



CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING

March 5, 2015

To:

Senator Beth Bye, Co-Chair, Appropriations Committee

Representative Toni E. Walker, Co-Chair, Appropriations Committee

Senator Robert J. Kane, Ranking Member, Appropriations Committee

Representative Melissa Ziobron, Ranking Member, Appropriations Committee

Representative Minnie Gonzalez, Co-Chair, Legislative Sub-Committee, Appropriations Committee

REF: FY16 FUNDING REQUEST

Please find attached the following regarding the Connecticut Academy of Science and Engineering's FY16 funding request presented to the Appropriations Committee on March 5, 2015:

- ◆ Testimony
- ◆ Funding Request
- ◆ Connecticut Academy of Science and Engineering: An Overview

Thank you for your time and consideration.

Best Regards,

Richard H. Strauss

Executive Director

Email: rstrauss@ctcase.org

cc: Members of the Legislative Management Sub-Committee of the Appropriations Committee



CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING

TESTIMONY OF THE CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING BEFORE THE APPROPRIATIONS COMMITTEE OF THE CONNECTICUT GENERAL ASSEMBLY: MARCH 5, 2015

Senator Bye, Representative Walker and members of the committee, my name is Rick Strauss; I am the Executive Director of the Connecticut Academy of Science and Engineering (CASE). On behalf of the Academy and its membership, it is requested that the General Assembly consider funding for CASE to continue work on current projects and to conduct new in-depth studies on science and technology issues on behalf of the General Assembly for FY16 and FY17.

As identified in the attached funding request, this includes a carryover of FY15 funds authorized for CASE studies into FY16, as well as additional funding for a current study. Also, funding is requested for CASE to conduct a study per year for the next two years on topics to be determined based on issues raised during legislative sessions.

The Academy is a non-profit organization patterned after the National Academy of Sciences and created by special act of the General Assembly in 1976 to provide expert guidance on science and technology to the people and to the state of Connecticut. Our membership is comprised of 387 of Connecticut's most esteemed scientists, physicians, and engineers elected by the membership of the Academy.

Since 1976, the Academy has completed approximately 100 studies on a variety of issues, on behalf of the General Assembly and state agencies. The Academy's convening authority enables us to have access to a wide range of independent expertise from technical experts from Connecticut and across the nation to address issues of concern to Connecticut. We are able to provide perspectives that are not bound by organizational structure and culture. Many of the Academy's projects have and will continue to provide the General Assembly and state agencies with guidance and advice regarding issues about which they may not be knowledgeable. Additionally, our projects seek to provide third party independent review for verification and confirmation of proposed solutions for guidance to create better policy and law. Members of the Academy and others from Connecticut and across the nation serve on our study committees on a pro-bono basis offering their expertise to help develop recommendations and solutions to pressing scientific and technical matters.

The Academy's funding request and backup information including a summary of recent CASE studies conducted for the General Assembly, state agencies and others is attached.

Thank you for your time and consideration.

Respectfully Submitted,

Richard H. Strauss
Executive Director

Email: rstrauss@ctcase.org



CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING FUNDING REQUEST FOR FY16 AND FY17

PROVIDING A UNIQUE VALUE-ADDED SERVICE TO THE GENERAL ASSEMBLY

Purpose: *Provide objective, scientific and technical support to assist the General Assembly in their legislative mission.* Many public policy issues today have strong and, often, complex technical components that need to be carefully understood in crafting effective legislative initiatives. An important need for General Assembly members is their ability to obtain objective, non-advocacy advice on technically complicated issues impacting the development of policies and law. The Connecticut Academy of Science and Engineering (CASE), founded in 1976 by act of the General Assembly, has legislatively mandated convening authority, expertise, and 39 years of experience in providing expert, third party, objective perspectives and information to the General Assembly, state agencies and others.

PROPOSED GENERAL ASSEMBLY ACTION:

For budgeting and administrative purposes, contracting will be provided through the Office of Legislative Management; with content-related project oversight provided through the committee(s) with cognizance.

1. PROVIDE \$100,000 PER YEAR IN THE GENERAL ASSEMBLY'S FY16/FY17 LEGISLATIVE MANAGEMENT BUDGET FOR CASE TO CONDUCT STUDIES FOR THE GENERAL ASSEMBLY.

