and the success of each center of excellence that received funding under the plan.

The bill appropriates \$50 million from the General Revenue Fund to the Department of Education for fiscal year 2005-2006 for the purpose of establishing or expanding one or more additional centers of excellence pursuant to s. 1004.226, F.S.

The bill appropriates \$50,000 from the General Revenue Fund to the Executive Office of the Governor for fiscal year 2005-2006 for the purpose of providing staff and administrative support to the commission created under s. 1004.226, F.S., and provides for per diem and travel expensed for commission members or the consortium members and staff while competing the tasks specified in s. 1004.226(3), F.S.

The bill provides a July 1, 2005 effective date.

C. SECTION DIRECTORY:

Section 1: Creates s. 1004.226, F.S., - *Florida technology development; centers of excellence.*

Section 2: Provides for a \$50,000 appropriation to the Office of the Governor.

Section 3: Provides for a \$50 million appropriation to the Department of Education.

Section 4: Provides an effective date.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

Technology transfer could be a source of revenues for universities. Thus, the extent of technology transfer occurring at centers of excellence could benefit universities.

2. Expenditures:

The bill provides for two separate appropriations. First, the bill appropriates \$50,000 from the General Revenue Fund to the Executive Office of the Governor for fiscal year 2005-2006 for the purpose of providing staff and administrative support to the Emerging Technology Commission created under s. 1004.226, F.S., and provides for per diem and travel expenses for commission members or the Florida Research Consortium, Inc. members and staff while completing the tasks specified in s. 1004.226(3), F.S.

Second, the bill appropriates \$50 million from the General Revenue Fund to the Department of Education for fiscal year 2005-2006 for the purpose of establishing one or more additional centers of excellence or expanding one or more existing centers of excellence pursuant to s. 1004.226, F.S.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

Not only do university-industry partnerships increase the speed and frequency with which new discoveries move from the laboratory to the market, but university-technology transfer may be a stimulant, precursor, or complement to building a high-skill, high-wage state economy. Thus the bill may increase the amount of technology transfer occurring in the state whereby businesses and individuals could benefit.

Furthermore, according to the Florida Space Research Institute, Florida-based university and industry involvement in strategic areas of research can attract significant federal investments in that research. For example, Florida leadership in the development of certain space exploration technologies can position the state to capture a greater federally sponsored role in new and diverse areas of space research and enterprise.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable. This bill does not impact local governments.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

Note that the language in current law relating to the Florida Technology Development Act (s. 1004.225, F.S.) is to be repealed in the 2005 reviser bill.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE & COMBINED BILL CHANGES

None.