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**TO:** Chairman of the House Committee on Education, Steven Carter; Chairman of the Senate Committee on Education, Conrad Appel; Chairman of the House Committee on Appropriations, James Fannin; and the Chairman of the Senate Committee on Finance, Jack Donahue  
**CC:** Representative Walter J. Leger, III  
**FROM:** Commissioner Joseph C. Rallo  
**SUBJECT:** Response to House Concurrent Resolution 134  
**DATE:** February 24, 2015

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Dear Members,

House Concurrent Resolution 134 of the 2014 Regular Legislative Session (HCR 134) by Representative Leger requests the Medical Education & Research Finance Work Group to provide the legislature with findings and recommendations for a formula-based financing model for the funding of Louisiana's public institutions for graduate and professional medical education and biomedical and health-related research. The Work Group heard testimony, deliberated on pertinent issues, and developed its findings and recommendations on each of the issues specified in HCR 134. At the regularly scheduled meeting of the Board of Regents on February 23, 2015, the Board received and approved the response to HCR 134. I have attached a copy of the executive summary and the response for your review. Please share these documents with your respective committee members as required by HCR 134.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Rallo", is positioned above the printed name of the Commissioner.

Joseph C. Rallo, Ph.D.  
Commissioner of Higher Education

## **Response to HCR 134**

### **Executive Summary**

House Concurrent Resolution 134 of the 2014 Regular Legislative Session (HCR 134) by Representative Leger requests the Medical Education & Research Finance Work Group to provide the legislature with findings and recommendations for a formula-based financing model for the funding of Louisiana's public institutions for graduate and professional medical education and biomedical and health-related research. The Board of Regents (Regents) convened the Work Group in accordance with the membership requirements as specified in HCR 134. Work Group meetings were held in September of 2014 and January of 2015, during which the Work Group heard testimony, deliberated on pertinent issues, and developed its findings and recommendations on each of the issues specified in HCR 134.

Based on the Work Group's written findings and recommendations, a draft report was prepared for the Work Group's review. The draft report was discussed and approved by the Work Group at the January meeting. Attached is a copy of the approved final report.

In conducting the study, the Work Group engaged several types of research including: extensive qualitative research gathered through interviews and focus groups, secondary research on various formula funding methodologies, and data analysis related to the cost and delivery of medical education and biomedical and health-related research in different states. Based upon this research, the Work Group developed two formula models: a model for the LSU Agricultural Center and Pennington Biomedical Research Center, and a model for the LSU Health Sciences Centers in Shreveport and New Orleans. The two formula models are described below:

#### ***LSU Agricultural Center & Pennington Biomedical Research Center***

The proposed formula model for the LSU Agricultural Center and Pennington Biomedical Research Center is based on enhancing innovation and properly funding faculty, facilities and equipment necessary to conduct their research. Funding is based on a ratio of institutional to state share responsibilities. The ratio will be adjusted each year by the change in the Consumer Price Index for All Urban Consumers (CPI-U). The summation of elements 1-4 (below) results in the total capacity and gap based funding amount to be provided by the state.

##### ***1. Base Element***

- a. Current fiscal year State General Fund level, plus continuation increases as calculated in next fiscal year's continuation budget request (inflation and compulsory adjustments).

##### ***2. Research Element***

- a. Provides a suitable funding level for research based on an increase in faculty. A previous three year fiscal average of research and public service productivity expenditures, with the exception of state-sponsored amounts, is divided by the number of Full-time Equivalent (FTE) Faculty (Assistant Professors and above) and is multiplied by the proposed increase in faculty. A factor for the replacement of research infrastructure is also included.
3. *Operational, Maintenance and Administrative Infrastructure Element*
    - a. Calculates the state share of unrecovered indirect costs as reported on the National Science Foundation Higher Education Research and Development (HERD) survey. Unrecovered indirect costs are calculated on a project-specific basis for externally funded R&D.
4. *Performance Element*
    - a. The performance element for enhanced research performance is calculated as 2% of the total of the required capacity and gap based funding requirement.

### ***LSU Health Sciences Centers***

The proposed formula model for the LSU Health Sciences Centers in Shreveport and New Orleans identifies a suitable state share of funding based on national average of salaries for instruction, a Net Assignable Square Feet (NASF) per Full-time Student Equivalent (FTSE) calculation based on the Texas model for infrastructure, a research component based on a three year average of indirect costs, and a general and administrative element based on national averages from the Integrated Postsecondary Education Data System (IPEDS) database. The summation of each element within the formula results in the level of support to be provided by the state.

#### *1. Instruction Element*

- a. The calculation converts student credit hours in each academic program to FTSE based on the Texas conversion schedule. Cost per FTSE is calculated for each program based on average faculty salaries reported by the appropriate program-specific association. A state share rate of 53% is applied to the total required funding amount based on Association of American Medical Colleges (AAMC) data.

