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**BOARD OF REGENTS**

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**AGENDA**

**SPONSORED PROGRAMS COMMITTEE**

Wednesday, December 10, 2014

2:40 p.m.

The Claiborne Building

Thomas Jefferson Room 1-136, Sections A&B

Baton Rouge, Louisiana

- I. Call to Order
- II. Roll Call
- III. Proposed BoRSF Endowed: WISE (Tier One\*) Two-Year Student Scholarships Subprogram
- IV. Master Plan Goal: Recommendations of the Statewide Review Panel
- V. Request from the University of Louisiana at Lafayette to Divide a BoRSF-Matched Endowed Professorship
- VI. NASA LaSPACE Request for Continuation of BoRSF Matching
- VII. Approval of Tulane University Appointment to the Master Plan Research Advisory Committee
- VIII. Survey: FY 2013-14 Endowed Chairs and Endowed Professorships Vacancy Rates
- IX. Other Business
- X. Adjournment

\* Selected high-demand four-star and five-star job openings

**Committee Members:** Roy Martin III, Chair; William Fenstermaker, Vice Chair; Maggie Brakeville; Raymond Brandt; Chris Gorman; Edward Markle; Albert Sam II

## AGENDA ITEM III

### **Proposed BoRSF Endowed: WISE (Tier One) Two-Year Student Scholarships Subprogram**

#### **Staff Summary**

Following Board approval of the Endowed Graduate Student Scholarships subprogram in September 2014, the staff held several follow-up communications with Dr. Monty Sullivan, President of the Louisiana Community and Technical College System (LCTCS). With some adaptations for the special attributes and needs of two-year campuses, we mutually agreed on the potential high value of a comparable endowed scholarship subprogram which would target community college students in high demand areas as identified by the WISE Council. A formal request from Dr. Sullivan followed on November 20, 2014 (see Attachment), submitted on behalf of all 15 two-year campuses, the 13 campuses within LCTCS along with LSU Eunice and Southern Shreveport.

Dr. Monty Sullivan, President of LCTCS, will be present to comment and respond to questions regarding the LCTCS request.

#### **Senior Staff Recommendations**

**The Senior Staff recommends establishment of the BoRSF Endowed: WISE (Tier One) Two-Year Student Scholarships subprogram, with the following parameters and attributes:**

- 1. The \$1.1 million\* allocated in the FY 2015-16 budget to the Enhancement Program for Two-Year Institutions shall be reallocated to the BoRSF Endowed: WISE (Tier One) Two-Year Student Scholarships subprogram.**
- 2. The BoRSF Endowed: WISE (Tier One) Two-Year Student Scholarships subprogram, to target high-wage, high demand jobs in Tier One categories, shall begin July 2015.**
- 3. The minimum endowment level for each BoRSF Endowed: WISE (Tier One) Two-Year Student Scholarship shall be \$40,000, based on a 3:1 (non-State-\$30,000; public-\$10,000) ratio.**
- 4. The LCTCS System shall coordinate statewide the BoRSF Endowed: WISE (Tier One) Two-Year Student Scholarships subprogram for all two-year campuses.\*\***
- 5. Board of Regents policies regarding investment, flexibility of use, accountability, reporting, and honoring of donors shall apply.**
- 6. Board of Regents staff, in collaboration with LCTCS, shall recommend comprehensive guidelines for the BoRSF Endowed: WISE (Tier One) Two-Year Student Scholarships subprogram in February 2015.**

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\* The anticipated level of funding in future fiscal years is \$1.2 million.

\*\* President Ronald Mason has approved this coordination for the Southern University System; a response from the LSU System is pending.

# **ATTACHMENT**

## Louisiana Community & Technical College System

### **Proposal to Convert the Board of Regents Enhancement Grants for Two-Year Institutions to an Endowed WISE Student Scholarship Subprogram for Two-Year Institutions**

#### I. Background

The Board of Regents currently allocates \$1.2 million annually in enhancements grants for two-year public colleges in Louisiana. While community colleges have accessed these funds for a wide variety of purposes over the years, not all colleges have participated; in addition, some of these funds have gone unused. Today, the economic climate and workforce demands with which Louisiana is challenged calls for a more strategic investment of resources by the State in its people, its colleges, and the future.

During the 2014 Legislative Session, lawmakers recognized the need for this investment when it passed the WISE Bill in 2014, which provided new funding for higher education for the first time in seven years. These new dollars were targeted to the high-wage, high demand careers identified by the State's economic and workforce officials. The WISE legislation, which requires a twenty percent private match, has spurred not only a renewed focus in all of higher education on aligning programs with Louisiana's workforce needs, but has also strengthened partnerships with business and industry and inspired new levels of private investment in our institutions.

A Board of Regents endowed scholarship program for two-year colleges also recognizes that community college students face significant financial hurdles to achieving their educational goals. While federal financial aid programs are available for students in traditional associate degree programs, these resources do not always cover the costs faced by non-traditional students attending college while supporting families. In addition, traditional forms of financial aid are often not available for students enrolling in programs in which they can earn an industry-based credential for jobs identified as high-wage and high-demand. Therefore, the students most in need face significant obstacles in their path to a middle-class job while Louisiana's workforce gap remains wide. An endowed student scholarship program for community college students enhances the capacity of two year colleges to produce the graduates our economy needs, contributes to economic development, and the well-being of our citizens.

Finally, an endowment program with a private match spurs continued private investment in two-year public institutions, securing economic growth and opportunity far into the future through a growing culture of philanthropy.