A. Annual CASE Study:

- **\$100,000** per year for CASE to conduct a study each year on a topic to be determined for the General Assembly; and
- **CARRYOVER:** Provide that any unexpended balance of funds appropriated to Legislative Management, for Connecticut Academy of Science and Engineering for each study, on a topic to be determined, shall not lapse, and such funds shall continue to be available, during the following fiscal year. (NOTE: Due to contracting process, studies frequently begin in one year and are completed in the following fiscal year)
 - *It is expected that this funding, pending project scoping, will be adequate to conduct one study.*
 - *A consultative process will be utilized to select the study topic. The topic selected for study will be based upon issues of interest to the committees of the General Assembly. This will help assure that the selected topic is of high interest, timely, and worthy of General Assembly funding. Potential topics will be identified through discussions with General Assembly committee leadership and others, with the selected studies submitted for contracting through committee leadership to the Office of Legislative Management.*
 - *Leadership of the committees of cognizance on the study topics will have an opportunity to review and provide feedback on scope of work.*

2. CARRYOVER AND ADDITIONAL FUNDING FOR STUDIES UNDER CONTRACT

A. REDUCING FAMILY VIOLENCE IN CONNECTICUT (CONTRACT #: JLCM14PSA0013): CARRYOVER OF UNEXPENDED FY15 FUNDING

This study is under contract with an expected completion date of June 2015. However, in the event that the study is not completed by the June deadline for processing invoices, a carryover of the outstanding balance of payments due to CASE for completion of the study is requested. This amount shall be in an amount of the remaining unpaid progress payments, not to exceed \$55,000.

- **CARRYOVER:** Provide that any unexpended balance of funds appropriated to Legislative Management, for the Connecticut Academy of Science and Engineering for the study on Family Violence in Connecticut, for the fiscal year ending June 30, 2015, shall not lapse on said date, and such funds shall continue to be available, during the fiscal year ending June 30, 2016.

B. CARRYOVER OF UNEXPENDED FY15 AND ADDITIONAL FUNDING: EARLY CHILDHOOD REGRESSION DISCONTINUITY (CONTRACT #: JLCM14PSA0018)

- CARRYOVER:** This study is under contract with an expected completion date of June 2016 in accordance with the CASE contract with the General Assembly, as amended. Since this study will not be completed until June 2016, a carryover of unexpended funding provided for this study in an amount not to exceed \$375,000 is necessary:
 - **CARRYOVER:** Provide that any unexpended balance of funds appropriated to Legislative Management, for the Early Childhood Regression Discontinuity Study for the Connecticut Academy of Science and Engineering, for the fiscal year ending June 30, 2015, shall not lapse on said date, and such funds shall continue to be available, during the fiscal year ending June 30, 2016.
- ADDITIONAL FUNDING:** As of 3/5/15, a request for additional funding, \$123,000, for this study is under consideration based on the additional work effort needed for the design, collection and review of program student data since *Prekindergarten Information System (preschool data system)* that was planned to be used for identifying and selecting students was decommissioned by the state and is no longer available for use. This information is required for conducting the study.
 - **ADDITIONAL FUNDING:** Provide that \$123,000 be appropriated to Legislative Management, for the Early Childhood Regression Discontinuity Study for the Connecticut Academy of Science and Engineering, for the fiscal year ending June 30, 2016.

3. CARRYOVER OF FY15 FUNDING: DISPARITY STUDY: PHASE 3

As of 3/5/15, this study is not under contract. CASE submitted a proposal for Phase 3 of the Disparity Study to the Chairs of the Government Administration and Elections Committee on 6/12/14. The proposal is still under consideration and may be authorized before the end of FY15. The FY15 budget included \$300,000 for this phase of the study. The current CASE proposal, based on the proposed scope of work is for \$255,000. The carryover is necessary as the study work effort will need to continue into FY16. Since the proposal is pending, based on the proposed scope of work, a carryover of the full \$300,000 is requested.

- **CARRYOVER:** Provide that a carryover of \$300,000 be appropriated to Legislative Management, for the Disparity Study – Phase 3 for the Connecticut Academy of Science and Engineering, for the fiscal year ending June 30, 2015, shall not lapse on said date, and such funds shall continue to be available, during the fiscal year ending June 30, 2016.