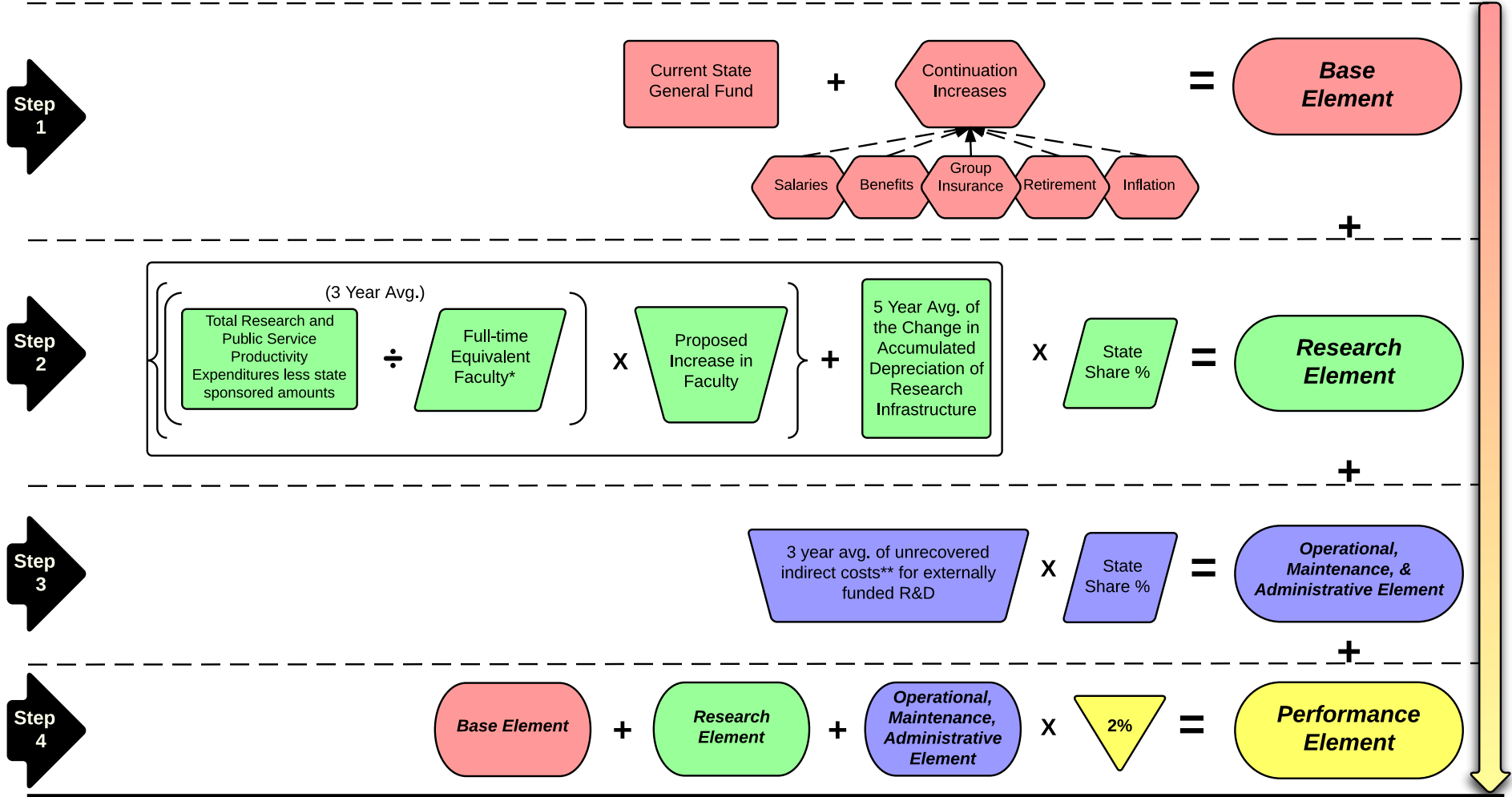
#### *2. Infrastructure Element*

- a. The infrastructure element is modeled after Texas' infrastructure support formula and space projection model. The formula funds institutions based on predicted square feet in five different space categories (room types). The summation of predicted square feet in each category is multiplied by the actual cost per gross square foot of the Health Sciences Centers to produce the total infrastructure requirement. Actual cost per square foot is derived from the actual operation and maintenance costs and gross square footage.
3. *Research Enhancement Element*
    - a. Calculates the state share of average unrecovered indirect costs as reported on the National Science Foundation Higher Education Research and Development (HERD) survey. Unrecovered indirect costs are calculated on a project-specific basis for externally funded R&D.
4. *General and Administrative Element*
    - a. Data from the IPEDS Finance survey is used to determine an appropriate level of general and administrative support. The ratio of Instruction Costs (salaries, wages and benefits) to other functional expenses (other instructional expenses, academic support, student services and institutional support) for both Health Sciences Centers is averaged and multiplied by the instruction element total to determine the General and Administrative Element.

These formulas will be continuously reviewed and revised in accordance with the Board of Regents constitutional responsibility to develop a funding formula for the equitable distribution of funds as a component of the Master Plan for Public Postsecondary Education and within the context of Act No. 462 of the 2014 Regular Session, which requires the Board of Regents to develop an outcomes-based funding formula for postsecondary education.

At the February 23<sup>rd</sup> meeting, the Board of Regents granted approval of the response to House Concurrent Resolution 134 and allowed the transmission of the report of the Work Group to the members of the House Committee on Education, the Senate Committee on Education, the House Committee on Appropriations, and the Senate Committee on Finance.