## II. Proposal Outline

The Board of Regents Endowed WISE Student Scholarship Subprogram for Two-Year Public Institutions shall:

- A. Be targeted to students entering programs in high wage, high demand programs in Tier One categories.
- B. Require \$40,000 to endow one student scholarship, with a three-to-one (3-1) match; the Board of Regents shall provide one dollar for every three private dollars. For each Endowed WISE Student Scholarship, the college shall secure \$30,000 in private dollars to qualify to receive \$10,000 from the Board of Regents; this will equal the 40,000 required for the scholarship endowment. The entire \$30,000 private match must be in hand prior to applying for the match.
- C. Allow the Endowed WISE Student Scholarship to be named in honor of the donor if the entire match is secured from a single contributor. Naming the endowment must follow the college naming policy guidelines.
- D. Require the Board of Regents Endowed WISE scholarships to be invested in accordance with Board of Regents guidelines.
- E. Permit current Board of Regents Endowed Professorships currently in place at community colleges to be converted to Endowed WISE Student Scholarships if donors provide their consent. Colleges must notify the Board of Regents of the converted endowments and provide written documentation of donor agreement. The process for notification will be developed by the LCTCS.
- F. Require a report of the Endowed WISE Student Scholarship Subprogram, along with all other Board of Regents endowments held by community colleges, to the Board of Regents on an annual basis, by September 1, of each year. The coordination and timelines for reporting will be provided and coordinated by the LCTCS.
- G. Require the guidance, promotion, oversight and coordination of the program by the LCTCS for all two-year colleges including LSU Eunice and Southern University Shreveport.

## III. Summary

The Board of Regents Endowed WISE Student Scholarship Subprogram will replace the Board of Regents Enhancement Program for Two-Year Institutions, providing a \$1.2 million funding stream to be matched 3-1 with private funds to create scholarship endowments for students in Tier One programs. This program has the capacity to generate \$4.8 million every year in endowment in the state's community colleges and create 120 new scholarships annually. The original purpose of the Board of Regents Enhancement Program is to promote the State's economic development. By converting this program to a more strategic focus, this goal will be most certainly be achieved.

## AGENDA ITEM IV

### Recommendations of the Statewide Review Panel

#### Staff Summary

The Board of Regents' 2011 Master Plan is organized around three major goals, including "fostering innovation through research in science and technology in Louisiana." To pursue this goal, the Regents in 2012 established the Master Plan Research Advisory Committee (MPRAC), comprised of representatives from public and private research-focused universities across the State. MPRAC's charge is to define priorities for investing in university research which show promise of leading to technology transfer and research commercialization.

To further the accomplishment of this goal, MPRAC, in collaboration with the Louisiana Department of Economic Development (LED) and the consultants LED engaged from Battelle during 2012-13, conducted analyses of priority research areas to identify a limited number of potential statewide foci. The 2013 Battelle report recommended the following five priority research areas:

- ❖ Advanced Manufacturing and Materials
- ❖ Clean Technology and Energy
- ❖ Coastal and Water Management
- ❖ Digital Media and Enterprise Software
- ❖ Life Sciences and Bioengineering

MPRAC promptly established five corresponding Task Forces to pinpoint opportunities for innovation within each designated area. Task Forces completed reports in October 2014, each recommending no more than three priority areas for research investment. At its meeting of August 27, 2014, the Board authorized an external review of Task Force priorities, with a report for Board consideration at its December meeting.

The external panel for this review included Dr. Gerald Sonnenfeld (Chair), Vice President for Research and Economic Development, University of Rhode Island; and Dr. Richard Seagrave, past president of Iowa State University. Both have extensive experience within Louisiana as reviewers of Support Fund and EPSCoR proposals. The panel met in Baton Rouge during November 16-19 and conducted interviews with representatives of each Task Force and two representatives from LED (see Appendix I of the report, attached). The panel's review, scoring, and subsequent recommendations were based on these interactions and the "Criteria for External Review of Task Force Reporting" (see Appendix II of the report, attached).

The review panel awarded the top three scores to **Advanced Manufacturing and Materials, 95 points; Life Sciences and Bioengineering, 90 points; and Digital Media and Enterprise Software, 85 points.** The report recommends that State leaders commit short- and long-term investments in one or more of these priority areas. The panel also emphasized the need to

aggressively continue research innovation efforts in each Task Force area, awarding **Coastal and Water Management 80 points and Clean Technology and Energy 75 points.**

Under General Recommendations, the review panel emphasized these essential requirements for success across all Task Force areas:

1. *Expanded Proof-of-Concept and Prototyping Fund*
2. *Statewide “Best Practices” for Technology Transfer*
3. *Establishment of Two Board of Regents Websites*
  - a. *Highlight Task Force Priorities for Research Innovation*
  - b. *A link to the Global Technology Portal maintained by the University Technology Transfer Offices and Association of University Technology Managers (AUTM)\**
4. *Investment of future WISE “research” dollars in priority areas identified through the competitive review*

### **Senior Staff Note**

Findings and recommendations of the review panel are the product of three years of study by the Master Plan Research Advisory Committee (MPRAC) which the Board of Regents established in 2012. From its inception, MPRAC has worked in close collaboration with LED, Battelle, and the Innovation Council. The statewide review of priorities, highlighted by recommendations of the external review panel, is a landmark attempt to accomplish this stated goal in the Regents’ Master Plan of 2011: **“foster(ing) innovation through research in science and technology in Louisiana.”**

Dr. Les Guice, President of Louisiana Tech University, Chair of MPRAC, and Chair of the Louisiana Innovation Council; and Dr. Michael Khonsari, EPSCoR Project Director and Vice Chair of MPRAC, will be present for comments and responses to questions regarding recommendations of the review panel.