# Agricultural Center and Pennington Biomedical Research Center Formula Summary



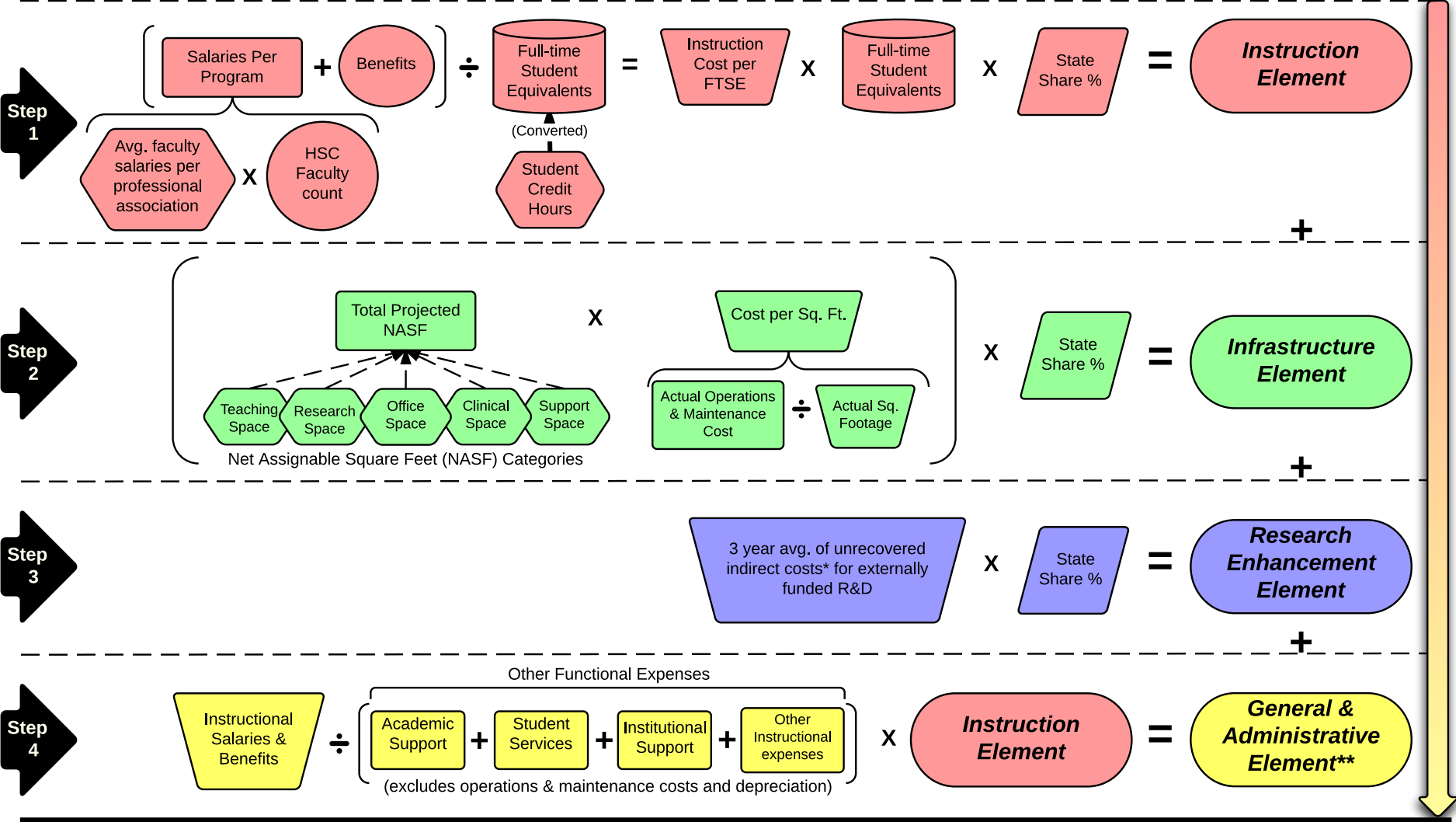
Funding will be based on a ratio of institutional to state share responsibilities. The ratio will be adjusted each year by the change in the Consumer Price Index for All Urban Consumers.

\*Only FTE faculty that are assistant professor and above are included.

\*\*Unrecovered indirect costs: The amount of indirect costs not recovered from a sponsor due to a sponsor funding an award at a rate below the negotiated indirect cost rate.

**State Share  
Formula Request**

# Health Sciences Center Formula Summary



\*Unrecovered indirect costs: The amount of indirect costs not recovered from a sponsor due to a sponsor funding an award at a rate below the negotiated indirect cost rate.

\*\*The results of dividing "Instructional Salaries & Benefits" by "Other Functional Expenses" (for each Health Sciences Center) are averaged and multiplied by the Instruction Element to calculate the General & Administrative Element.

**State Share  
Formula Request**

**MEDICAL EDUCATION &  
RESEARCH FINANCE WORK GROUP  
RESPONSE TO HOUSE  
CONCURRENT  
RESOLUTION 134  
OF THE 2014 REGULAR SESSION  
OF THE LOUISIANA LEGISLATURE**



**LOUISIANA BOARD OF REGENTS**

**February 2015**

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## Introduction

Funding formulas for public postsecondary education have been used on the state level for over 60 years.<sup>1</sup> Formula funding methodologies were first implemented in Texas when dramatic enrollment increases in the 1940's resulted in a lobbying campaign for additional funds by Texas' public colleges. Lawmakers felt the appropriation of funds based solely on each college's level of influence was inequitable and sought a systematic way to allocate funds based on the actual needs of the institutions. Over the following decade, studies covering the role and scope of institutions and their program costs facilitated the creation of a group of formula calculations to fund Texas' public colleges.<sup>1</sup> To avoid spending time and money on cost studies of their own, other states soon developed formulas by modifying existing funding methodologies to meet the needs of their institutions. Today, a majority of states utilize funding formulas to develop budgets and allocate resources to public higher education institutions.<sup>1</sup>

Creating an "optimal formula" can be an elaborate undertaking due to vast differences in institutional missions and capacities of institutions to fulfill their missions, even when institutions operate within the same system.<sup>1</sup> Funding formulas can be used to provide a "fiscal base" to which funding can be adjusted, if necessary.<sup>1</sup> A study performed by MGT of America, Inc. (2011)<sup>1</sup> delineates a variety of reasons why states use funding formulas:

- Formulas provide an objective method to determine institutional needs equitably.
- Formulas reduce political competition and lobbying by the institutions.
- Formulas provide state officials with a reasonably simple and understandable basis for measuring expenditures and revenue needs of campuses and determining the adequacy of support.
- Formulas enable institutions to project needs on a timely basis.
- Formulas represent a reasonable compromise between public accountability and institutional autonomy.
- Formulas ease comparisons between institutions.

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<sup>1</sup> "Formula Funding Study – Nevada System of Higher Education." MGT of America, Inc. May 1, 2011. [http://system.nevada.edu/tasks/sites/Nshe/assets/File/Publications/NSHE\\_Funding\\_Formula\\_Report\\_May\\_2011.pdf](http://system.nevada.edu/tasks/sites/Nshe/assets/File/Publications/NSHE_Funding_Formula_Report_May_2011.pdf).

- Formulas permit policy makers to focus on basic policy questions.