### **Senior Staff Recommendation**

**Senior Staff recommends that the Board of Regents advance the Master Plan research goal by advocating implementation of the review panel’s recommendations to current and future Governors, the Legislature, the Louisiana Department of Economic Development,**

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\* The Association of University Technology Managers (AUTM) is a global network of more than 3,500 technology transfer professionals who work in academic, research, government, legal and commercial settings. The organization collects and disseminates critical data relative to technology transfer activities and outcomes on university campuses. The AUTM Global Technology Portal provides a searchable databank of the latest university technologies available for licensing worldwide.

and the Louisiana Innovation Council, along with academic and business leaders. Within this context, the Regents endorse:

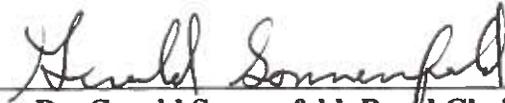
1. Specific short- and long-term State and private investments in the priority university research areas which the MPRAC Task Forces and review panel identified, especially the top three: Advanced Manufacturing and Materials, Life Sciences and Bioengineering, and Digital Media and Enterprise Software;
2. MPRAC, in collaboration with the Louisiana Department of Economic Development and Louisiana Technology Transfer Officers working group, develop statewide recommendations regarding the following, with an update to the Board of Regents by April 1, 2015:
  - Competitive Proof of Concept funding; and
  - Framework for common standards in university-based technology transfer;
3. Board of Regents staff, in collaboration with MPRAC, develop, by June 1, 2015, two websites which: a) highlight Task Force priorities for research innovation; and b) provide a portal to university technology transfer offices and AUTM's Global Technology Portal;
4. The Board of Regents engage a full-time economic development manager within the Sponsored Programs unit to assist MPRAC and the Louisiana Department of Economic Development in coordinating higher education's involvement in statewide matters related to proof-of-concept funding, technology transfer, and the Regents' research commercialization websites;
5. Allocate the 20% of Workforce and Innovation for a Stronger Economy program (WISE) research dollars to target research priorities that the review panel recommended; and
6. Approval of the review panel's report as presented, including the recommendation that respective Task Forces continue to address outstanding issues.

# **ATTACHMENT**

**STATEWIDE RESEARCH PRIORITIES REVIEW PANEL  
REPORT AND RECOMMENDATIONS**

**TO**

**THE LOUISIANA BOARD OF REGENTS**



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**Dr. Gerald Sonnenfeld, Panel Chair  
Vice President for Research and Economic Development  
University of Rhode Island**



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**Dr. Richard Seagrave  
Past President  
Iowa State University**

**November 19, 2014**

# Statewide Research Priorities Review Panel

## Report and Recommendations

### Introduction

As explained in staff briefings, the Board of Regents' 2011 Master Plan is organized around three major goals, including "fostering innovation through research in science and technology in Louisiana." To pursue this goal, the Regents in 2012 established the Master Plan Research Advisory Committee (MPRAC), comprised of representatives from public and private research-focused universities across the State. MPRAC's charge is to define priorities for investing in university research which show promise of leading to technology transfer and research commercialization.

To further the accomplishment of this goal, MPRAC, in collaboration with the Louisiana Department of Economic Development (LED) and the consultants LED engaged from Battelle during 2012-13, conducted analyses of priority research areas to identify a limited number of potential statewide foci. The 2013 Battelle report recommended the following five priority research areas:

- ❖ Advanced Manufacturing and Materials
- ❖ Clean Technology and Energy
- ❖ Coastal and Water Management
- ❖ Digital Media and Enterprise Software
- ❖ Life Sciences and Bioengineering

MPRAC promptly established five corresponding Task Forces to pinpoint opportunities for innovation within each designated area. Task Forces completed reports in October 2014, each recommending no more than three priority areas for research investment.

Dr. Kerry Davidson, Deputy Commissioner for Sponsored Programs, Board of Regents, charged the Statewide Research Priorities Review Panel with reviewing the Task Force reports and preparing findings and recommendations for submittal to the Regents. The panel met in Baton Rouge during November 16-19 and conducted interviews with representatives of each Task Force and two representatives from LED (see Appendix I). The panel's review, scoring, and subsequent recommendations were based on these interactions and the "Criteria for External Review of Task Force Reporting" (see Appendix II).

## EVALUATIONS

**Task Force evaluations, based on criteria in Appendix II, are listed in the order of the strength of the reports and presentations to the panel. The panel recognizes that each area addressed by the five Task Forces is highly important for the future of academic research and economic development in Louisiana. The panel reviewed and evaluated priorities within each Task Force area separately and in combination; a single combined score is indicated for all priorities within each Task Force.**

**Long-term investment in selected priorities is essential. Within this context, given the dynamic nature of State and national needs and resources, the panel emphasizes the imperative to periodically reassess priorities within and across all Task Forces.**

### **1. Advanced Materials and Manufacturing (95 points)**

#### Foundational Sciences

The Task Force report and presentation convincingly conveyed the significant strengths that already exist in this highly competitive area, which participating institutions are maintaining and advancing, particularly in research and development related to metals manufacturing and materials. Accomplishments in the areas of polymers and composite materials and in biomaterials are also significant and continuing. The connection to FIRST Louisiana, the statewide science and technology plan, is solid. The Task Force offers a set of overarching strategic recommendations for further linking university-based and university-affiliated entities under a networked umbrella organization that would promote and expedite access to facilities and increase competitiveness for national resources and faculty recruitment. **(15 points)**

#### Collaborative Efforts

Multidisciplinary and multi-institutional collaborative efforts in this area are developing among the five major universities of LSU, Louisiana Tech, ULL, UNO, and Tulane. Further development that would include Loyola, Xavier, Southern-Baton Rouge, UL Monroe, and the LSU Ag Center is encouraged. There is an impressive list of current and potential industry partners, and further attempts to secure financial support from those companies is encouraged. **(15 points)**

### Alignment: National Needs and Priorities

Alignment of the work in this area and its competitiveness with national needs, priorities, and potential funding is strong, particularly in the metals manufacturing priority area, and to a lesser degree in polymers and biomaterials. The use of the EPSCOR programs is commendable. While related disciplines have had some success in attracting faculty through the Board's Endowed Chairs for Eminent Scholars program, it may be desirable to recruit a senior faculty member to provide overall leadership and direction of the combined efforts. This could help catalyze statewide coordination of the research efforts and also increase the competitiveness for additional resources. **(30 points)**

### Research Commercialization and Translational Activities

Targeting of the research and development efforts in ways leading to research commercialization and translational activities that promote economic development in Louisiana represents an area for improvement. While there is significant potential in this area, the Task Force report throughout does not specifically couple the proposed efforts to Criterion 4. It is clear that there is sufficient interest and industry participation to effect increased financial support and to promote technology transfer and subsequent economic development. **(35 points)**

## 2. Life Sciences and Bioengineering (90 points)

Life Sciences and Bioengineering are critically important areas for research and development in Louisiana. Universities and special focus campuses in the State have a wealth of experience, and the need for development in health care, medical devices and pharmaceuticals is unquestioned, not only in Louisiana, but nationally and worldwide. As the population grows and ages, the needs will only expand. Research and development in these areas is well worth investment by Louisiana leaders.