The Louisiana Board of Regents (BOR) is required by the Louisiana Constitution (Article VIII, Section 5 [D] [4]) to develop a funding formula for the equitable distribution of funds as a component of the Master Plan for Public Postsecondary Education. The Public Postsecondary Performance Funding formula generates an initial request for state funding from the legislature and distributes allocated funds to the state's two and four year institutions. Louisiana's public specialized entities within the higher education system do not participate in the current two and four year funding formula distribution and instead receive funding at their base levels or through a direct appropriation by the legislature based on the BOR budget request. The public postsecondary specialized entities included in HCR 134 are as follows: LSU Pennington Biomedical Research Center, LSU Agricultural Center, LSU Health Sciences Center – New Orleans, and LSU Health Sciences Center – Shreveport. Other specialized public postsecondary entities not included in HCR 134 include the Southern University Agricultural Center, Louisiana Universities Marine Consortium, the LSU Paul M. Hebert Law Center, the Southern University Law Center, the four management boards and the Office of Student Financial Assistance.

Stable and predictable funding is important to higher education institutions like Louisiana's specialized entities with low or no tuition bases as compared to overall operations. Between Fiscal Years 2009-14, Louisiana experienced an increased demand for graduates and research productivity while state fiscal support for higher education declined by 34.4%.<sup>2</sup> As public funds are scarce, the legislature is challenged to efficiently allocate taxpayer dollars into areas of higher education that appropriately address the needs of the state. The lack of a systematic method for the objective distribution of funds makes the allocation of sparse resources a complex task. House Concurrent Resolution 134 (HCR 134) of the 2014 Regular Legislative Session by Representative Leger requests the Medical Education & Research Finance Work Group to "provide the legislature with findings and recommendations for a formula-based financing model for the funding of Louisiana's public institutions for graduate and professional medical education

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<sup>2</sup> "SHEF - State Higher Education Finance FY13." SHEEO. April 29, 2014. [http://www.sheeo.org/sites/default/files/publications/SHEF\\_FY13\\_04292014.pdf](http://www.sheeo.org/sites/default/files/publications/SHEF_FY13_04292014.pdf).

and biomedical and health-related research.” As required, the HCR 134 Work Group was formed with the following members:

1. A representative of the Board of Regents.
2. The president of Louisiana State University, or his designee.
3. A representative of the La. State Medical Society.
4. Four persons designated by the president of Louisiana State University who are employed by the Louisiana State University Health Sciences Center, including at least one employee of the Louisiana State University Pennington Biomedical Center, at least one employee of Louisiana Medical School Shreveport, and at least one employee of Louisiana State University Agricultural Center.
5. The commissioner of administration, or his designee.
6. The chair of the La. Health Works Commission, or his designee.

The goal of the Work Group is to introduce a formula based funding methodology to establish an appropriate funding target for the subject institutions based on transparent, auditable metrics that promote accountability and reward performance. In order to do this, it was necessary to research formula based funding models for similar institutions in other states. While no two states have identical higher education systems or institutions, formula components existing outside of Louisiana were adapted into a workable formula based funding model for Louisiana’s graduate and professional medical education and biomedical and health-related research institutions.

The subsequent sections of this response to HCR 134 (1) provide a background of Louisiana's formula funding; (2) explore existing formula-based funding models; (3) provide findings; and (4) provide recommendations.

## **Background**

In the past, a simple calculation based on student headcount and a proxy for cost fluctuations from year to year using SREB data applicable to four year institutions was used to formulate funding requests for specialized entities. The headcount calculation was subsequently

discontinued as it was an ineffective methodology to estimate costs. Today, specialized entities are individually responsible for submitting budget requests to the BOR to request appropriations from the legislature. Components of the BOR funding formula for two and four year institutions have served as a catalyst for stakeholders of the specialized entities to seek comparable evaluation in determining a level of funding necessary to fulfill institutional missions.

The existing two and four year formula determines a base Student Credit Hour cost (base SCH cost) for a lower level undergraduate liberal arts student credit hour by considering faculty salaries of peer institutions, retirement costs, average class size, annual student workloads, and an additional customary calculation for institutional instruction, research, academic support and student services. A cost matrix is utilized to determine weights by discipline for academic and technical courses that have a higher cost than the base student credit hour (SCH) value.

Weighted SCHs are calculated by multiplying the appropriate student level SCHs and the cost matrix value. The summation of all weighted SCHs multiplied by the base SCH cost results in the calculated core cost component for each institution. At this point, weighted course withdrawals are removed, yielding the End of Course (EOC) Core Cost Component. An additional 10% of the EOC Core Cost Component value is added based on institutional involvement in strategic initiatives. The strategic initiatives and their allocations are as follows:

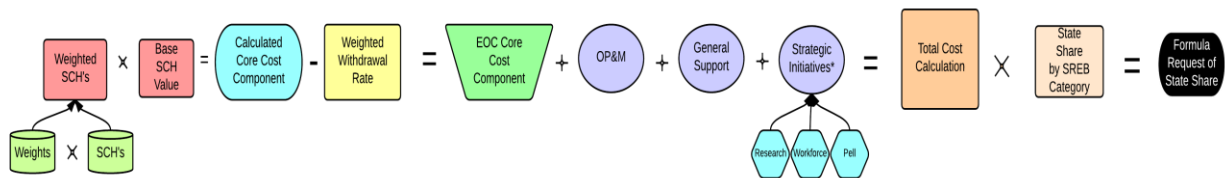
- *Pell*: 5% will be shared among institutions that serve populations of Pell Grant recipients above the state average. Institutions are assigned a pro-rata share based on the number of low income students they serve as compared to the overall total.
- *Workforce*: 3% will be shared pro rata among all institutions based upon graduates who completed programs that lead to jobs in in high demand fields in Louisiana's workforce. Funding is based on the number of students receiving degrees or certificates in programs rated a four or five on the Workforce Commission's Star Rating System.
- *Research*: 2% will be shared pro rata among all institutions based upon research conducted at the institution as reported to the National Science Foundation.

The two remaining components are Operations and Maintenance (OP&M) and General Support.

OP&M is defined as a base cost per square foot times the Net Assignable Square Footage (NASF) reported in the BOR facilities database as reported by each institution. General Support is defined as a percentage of the institution’s SREB category’s budget dedicated to general support activities of the institution. General Support does not include instruction or research activities. The total cost calculation is a summation of the EOC Core Cost Component, OP&M, General Support and the strategic initiatives. The state share of the formula request is established by multiplying the total cost calculation by the latest data published in the SREB State Data Exchange for each institution’s respective peer category. A flowchart of the current BOR funding formula for two and four year institutions is shown in **Figure 1**.