### Need for Focus

The Task Force wishes to see investment in three major areas: biotechnology; engineering of medical technology; and advancement of health and media informatics. Foci in agricultural research were also included among the biotechnology priorities. The panel believes that each selection is worthy of investment; the broad areas identified are logical choices and the amount of expenditures in both Louisiana and the U.S. provide compelling evidence for a very good return on investment. The panel also viewed positively the interest in workforce development, including a focus on professional master's degrees.

The proposed initiative, however, needs clearer definition. Each area proposed for inclusion is very broad; the effort would benefit by being more narrowly focused in terms of research leading to innovation and more inclusive in terms of leadership among leading institutions. The Task Force concluded that the most effective way to achieve these goals would be establishment of a statewide organization, such as a Life Sciences/Biotechnology Center, that would assure meaningful coordination and interaction across all affected groups. Despite providing ample evidence of collaborations with many commercial groups, there was no evidence presented of meaningful interaction in planning the proposed Louisiana Biotechnology Center, or in approaching these groups to provide funding support for Center activities. The project would be enhanced by further interaction with industry.

### Foundational Sciences

With clearer research targets and greater participation among the leading institutions, the proposed initiative should maintain and build strength in targeted foundational science and technology disciplines identified in the FIRST Louisiana S&T Plan. The biotechnology, health and engineering of biology areas all fall within FIRST Louisiana's Biomedical Sciences area and should be able to attract funding from the agencies listed. **(15 points)**

### Collaborative Efforts

With revisions noted above, the Life Sciences and Bioengineering initiative should promote focused multidisciplinary and multi-institutional collaborative research efforts. The presentation focused primarily on one university, and care must be taken to assure multi-institutional participation as the initiative is developed. **(10 points)**

### Alignment: National Needs and Priorities

A clearer focus and greater inclusivity would well align the initiative with national priorities and needs, and thus make it competitive for federal funding. Health care nationally has become a major social, political, and moral issue as the population ages, and Louisiana should be an aggressive participant and leader in finding new ways to manage care and new methods of delivery, as well as new drugs and medical equipment. **(30 points)**

### Research Commercialization and Translational Activities

The proposed initiatives should be able to sustain and advance targeted research commercialization and translational activities that promote economic development in Louisiana. This conclusion is predicated on the assumption that focus is narrowed to multi-institutional research strengths with the highest economic development potential. **(35 points)**

### 3. Digital Media and Enterprise Software (85 points)

The Task Force in this rapidly evolving and strategically important area divides priorities into Big Data and Analytics, Cybersecurity, and Enterprise Computing and Software Development. The report does an excellent job in relating the content of the report to the stipulated criteria for panel evaluation. The panel perceives that the Big Data and Analytics area has the best chance of achieving national prominence. While exciting progress and achievements are being made in all three areas, the panel concluded that there was an over-reliance on direct funding from the Board of Regents. The report presented an impressive list of commercial participants involved in the research area; this provides an opportunity for significant strengthening and expansion of the funding base.

#### Foundational Sciences

There has been impressive progress in Louisiana in building strength and in targeting the foundational science and technology in this discipline, consistent with FIRST Louisiana. This is particularly true for the area of Big Data and Analytics. There have also been impressive steps forward on Cybersecurity and Software Development. **(13 points)**

#### Collaborative Efforts

This area is inherently multidisciplinary and logically multi-institutional, particularly with respect to collaborative research. While ULL has taken the lead, the cooperating institutions are accomplishing significant related research and there are likely unexplored opportunities for further collaborations. For example, the pervasive nature of the underlying science is creating new research capability in the life sciences, the social sciences, and the humanities, as well as in the traditional related areas of mathematics, engineering, and the physical sciences. **(15 points)**

#### Alignment: National Needs and Priorities

There is certainly significant alignment and competitiveness with national priorities and needs. The efforts transcend many other areas in the natural sciences and engineering, medicine, and social phenomena. It is incumbent on Louisiana's leaders to be aware of collaborative funding opportunities in all of these fields, as noted above. **(30 points)**

#### Research Commercialization and Translational Activities

With respect to Criterion 4 that addresses sustaining research commercialization that promotes economic development in Louisiana, neither the Task Force report nor the interview provided fully convincing arguments. There needs to be more attention directed towards developing

relationships with State and national industries and organizations to achieve clearer focus in this area. **(27 points)**

#### 4. Coastal and Water Management Task Force (80 points)

Given the State's geographic location, characteristics, and thriving related industries – such as oil and gas, fisheries, and tourism – coastal and water management plays a pivotal role in assuring Louisiana's future development. Continually rising sea levels will inevitably pose major challenges for Louisiana and the nation, including maintenance and support of land near the ocean and other water sources. Additionally, maintenance of water quality may also become a significant problem for coastal areas as saline levels rise. It is vital that Louisiana find ways to manage these issues before they move beyond our control.

##### General Comments

The Task Force proposes three well-defined areas for investment: coastal resilience through next generation coastal science, engineering and management; water resilience management and technology; and coastal resilience and sustainable community planning and engineering. Consideration was given to technology transfer issues, as well as to workforce development. It appeared that the Task Force members had worked together well and were concerned about all areas of the State, not focused on one area or university alone. The three areas selected are important and well worth further study and investment.

Plans for involvement of corporate partners, however, were limited. The chances for success and good returns on investment would be improved considerably if commercial partners could be convinced to contribute to the research and development effort. One way to accomplish this would be to include research issues important to the Louisiana fishing industry and/or the offshore oil/gas industry; if successful, funding assistance from these industries could follow. These economic contributions are very important to Louisiana, and related industries would benefit from strong coastal and water management.