**Figure 1**

### Board of Regents Funding Formula



## Overview of Existing Funding Formulas

### Texas

Texas has different formulas for its general academic institutions, community colleges, vocational and technical colleges, and health related institutions (HRIs). Appropriations to HRIs are allocated by multiple formulas: Instruction and Operations Formula, Infrastructure Formula, Graduate Medical Education Formula, and the Research Enhancement Formula. Texas also includes mission specific support formulas which recognize certain non-degree granting institutions for patient care, research, and training programs. The Texas Higher Education Coordinating Board (THECB) makes recommendations concerning formula funding, the legislative budget staff uses data provided by the board and institutions to calculate the formulas, and the legislature determines the amount of general revenue funds directed to each formula.<sup>3</sup>

<sup>3</sup> "Appropriation of Higher Education Formula Funding." Legislative Budget Board. January, 2013. [http://www.lbb.state.tx.us/Documents/Publications/Issue\\_Briefs/564\\_Higher\\_Ed\\_Formula\\_Funding.pdf](http://www.lbb.state.tx.us/Documents/Publications/Issue_Briefs/564_Higher_Ed_Formula_Funding.pdf).

In 2009, the Texas legislature instructed the THECB to "...conduct a cost study to validate the relative weights..." used for the health related institutions' Instructions & Operations (I&O) Formula.<sup>4</sup> The THECB sought to compare funding differences to certain programs between HRI and general academic institutions and validate weights in the HRI cost matrix. Difficulty arose relative to which HRI revenues and expenses should be included in the cost study, how to properly allocate expenses that are not directly related to a specific academic discipline, and what steps to take to prevent unintended consequences from a swing in enrollment or the creation of a new program.<sup>5</sup> Differences in the size of clinical and research programs and the fact that some HRIs in Texas operate their own hospitals caused concern over cost allocation to different programs. The study found that because certain institutions and programs, such as schools of medicine, generate outside revenue to cover costs that state appropriations fail to support, an alteration in state appropriations to fund all programs at the same rate relative to expected costs would harm institutions that have little or no access to outside revenues.<sup>5</sup> The THECB concluded the study by recommending that no changes to the cost weights be made based on the findings provided at the time unless new funding was added for HRIs. The result of an alteration to the HRI cost matrix would have been a significant reduction in capacity for many disciplines. Today, Texas' HRI formulas continue to allocate funds without utilizing the adjusted cost matrix developed in the 2009 cost study.

The Instruction and Operations formula allocates funding to health related institutions for faculty salaries, departmental operating expenses, instructional administration and libraries by multiplying the full-time student equivalent (FTSE) by a weight dependent on the FTSE's program of study and a base rate determined by the legislature. A single FTSE is calculated as follows: 30 undergraduate SCH; 24 masters SCH; and 18 doctoral SCH. A dental or medical student equals one FTSE. Programs with enrollments less than 200 receive a small class size supplement of either \$20,000 or \$30,000 per FTSE, depending upon the program.<sup>5</sup>

Funding for plant support and utilities is calculated by the Infrastructure Formula and is driven

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<sup>4</sup> "Summary of Higher Education Legislation; 81<sup>st</sup> Texas Legislature." Texas Higher Education Coordinating Board. October, 2009. <http://www.thecb.state.tx.us/reports/PDF/1848.PDF?CFID=20568897&CFTOKEN=80336211>.

<sup>5</sup> "Texas Public Health-Related Institutions Cost Study." Texas Higher Education Coordinating Board. July, 2010. <http://www.thecb.state.tx.us/reports/pdf/2048.PDF>.

by the Space Projection Model. Texas' Space Projection Model "predicts the educational and general (E&G) space required for a public health institution to fulfill its missions of teaching, research, and public service."<sup>6</sup> Each factor within the model relies on drivers used to calculate predicted space needs in each category: research, teaching, office, clinical and support space. The infrastructure formula uses a fixed rate set forth by the legislature in the appropriations bill based on available funding. The rate is multiplied by the predicted square feet of each institution to arrive at a suitable level of infrastructure funding. Also, institutions with operations in locations other than the main campus participate in a multi-campus adjustment to predicted square feet in the space projection model.

Health related institutions are also guaranteed a base amount of funding for research plus a small percentage increase based on each institution's research expenditures through the Research Enhancement Formula. While the base funding amount of \$1,412,500 has not changed since the establishment of the formula, the formula rate has decreased from 2.85% in FY 2000-01 to 1.22% in FY 2014-15.<sup>7</sup> The Graduate Medical Education (GME) formula was established to allocate additional funds to the state's schools of medicine for the education of students in residency. The GME formula is calculated by multiplying a base rate by the number of medical residents per year. The University of Texas Health Science Center at Tyler's Chest Disease Center and the University of Texas M.D. Anderson Cancer Center participate in two separate mission specific formulas that are based on the number of Texas' cancer patients served and the number of primary disease cases introduced, respectively.

### *Ohio*

Ohio allocates a State Share of Instruction (SSI) for each campus type: community and technical colleges, and university main and regional campuses. The health related and research programs are allocated funding through the University campus-funding model. Ohio's University model contains two central components: a course completion component and a degree completion

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<sup>6</sup> "Space Projection Model Instructions." Texas Higher Education Coordinating Board. October, 2005. <http://www.thecb.state.tx.us/reports/pdf/1215.PDF>.

<sup>7</sup> "Formula Funding Recommendations 2014." Texas Higher Education Coordinating Board. April, 2014. <http://www.thecb.state.tx.us/reports/pdf/3487.PDF>.



component. The degree completion component determines average costs per subject field or discipline area for bachelor's, master's, doctoral and professional programs (excluding medical degrees) on a statewide basis.<sup>8</sup> The cost of each degree is established by aggregating the "average cost of the SSI model for each course taken."<sup>8</sup> Finally, cost weights are applied to certain degrees based on a campus index which details whether certain student cohorts are in-state, out of state, or at risk of not graduating.