##### Foundational Sciences

The proposed plan will maintain and build strength in targeted foundational science and technology disciplines identified in FIRST Louisiana; as conceptualized, the initiative would fit into both the "Biomedical Sciences" and the "Materials" areas of FIRST Louisiana, particularly if fish industry issues were included. The foundational studies should lead to applied research that could contribute to economic development in Louisiana **(15 points)**

##### Collaborative Efforts

The initiative will promote targeted multidisciplinary and multi-institutional collaborative research efforts. It was made clear that Task Force members had jointly designed the proposed

program and that multiple institutions plan to participate. This would facilitate the program's statewide reach. **(15 points)**

Alignment: National Needs and Priorities

Directions of the initiative are well-aligned and will be competitive with national priorities, needs, and funding. Coastal and water management are currently major issues across the United States. Rising sea levels and changes in climate and the environment will require major attention in the foreseeable future. Louisiana could lead in this area. **(30 points)**

Research Commercialization and Technology Transfer Activities

The proposed plan will sustain and advance targeted research commercialization and translational activities that promote economic development in Louisiana; this could be greatly enhanced, however, by additional interaction and inclusion of research topics that will be of interest to corporate partners. Changing water and salinity levels and exposure to pollutants are all major challenges to the fishing industry. Since this industry is of great importance to the State, it would likely greatly benefit by consideration of its issues by the Coastal and Water Management researchers, which in turn could contribute to Louisiana's economic development. **(20 points)**

## 5. Clean Technology and Energy (75 points)

The October 31 Task Force report in this area originally identified five priority sub-areas: Oil and Gas Production, Fuels and Energy Storage, Power Generation, Renewable Bioenergy, and Catalysis. The November 17 afternoon interview narrowed the sub-areas to Oil and Gas Resources, Clean Tech Resources, and Energy Processes. Subsequently, during the evening of November 17, the panel received a list of three priority research commercialization areas—Non-Conventional Oil & Gas, Biofuels, and Power Production. The panel found it challenging to evaluate the relationship of the reports with respect to the criteria. There is little statewide evidence of coordination or focusing.

### Criticality of Area

This is a critically important area for Louisiana and for the nation, particularly clean energy resources. The relationships coupling non-conventional oil and gas, biofuels, and electrical power production will ultimately have profound economic, social, and scientific effects on Louisiana industries and institutions.

### Foundational Sciences

There is very significant work being done throughout the State, consistent with the FIRST Louisiana S&T Plan. Areas include co-generation of biomass and coal, improved solar cells, energy scavenging, ethanol production, and intelligent gas turbines. **(10 points)**

### Collaborative Efforts

It is not clear from the report that there is a continuous functioning coordinating mechanism to promote multi-institutional collaborative research efforts. The Task Force report indicates that there is sufficient inter-institutional personnel to accomplish this if the necessary leadership comes forward. **(10 points)**

### Alignment: National Needs and Priorities

There is certainly significant alignment with national priorities, needs, and funding. Collectively, through the Clean Power and Energy Research Consortium in Louisiana, there is a history of past federal and State funding of \$750K per year. The report makes a very strong case for the importance of work in these areas. **(30 points)**

### Research Commercialization and Translational Activities

With respect to Criterion 4, requiring targeted research commercialization and translational activities that promote economic development in Louisiana, the panel does not find a coherent strategy or plan to accomplish this objective. However, it is apparent that the commercialization potential and effects of the work being done by the Task Force institutions are immense. **(25 points)**

The Task Force Report and the interview would have benefitted from a timely and coherent discussion of the relationships with the Evaluation Criteria and specific suggestions for enhancement. Subsequent to the interview, the panel received additional input regarding the four evaluation criteria and suggestions for enhancement.

## GENERAL RECOMMENDATIONS

The review panel was highly impressed with the dedication and hard work demonstrated by the MPRAC Task Forces in collaboration with the Louisiana Department of Economic Development. We also highly commend the Board of Regents of the State of Louisiana for realizing the significance of research and development issues to economic innovation and the future of the State. We believe that the areas addressed by each Task Force, in further refining the priorities recommended by Battelle, are of great significance to Louisiana and that targeted investments will lead to both short- and long-range returns for the citizenry of this State.

**We highly recommend that the Board of Regents, MPRAC and its Task Forces, the Louisiana Department of Economic Development, the Louisiana Innovation Council, and related constituencies consider the following as economic planning and development in Louisiana continue:**

- 1. As noted by several Task Forces, it is critically necessary to provide support for “proof of concept” and prototyping activities at the university level across all priority research areas with research commercialization and technology transfer potential. Proof of concept and prototyping funds help generate data that will enhance applications for external funding and, for studies ready for translation to commercial use, can assist with patenting, licensing, and obtaining data needed for small companies to move forward with product development. The Board of Regents already, through the Opportunities for Partnerships in Technology with Industry (OPT-In) Program, provides limited competitive funding; this program should be expanded, with additional funding leveraged through other State, private, and non-profit sources to ensure statewide reach and impact.**

**The Technology Transfer and Commercialization Task Force should be charged to recommend to MPRAC, the Board of Regents, and the Louisiana Innovation Council an expanded proof-of-concept and prototyping initiative which leverages funding from multiple sources to support a statewide competitive program.**

- 2. Since policies and approaches regarding technology transfer are integral to the success of research and development plans, the process must be comprehensible to industry and mutually protect the interests of universities and business. We understand that MPRAC’s Technology Transfer and Commercialization Task Force is currently collaborating closely with representatives of the Louisiana Department of Economic Development. This Task Force should, after a review of campus-based policies and approaches, recommend a set of best practices statewide**

to the MPRAC, the Board of Regents, the Louisiana Department of Economic Development, and the Louisiana Innovation Council.