The course completion component determines the cost of instruction of each subject and level by performing a cost allocation process. The cost allocation process or "Resource Analysis" (RA) is described by the Ohio Board of Regents as:

The costs that are allocated in Resource Analysis are the actual expenses reported by the campuses at the end of each fiscal year. All of these costs are allocated to some combination of subject and level of the various course sections offered by the campus in some term of the fiscal year. These costs then are converted to a per student full-time equivalent (FTE) basis and aggregated together for all public colleges and universities in the state. The statewide average cost per student FTE for each combination of subject and level of any course section offered by any campus of a public college or university becomes the basis of state instructional subsidy for instruction in that subject at that level. The process is executed for each fiscal year and calculates both Unrestricted and Total (Restricted plus Unrestricted) I&G costs.<sup>9</sup>

Courses are classified by subject field and level of instruction into 26 separate "subsidy models" within the formula. Course costs are adjusted for the upcoming fiscal year based on the average of the last three years of Higher Education Cost Index (HECA) increases with priority weightings for STEM, medicine, graduate fields and at-risk students.<sup>8</sup> Reimbursement costs for each "subsidy model" are established by multiplying the priority weightings by the aggregated

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<sup>8</sup> "State Share of Instruction Handbook." Ohio Board of Regents. July 12, 2013. [https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/financial/ssi/University\\_Handbook\\_14%20with%20summary%20version%201.4.doc](https://www.ohiohighered.org/sites/ohiohighered.org/files/uploads/financial/ssi/University_Handbook_14%20with%20summary%20version%201.4.doc).

<sup>9</sup> "Methodology for Resource Analysis (RA) in HEI." Ohio Board of Regents. June, 2001. <http://regents.ohio.gov/hei/RA/RAspecifications.html>.

cost of a 3-year average of subsidy eligible completed FTEs. Ohio equates a subsidy eligible FTE to 30 semester credit hours or 45 quarter credit hours, while medical, veterinary medicine, and dental health program FTEs are based on student enrollments. Medical and doctoral programs are allocated additional funds from the University campus model through three set asides based on student FTE, weighted cost, and NSF and NIH expenditures.<sup>8</sup> The Doctoral, Medical I, and Medical II set asides are established by subtracting a fixed percentage for each set aside from the remaining SSI allocation.

Doctoral set aside earnings are calculated in three parts: (1) 62% of the set aside is based on a calculation involving the 3-year average FTE of doctoral students for each institution, (2) approximately 25% of the total doctoral set aside funds are based on the weighted cost of doctoral degrees, and (3) approximately 12.5% of the total doctoral set aside is based upon the institution's NSF expenditures (NIH expenditures are weighted by 50%).<sup>8</sup> Each institution's share (percentage) of the doctoral set aside for instruction was established by Ohio's Graduate Funding Commission and is adjusted annually by the institution's subsidy eligible doctoral equivalent FTE amount. The medical set aside is separated into two allocations based on the type of medical programs the institutions provide. Because Ohio State University is the only institution that offers Medical I tier programs, Medical I funding is allocated solely to that institution. Medical II funding is prorated to the institutions based on a 3-year average medical FTE. The final portion of the course completion component is a plant operation and maintenance protection calculation. The calculation exists because "university main campuses had significant protection in the old model related to the amount of NASF that they had compared to their activity based plant operation and maintenance (POM)."<sup>8</sup> This protection will continue for universities while the cause of the differences in the amount of NASF compared to activity based POM can be further studied. Finally, bridge funding outside of the course and degree completion components is provided to ensure that no university or regional campus receives less than 96% of the SSI it received in the previous year.<sup>8</sup>

## *Florida*

In 2007, the issue of inequality in state funding among public colleges of medicine in Florida was raised to the Legislature by the University of Florida and The University of South Florida.<sup>10</sup> The inequality was based on evidence from the State University System's expenditure data. When the Office of Program Policy Analysis and Government Accountability (OPPAGA) analyzed the State University System's system, they discovered inconsistent reporting practices on a system wide basis and found the data insufficient.<sup>10</sup> The legislature subsequently directed OPPAGA, in concert with the Board of Governors, to review funding models for public medical education programs and develop a uniform expenditure reporting structure for the Doctor of Medicine program.

The Board of Governors and OPPAGA developed a methodology to estimate expenditures for the state's Schools of Medicine and a per-student base-level funding calculation to identify the appropriate share of funding the state should provide to train a medical student. The methodology for estimating expenditures is, "based on weighted enrollments that reconciles institutional differences and addresses shortcomings in current data."<sup>10</sup> The methodology simply applies weights to program specific FTEs which is then divided into the sum of weighted FTEs for the entire School of Medicine resulting in a share of total expenditures for each program (once supplemental costs are subtracted and a library adjustment is added).<sup>11</sup> Today, this methodology is used to estimate expenditures for MD and non-MD degree programs within the Schools of Medicine.

The per-student base-level funding calculation for producing a medical graduate was adapted from the 1997 Jones and Korn study, "On the Cost of Educating a Medical Student."<sup>12</sup> Jones and Korn classified medical education costs into two categories:

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<sup>10</sup> "Report No. 09-19." Office of Program Policy Analysis & Government Accountability. March, 2009. <http://www.oppaga.state.fl.us/reports/pdf/0919rpt.pdf>.

<sup>11</sup> "Medical Education Funding." Florida Board of Governors. January, 2010. [http://www.myfloridahouse.gov/sections/Documents/loaddoc.aspx?PublicationType=Committees&CommitteeId=2448&Session=2010&DocumentType=Meeting%20Packets&FileName=SUPCAC\\_Mtg\\_Online\\_2-11-10.pdf](http://www.myfloridahouse.gov/sections/Documents/loaddoc.aspx?PublicationType=Committees&CommitteeId=2448&Session=2010&DocumentType=Meeting%20Packets&FileName=SUPCAC_Mtg_Online_2-11-10.pdf).