3. To ensure that constituencies across Louisiana are aware of MPRAC's statewide work, a website should be developed by the Board of Regents, in collaboration with MPRAC and its Task Forces, to accomplish two purposes: (a) highlight priorities which emerge from the review panel's report and Board action; and (b) communicate and advertise the priorities identified across all Task Force reports.
4. As suggested by the Technology Transfer and Commercialization Task Force, the panel recommends an interactive website to promote expanded relationships with industry by providing a searchable databank of all technologies available across Louisiana's research institutions. While the initiative should be coordinated and managed on a statewide basis by the Board of Regents, collaboration with campus technology transfer officers as well as the Louisiana Department of Economic Development is critical. Given the scale of this activity and the collaboration required for it to succeed, the Board of Regents should create a full-time staff position to design, implement, and manage the databank.
5. Workforce development is an essential component of each initiative, and inclusion of professional master's degrees will enhance the outcomes. Further, there should be interactions with community colleges to allow the addition of certificates to associate's degrees in important research areas to help assure a workforce that can cope with varied needs of modern corporations in such areas as manufacturing, health care, water quality, energy, and computing. This will help minimize the existence of high-demand jobs in Louisiana which cannot be filled by Louisiana residents.
6. Each MPRAC research and economic development initiative should be designed to benefit the State of Louisiana and not one geographical area or university alone. Care should be taken to make each initiative truly collaborative and multi-institutional.
7. There are many outstanding corporate partners in the State. They should be engaged more meaningfully in planning, execution, and funding. Since a paramount goal of the program is to facilitate economic development of Louisiana, it is important to know that MPRAC strategies will help corporate partners meet their needs and objectives. Direct communications and interactions are essential. MPRAC is fortunate to have, as collaborating partners, representatives from the Louisiana Department of Economic Development. The Task Forces and respective

**campuses should continue to take advantage of the expertise of LED to aid in strengthening relations with corporate partners.**

- 8. The panel recommends that, for future funding cycles, the 20% of Workforce and Innovation for a Stronger Economy program (WISE) funds that are devoted to research be targeted to support, on public campuses, research priorities that the Board of Regents approves through the MPRAC-based statewide competitive process.**

The review panel thanks the Board of Regents for giving us the opportunity to participate in the preparation of Louisiana's research and economic development initiative. The combination and flow of events and collaborations – Master Plan Research Goal, MPRAC, Battelle, LED, the Louisiana Innovation Council – may not easily reoccur. We believe the prospects for targeted research leading to innovation are now very exciting; this is a momentous opportunity for Louisiana. We wish you the greatest success in these efforts.

# APPENDIX I

## Task Force Interviews: November 17, 2014

<b>8:30-9:30 a.m.</b>	<b>Coastal &amp; Water Management</b> <ul style="list-style-type: none"><li>➤ <b>Sam Bentley</b>, Professor of Geology LSU-Baton Rouge</li><li>➤ <b>Nancy Rabalais</b>, Executive Director LUMCON</li><li>➤ <b>David Borrok</b>, Professor of Geosciences UL Lafayette</li></ul>
<b>9:45-10:45 a.m.</b>	<b>Advanced Manufacturing &amp; Materials</b> <ul style="list-style-type: none"><li>➤ <b>Kenneth Sewell</b>, Vice President for Research &amp; Economic Development, UNO</li><li>➤ <b>Stan Napper</b>, Vice President for Research &amp; Development Louisiana Tech</li><li>➤ <b>Michael Khonsari</b>, Professor of Mechanical Engineering LSU-Baton Rouge</li></ul>
<b>11:00 a.m.-12:00 p.m.</b>	<b>Life Sciences &amp; Bioengineering</b> <ul style="list-style-type: none"><li>➤ <b>Laura Levy</b>, Vice President of Research Tulane University</li><li>➤ <b>Donald Gaver</b>, Professor &amp; Dept. Chair of Biomedical Engineering, Tulane University</li><li>➤ <b>Gus Kousoulas</b>, Director and Professor of Biotechnology, Veterinary, &amp; Molecular Medicine, LSU-Baton Rouge</li></ul>
<b>1:30-2:30 p.m.</b>	<b>Digital Media &amp; Enterprise Software</b> <ul style="list-style-type: none"><li>➤ <b>Ramesh Kolluru</b>, Vice President for Research, UL Lafayette</li><li>➤ <b>Matthew Lee</b>, Senior Associate Vice Chancellor, Office of Research and Economic Development, LSU-Baton Rouge</li><li>➤ <b>Sumeet Dua</b>, Professor of Computer Science and Coordinator of IT Research, Louisiana Tech</li></ul>
<b>2:45-3:45 p.m.</b>	<b>Clean Technology &amp; Energy</b> <ul style="list-style-type: none"><li>➤ <b>Mark Zappi</b>, Dean, College of Engineering UL Lafayette</li></ul>
<b>4:00-5:00 p.m.</b>	<b>Representatives of the Louisiana Department of Economic Development</b> <ul style="list-style-type: none"><li>➤ <b>Quentin Messer</b>, Assistant Secretary</li><li>➤ <b>Jenee Slocum</b>, Special Projects Director</li></ul>

## APPENDIX II

### Criteria for External Review of Task Force Reporting

Each Task Force report should identify no more than three (3) priority research commercialization areas (e.g., wetland restoration, cybersecurity, drug delivery, light metal manufacturing, polymers, etc.) and develop action-oriented strategies for development and State investment in each. Task Forces may choose to develop a separate document for each priority area selected. External consultants will recommend those action-oriented priority initiatives which represent the strongest opportunities for achieving four objectives, rated below as follows:

1. Maintain and build strength in targeted foundational science and technology disciplines identified in FIRST Louisiana – 15%
2. Promote targeted multidisciplinary and multi-institutional collaborative research efforts – 15%
3. Demonstrate prospective alignment and competitiveness with national priorities, needs, and funding – 30%
4. Sustain and advance targeted research commercialization and translational activities that promote economic development in Louisiana – 40%

**In formulating recommendations, external consultants will be charged to: (a) identify and recommend Louisiana priorities among research commercialization areas identified by each Task Force; and (b) identify and recommend Louisiana priorities across research commercialization areas covered by all Task Forces.**

The report of external consultants will be transmitted to the Board of Regents, the Louisiana Department of Economic Development, and other stakeholders.