<sup>12</sup> "On the cost of educating a medical student." Jones RF, Korn D. *Acad Med*. March, 1997.

1. *Instructional Costs:*

- a. faculty time spent in teaching, preparation for teaching, and student assessment, as well as in faculty development and administrative activities related to teaching;
- b. medical school support of the medical student education program (offices of admission, student affairs, curriculum development, etc.) and a share of medical school and departmental administrative and staff support; and
- c. a share of general instructional support and infrastructure (space/facilities, library, information technology, personnel, campus security, university administration, etc.).

2. *Total Resource Costs:*

- a. all Instructional Cost components a., b., and c., above, plus one more:
- b. a research support component.

The 1997 study produced a range of the costs for each category. The two ranges were averaged to establish two single cost figures. Fixed percentages of “university-wide indirect costs” (university support and plant operations and maintenance) were then subtracted from the averages to strip away overhead costs from the per-student base-level funding figure.<sup>11</sup> A research support component was calculated by subtracting the modified total resource cost by the modified instructional cost and multiplying by a state share of 67%. Instructional costs plus the state share of the research component were then subtracted by the national median tuition for public medical schools to arrive at the share of base level funding the legislature should appropriate.

The per-student base-level funding methodology for medical schools has not been funded for three years. Based on conversations with the Vice Chancellor and CFO of the Florida Board of Governors, Tim Jones, key legislators who were once interested in properly funding schools of medicine were the main drivers in the development of the per-student base-level funding calculation. Unfortunately, when the key legislators interest and support for the methodology waned, so did the funding.

## **Findings**

Two formula based funding models were developed considering the different role, scope and mission of each specialized entity included in HCR 134. Both formulas are predicated on auditable, transparent metrics promoting accountability and rewarding performance.

### ***LSU Agricultural Center & Pennington Biomedical Research Center***

The proposed formula model for the LSU Agricultural Center and Pennington Biomedical Research Center is based on enhancing innovation and properly funding faculty, facilities and equipment necessary to conduct their research. Funding is based on a ratio of institutional to state share responsibilities. The ratio will be adjusted each year by the change in the Consumer Price Index for All Urban Consumers (CPI-U). Considering the vast differences in mission between Pennington Biomedical Research Center and the LSU Agricultural Center, targets and indices may vary while utilizing a common framework. The summation of elements 1-4 (below) results in the total capacity and gap based funding amount to be provided by the state.

#### *1. Base Element*

- a. Current fiscal year State General Fund level, plus continuation increases as calculated in next fiscal year's continuation budget request (inflation and compulsory adjustments).

#### *2. Research Element*

- a. Provides a suitable funding level for research based on an increase in faculty. A previous three year fiscal average of research and public service productivity expenditures, with the exception of state-sponsored amounts, is divided by the number of FTE Faculty (Assistant Professors and above) and is multiplied by the proposed increase in faculty. A factor for the replacement of research infrastructure is also included.

#### *3. Operational, Maintenance and Administrative Infrastructure Element*

- a. Calculates the state share of unrecovered indirect costs as reported on the National Science Foundation Higher Education Research and Development (HERD) survey. Unrecovered indirect costs are calculated on a project-specific basis for externally funded R&D. This is the difference between the appropriate negotiated

rate and the rate that is realized.

4. *Performance Element*

- a. The performance element for enhanced research performance is calculated as 2% of the total of the required capacity and gap based funding requirement.

***LSU Health Sciences Centers***

The proposed formula model for the LSU Health Sciences Centers in Shreveport and New Orleans identifies a suitable state share of funding based on national average of salaries for instruction, a NASF per FTSE calculation based on the Texas model for infrastructure, a research component based on a three year average of indirect costs, and a general and administrative element based on national averages from the Integrated Postsecondary Education Data System (IPEDS) database. The summation of each element within the formula results in the level of support to be provided by the state.

1. *Instruction Element*

- a. The calculation converts student credit hours in each academic program to FTSE based on the Texas conversion schedule. Cost per FTSE is calculated for each program based on average faculty salaries reported by the appropriate program specific association. The associations include the Association of Schools of Allied Health Professions (ASAHP), the American Dental Education Association (ADEA), the Association of American Medical Colleges (AAMC), the American Association of Colleges of Nursing (AACN), and the Association of Schools of Public Health (ASPH). A state share rate of 53% is applied to the total required funding amount based on Association of American Medical Colleges (AAMC) data.

2. *Infrastructure Element*

- a. The infrastructure element is modeled after Texas' infrastructure support formula and space projection model. The formula funds institutions based on predicted square feet in five different space categories (room types). The summation of predicted square feet in each category is multiplied by the actual cost per gross square foot of the Health Sciences Centers to produce the total infrastructure

requirement. Actual cost per square foot is derived from the actual operation and maintenance costs and gross square footage. The space categories and bases are as follows:

- i. Teaching space
  - Reported headcount for each level and educational category
- ii. Research space
  - Research expenditures and full-time equivalent faculty
- iii. Office space
  - Faculty, non-faculty, and current fund E&G expenditures
- iv. Clinical space
  - Actual clinical space
- v. Support space
  - A percentage of the total prediction for all the other factors and library space

### 3. *Research Enhancement Element*

- a. Calculates the state share of average unrecovered indirect costs as reported on the National Science Foundation Higher Education Research and Development (HERD) survey. Unrecovered indirect costs are calculated on a project-specific basis for externally funded R&D. This is the difference between the appropriate negotiated rate and the rate that is realized.

### 4. *General and Administrative Element*

- a. Data from the IPEDS Finance survey is used to determine an appropriate level of general and administrative support. The ratio of Instruction Costs (salaries, wages and benefits) to other functional expenses (other instructional expenses, academic support, student services and institutional support) for both Health Sciences Center is averaged together and multiplied by the instruction element total to determine the state's support for general and administrative costs.