## **AGENDA ITEM V**

### **Request from the University of Louisiana at Lafayette to Divide a BoRSF-Matched Endowed Professorship**

#### **Staff Summary**

The University of Louisiana at Lafayette requests authorization to divide one BoRSF-matched Endowed Professorship – the Contractors Educational Trust Fund/LEQSF Professorship in Art and Architecture (matched 1990-91) into two, each with a corpus value of \$100,000.

Dr. Robert McKinney, Assistant Vice President for Faculty Affairs, has indicated that UL Lafayette will request such divisions when the market value of an existing Professorship exceeds \$220,000. These requests are in accordance with an institutional policy “to award all endowed professorships at the same stipend amount, which per UL Lafayette Foundation guidelines is a maximum of 4.5% of the fund balance. The reason for awarding all professorships at the same level is to ensure that all endowed professorships are viewed as being equally significant.” Dr. McKinney notes that there is “a shortage of professorships in some areas, specifically the arts, liberal arts, and sciences” which Professorship divisions will help to address.

Though the Board encourages establishment of Endowed Professorships at levels beyond the \$100,000 minimum corpus, this request from UL Lafayette is consistent with current Board policy.

#### **Senior Staff Recommendation**

**Consistent with current Board policy, the Senior Staff recommends approval of the division of the Contractors Educational Trust Fund/LEQSF Professorship in Art and Architecture into two Professorships, each with a corpus value of \$100,000.**

## AGENDA ITEM VI

### **Request for BoRSF Match: NASA Louisiana Space Consortium (LaSPACE) Bridge Grant**

#### **Staff Summary**

Initiated in 1991, the Louisiana Space Consortium (LaSPACE) project is a jointly supported effort of the Board of Regents and the National Aeronautics and Space Administration (NASA) under its National Space Grant program. Goals of the LaSPACE project are to strengthen aerospace research and education in Louisiana, as well as increase the number of Louisiana scientists and engineers trained in technical areas supportive of the nation's aerospace mission. Since the program's inception in FY 1991-92, NASA has provided \$6,906,250 to LaSPACE, matched with \$4,150,000 from the BoRSF, for a direct return on investment of \$1.66.

In the most recent LaSPACE award, funded during FY 2010-11 through FY 2014-15, the Board has approved the provision of \$1,250,000 (\$250,000 per year) as a match for \$3,145,000 in funding from NASA, a return on investment of \$2.52. The funds provided by the Board support both graduate student fellowships and research enhancement awards to faculty.

NASA is currently engaged in an extensive, multi-year external review of the Space Grant program, expected to last until 2018, indicating the intent to offer a grant totaling \$1,725,000 (\$575,000 per year) during this three-year 'bridge period'. After this period, a new proposal for the next five-year LaSPACE project will be solicited and reviewed. The LaSPACE Project Director has requested that the Board of Regents continue to provide a matching commitment of \$250,000 per year during FY 2015-16 through FY 2017-18 as part of the Federal Matching subprogram.

#### **Senior Staff Recommendation**

**The Senior Staff recommends that the Board of Regents commit a cash match from previously unspent monies in the Board of Regents Support Fund for the NASA LaSPACE continuation proposal. The amount of cash match provided shall not exceed \$250,000 per fiscal year for the three-year duration of the award. Matching funds are to be provided only if NASA Space Grant funding is received.\***

**\* To accommodate matching funds needed in FY 2015-16, the BoRSF Plan and Budget as approved by the Board in September 2014 shall be adjusted as follows: The allocation for Federal Matching shall increase from \$1,425,000 to \$1,675,000 and the allocation for Traditional Enhancement shall decrease from \$3,926,770 (as approved in Agenda Item III) to \$3,676,770. The net total allocated for the Enhancement program shall remain unchanged.**

## **AGENDA ITEM VII**

### **Approval of Tulane University Nominee to the Board of Regents Master Plan Advisory Committee (MPRAC)**

#### **Background Information**

The Board of Regents Master Plan Advisory Committee (MPRAC) provides advice and guidance to the Board of Regents relative to fulfillment of the goal of the 2011 Master Plan related to research and technology transfer. Membership of MPRAC consists of one representative of each four-year system and each campus with a significant research program.

#### **Staff Summary**

Dr. Michael Bernstein, Provost of Tulane University, has nominated Dr. Michael Cunningham, Associate Provost for Graduate Studies and Research, to serve on MPRAC as a representative of Tulane. Dr. Cunningham replaces Dr. Brian Mitchell.

#### **Senior Staff Recommendation**

**Senior Staff recommends that the Board of Regents approve Tulane University's nomination of Dr. Cunningham to the Master Plan Research Advisory Committee.**

## AGENDA ITEM VIII

### Survey: FY 2013-14 Endowed Chairs and Endowed Professorships Vacancy Rates

#### Staff Summary

During September 2013, in response to data showing long-term vacancy rates for Chairs and Professorships above 30% statewide, the Board of Regents approved policy revisions to render ineligible for new matches any campus whose “percentage of vacancies of greater than two years’ duration in the Endowed Professorships subprogram [or Endowed Chairs program] exceeds 20%.” Vacancy rates are calculated annually to determine eligibility.

Based on review and analysis of data for FY 2013-14, 32 of 43 (74%) Support Fund-eligible campuses will be permitted to submit new requests for match in the Endowed Chairs subprogram and 35 of 43 (81%) in the Endowed Professorships subprogram. (See Attachment.) **Please note that \$2.8 million has been budgeted for Endowed Professorships and \$2 million has been budgeted for Endowed Chairs in FY 2014-15. Under Board policy, an RFP for the FY 2014-15 Endowed Chairs competition has already been disseminated and eligible campuses are preparing proposals due for submittal on February 1, 2015; requests for Professorships matches are submitted on a non-competitive basis and are due by March 31, 2015.**

**There are two related compelling results of the statewide survey in regard to Endowed Chairs:** (1) every four-year public research campus, with the exception of Pennington Biomedical Research Center, is ineligible to submit new proposals during FY 2014-15; and (2) every LAICU campus remains eligible to do so during this period. **The only persuasive reason for these generalized differences in public versus independent campus results is the cumulative negative effect which protracted State budgetary cuts are having for public colleges and universities.**

**The following eleven (11) campuses, all public, are thus ineligible to submit new proposals and compete for Endowed Chairs during FY 2014-15:** Louisiana State University and A&M College-Baton Rouge, LSU Health Sciences Center-New Orleans, LSU Health Sciences Center-Shreveport, LSU Law Center, Louisiana Tech University, Northwestern State University, Southeastern Louisiana University, Southern University at Baton Rouge, Southern University at New Orleans, University of Louisiana at Lafayette, and University of New Orleans. In total these campuses house 82 Chairs that have remained vacant for more than two years.

Unlike Endowed Professorships, which each campus fills entirely at its own discretion, usually with existing faculty, long-established Board policy for Endowed Chairs requires that all campuses (a) establish an appropriate salary line for support of each Chairholder; and (b) conduct a national search to identify top candidates to fill all vacant Chairs. In addition, to recruit truly eminent scholars and researchers, campuses must provide substantial start-up packages including facilities, laboratory equipment, student support, and even additional faculty to support

the work of the Chairholder; these packages, particularly in STEM disciplines, can total millions of dollars.

### **Staff Conclusion**

The purpose of the Regents' Endowed Chairs program is to help campuses attract and retain nationally and internationally recognized eminent scholars; as researchers, educators, and intellectuals, eminent scholars are catalysts, magnets, and stars at major universities nationwide. They are, by analogy, quarterbacks in each discipline of the top 25 or top 100 academic teams. **Results of the recent Endowed Chairs survey are an unmistakable warning, with far-reaching and wide-ranging consequences, that the top public universities in Louisiana are having severe budgetary difficulty in recruiting the nation's top "academic quarterbacks."**

Relative to Eminent Scholars, it appears that Louisiana is systematically violating the age-old and time-tested farmer's maxim: **"Don't eat your seed corn."**

The Senior Staff recommendation which follows recognizes that many campus administrators are unaware or have only recently become aware of the consequences of the vacancy data submitted.

### **Senior Staff Recommendation**

**The Board invites the president/chancellor of each affected public campus to advise the Commissioner of Higher Education, by January 9, 2015, on ways to address existing Endowed Professorships and/or Endowed Chairs vacancies – in a manner consistent with Regents' policies – which will allow the campus to regain or retain eligibility for new matches beginning FY 2015-16. The Board will consider these recommendations at its January or February meeting.**

# **ATTACHMENT**

### Vacancy Rates in Faculty Endowments: FY 2013-14

System/Campus	Endowed Professorships			Endowed Chairs		
	# EP Matched	# EP Vacant >2 Years	% EP Vacant >2 Years*	# EC Matched	# EC Vacant > 2 Years	% EC Vacant >2 Years*
<b><u>UL System</u></b>	<b>773</b>	<b>56</b>	<b>7%</b>	<b>75</b>	<b>30</b>	<b>40%</b>
GSU	27	4	15%	2	0	0%
LA Tech	140	3	2%	13	4	31%
McNeese	108	0	0%	0	0	0%
Nicholls	56	15	27%	2	0	0%
NSU	51	4	8%	3	1	33%
SELU	55	2	4%	2	1	50%
ULL	232	23	10%	23	12	52%
ULM	59	2	3%	7	1	14%
UNO	45	3	7%	23	11	48%
<b><u>LSU System</u></b>	<b>781</b>	<b>52</b>	<b>7%</b>	<b>138</b>	<b>49</b>	<b>36%</b>
LSU Ag	38	2	5%	3	0	0%
LSUA	20	4	20%	1	0	0%
LSUBR	434	19	4%	67	23	34%
LSUE	7	0	0%	0	0	0%
LSUHSCNO	122	15	12%	38	21	55%
LSUHSCS	46	7	15%	11	3	27%
LSUS	44	0	0%	4	0	0%
LSU Law	64	5	8%	3	1	33%
Pennington	6	0	0%	11	1	9%
<b><u>LAICU</u></b>	<b>549</b>	<b>95</b>	<b>17%</b>	<b>98</b>	<b>9</b>	<b>9%</b>
Centenary	129	74	57%	12	1	8%
Dillard	29	7	24%	4	0	0%
LA College	16	1	6%	0	0	0%
Loyola	80	3	4%	10	0	0%
OLHC	36	0	0%	1	0	0%
OLOL	39	0	0%	1	0	0%
St. Joseph	15	0	0%	0	0	0%
Tulane	92	8	9%	32	4	13%
TUHSC	58	2	3%	33	4	12%
Xavier	55	0	0%	5	0	0%
<b><u>Southern System</u></b>	<b>66</b>	<b>24</b>	<b>36%</b>	<b>4</b>	<b>3</b>	<b>75%</b>
SUBR	42	16	38%	2	2	100%
SU Law	12	0	0%	0	0	0%
SUNO	5	2	40%	2	1	50%
SUS	7	6	86%	0	0	0%
<b><u>LCTCS</u></b>	<b>39</b>	<b>9</b>	<b>23%</b>	<b>0</b>	<b>0</b>	<b>0%</b>
BRCC	4	0	0%			
BPCC	1	0	0%			
CLTCC	0	0	0%			
Delgado	15	0	0%			
Fletcher	2	2	100%			
LDCC	5	5	100%			
Northshore	0	0	0%			
Nunez	10	2	20%			
RPCC	0	0	0%			
SLCC	2	0	0%			
Sowela	0	0	0%			
<b>Statewide Total</b>	<b>2,208</b>	<b>236</b>	<b>11%</b>	<b>315</b>	<b>91</b>	<b>29%</b>

\* Percentage calculated as the number vacant more than 2 years (as defined in policy) divided by the total number matched.