## **Recommendations**

In response to its charge, the Medical Education & Research Finance Work Group has collected and analyzed data related to the cost and delivery of medical education and biomedical and health-related research in Louisiana and other states, and submits the two formulas along with their related methodology described herein to the House Committee on Education, the Senate Committee on Education, the House Committee on Appropriations, and the Senate Committee on Finance.

These formulas will be continuously reviewed and revised in accordance with the Board of Regents constitutional responsibility to develop a funding formula for the equitable distribution of funds as a component of the Master Plan for Public Postsecondary Education and within the context of Act No. 462 of the 2014 Regular Session, which requires the Board of Regents to develop an outcomes-based funding formula for postsecondary education.



Regular Session, 2014

HOUSE CONCURRENT RESOLUTION NO. 134

BY REPRESENTATIVE LEGER

A CONCURRENT RESOLUTION

To establish the Medical Education & Research Finance Work Group to provide the legislature with findings and recommendations for a formula-based financing model for the funding of Louisiana's public institutions for graduate and professional medical education and biomedical and health-related research.

WHEREAS, the Louisiana Legislature, business community, and the public at-large have increasing expectations relating to the role of Louisiana's public institutions for graduate and professional medical education and biomedical and health-related research, hereinafter referred to as "institutions for medical education and research", as a consistent and reliable source for graduates necessary to meet the workforce needs of the state, as well as, for the development of innovative biomedical technologies and medical treatments to contribute to the health of all Louisianians; and

WHEREAS, Louisiana currently ranks in the bottom quartile among other states in terms of the supply of healthcare professionals according to surveys by the Kaiser Family Foundation and the American Association of Medical Colleges, as follows: forty-third in the number of primary care physicians, fortieth in the number of dentists, thirty-seventh in the number of nurse practitioners, and forty-fourth in the number of physician assistants; and

WHEREAS, the LSU Health Sciences Centers provide the majority of the graduate and professional degrees in health fields awarded by the state's institutions for medical education and research as evidenced by the fact that seventy percent of Louisiana's actively practicing physicians and over seventy-five percent of actively practicing dentists have trained at a Louisiana State University institution; and

WHEREAS, biomedical and health-related research is considered to be a mission critical component of an institution for medical education and research, and as such is a

mandatory requirement for accreditation by the accrediting bodies governing health-related educational institutions; and

WHEREAS, biomedical and health research is critical to addressing the financial and social burden of chronic disease in Louisiana's citizens; and

WHEREAS, Louisiana State University Agricultural Center, through multiple disciplines, contributes research vital to the health, well-being, and prosperity of all Louisianians; and

WHEREAS, Article VIII, Section 5(D) of the Constitution of Louisiana directs the Board of Regents to prepare and maintain a master plan for the state's public institutions of postsecondary education, which includes a formula for the equitable distribution of funding among those institutions; and

WHEREAS, no funding formula exists that accounts for the educational and research mission of the state's institutions for medical education and research; and

WHEREAS, the exclusion of the institutions for medical education and research from the formula used to fund the state's two-year and four-year degree-granting institutions makes it difficult to equitably balance the needs for financial support of all of the state's institutions; and

WHEREAS, the formula used for the funding of institutions which grant four-year and two-year degrees includes a large component that is based upon costs, enrollment, and performance measure statistics for each institution; and

WHEREAS, the cost of educating and training medical professionals is considerably higher than that for the education and training of professionals in other fields, with the cost of training physicians and dentists being particularly high, ranging from seventy-two thousand dollars to eighty thousand dollars per student, per year; and

WHEREAS, the tuition bases for the Louisiana State University Health Sciences Centers, Louisiana State University Pennington Biomedical Research Center, and the Louisiana State University Agricultural Center are all relatively small or nonexistent as compared to the size of their overall operations, which means that fluctuations in funding through the state general fund and other sources have dramatic effects on the financial viability of those institutions; and

WHEREAS, despite Louisiana's low rankings when compared to other states, enrollment at the LSU Health Sciences Centers since 2008 has increased an average of seventeen percent, without any increases in state funding to provide for the increases in student population; and

WHEREAS, a comprehensive formula for the funding of institutions of medical education and research may allow for better decisions with respect to the finance of all of the state's public institutions of postsecondary education when the legislature considers the Board of Regent's budget recommendations.

THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby create the Medical Education & Research Finance Work Group, hereinafter referred to as "work group", to provide the legislature and the Board of Regents with findings and recommendations for a formula based financing model for the funding of Louisiana's public institutions for graduate and professional medical education and biomedical and health-related research.

BE IT FURTHER RESOLVED that the work group shall be composed of the following members:

- (1) A representative of the Board of Regents.
- (2) The president of Louisiana State University, or his designee.
- (3) A representative of the Louisiana State Medical Society.

(4) Four persons designated by the president of Louisiana State University who are employed by the Louisiana State University Health Sciences Center, including at least one employee of the Louisiana State University Pennington Biomedical Center and at least one employee of Louisiana State University Medical School Shreveport, and at least one employee of Louisiana State University Agricultural Center.

- (5) The commissioner of administration, or his designee.
- (6) The chair of the Louisiana Health Works Commission, or his designee.

BE IT FURTHER RESOLVED that the work group shall collect and analyze data related to the cost and delivery of medical education and biomedical and health-related research in Louisiana and other states.

BE IT FURTHER RESOLVED that the work group shall prepare findings and recommendations on a formula-based financing model, or components of such a model, to be used to provide funding for Louisiana's public institutions for graduate and professional medical education and biomedical and health-related research.

BE IT FURTHER RESOLVED that the work group shall submit the findings and recommendations to the members of the House Committee on Education, the Senate Committee on Education, the House Committee on Appropriations, and the Senate Committee on Finance no later than January 31, 2015.

BE IT FURTHER RESOLVED that the Board of Regents shall be responsible for designating staff to assist the work group in performing its duties.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the Board of Regents which shall be responsible for transmitting a copy to each of the offices, institutions, or organizations from which the members of the Medical Education and Research Finance Work Group are being selected or designated.

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SPEAKER OF THE HOUSE OF REPRESENTATIVES

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PRESIDENT OF THE SENATE