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING: *AN OVERVIEW*

Background:

The Connecticut Academy of Science and Engineering is a non-profit institution patterned after the National Academies that was created in 1976 by Special Act of the General Assembly. The Academy's membership is limited to 400 distinguished Connecticut scientists, physicians, and engineers that are elected by its membership. Current membership is at 387. The Academy's legislatively mandated mission is to provide expert guidance on science and technology to the people and to the state of Connecticut, and promote the application of science and technology to human welfare and economic well-being by:

- Advising government leaders
- Strengthening Connecticut's student science and technology programs
- Informing Connecticut's citizenry on science and technology topics

The Academy's Added-Value:

For 39 years, the Academy has provided the state with a readily available resource for timely access to sound objective technical advice, guidance and leadership. During this period, the Academy has performed over 90 in-depth studies for the Connecticut General Assembly and/or state agencies—many of which have resulted in either policy or law changes. The Academy's convening authority allows it to engage the best technical experts from Connecticut, across the nation to address issues of concern to Connecticut.

Sample Recent Activities:

- *In-Process Studies and Projects*
 - ◆ **General Assembly: Early Childhood Regression Discontinuity Study (target completion date: June 2016)**
 - ◆ **General Assembly: Family Violence in Connecticut (target completion date: June 2015)**
 - ◆ CTDOT (*mandated by PA 14-199*): Winter Highway Maintenance (*target completion date: June 2015*)
 - ◆ Albertus Magnus College (on behalf of the Office of Higher Education): External Evaluation of Project CCSS: STEM (Common Core State Standards – Science, Technology, Engineering and Mathematics)
 - ◆ Connecticut Medals of Science and Technology: selection of the Medal winners at the request of the Governor
 - ◆ Hartford Courant: Partner in producing Science Matters series for the Courant's Newspapers in Education Program
 - ◆ Academy Bulletin – published quarterly
- *Completed Studies*
 - ◆ **General Assembly: Shared Clean Energy Facilities Study (2015)**
 - ◆ DEEP (*mandated by PA 12-155*): Methods to Measure Phosphorus and Make Future Projections (2014)
 - ◆ CTDOT: Energy Efficiency and Reliability Solutions for Rail Operations and Facilities (2014)
 - ◆ DPH: Biomedical Research Program Analysis of Key Accomplishments (2014)
 - ◆ **General Assembly: Disparity Study - Phase 1 (2013); Phase 2 (2014)**
 - ◆ **General Assembly: Health Impact Assessments (2013)**
 - ◆ CTDOT: Economic Value of Transportation Projects (2013)
 - ◆ DPH & Connecticut Innovations: Stem Cell Research Program Accomplishments (2013)
 - ◆ **General Assembly: Workforce Alignment Study ("Strategies for Evaluating the Effectiveness of Programs and Resources for Assuring Connecticut's Skilled Workforce meets the Needs of Business and Industry Today and in the Future") (2012)**
 - ◆ CTDOT: Benchmarking Connecticut's Transportation Infrastructure Capital Program with Other States (2012)
 - ◆ CTDOT: Alternative Methods for Safety Analysis and Intervention for Use by ConnDOT for Contracting Vehicles and Drivers for Transportation Projects and Services (2012)
 - ◆ Office of Consumer Counsel/PURA: Guidelines for the Development of a Strategic Plan for Accessibility to and Adoption of Broadband Services in Connecticut (2011)
 - ◆ CEAB: Advances in Nuclear Power Technology (2011)
 - ◆ OPM: Energy Emergency Assurance Planning, Capabilities and Resources (*multi-year project: 2009 – 2011*)
 - ◆ CTDOT: Environmental Mitigation Alternatives for Transportation Projects (2010)
 - ◆ CTDOT: Design-Build: A Transportation Project Methodology for Connecticut's Consideration (2010)
 - ◆ CEAB: Feasibility of Utilizing Waste Heat from Power Plants for a Useful Purpose (2009)
 - ◆ **General Assembly: Independent Monitor – Implementation of UCHC Study Recommendations (2008/2009)**
 - ◆ **CT Clean Energy Fund on behalf of the General Assembly: Preparing for Connecticut's Energy Future (2009)**
 - ◆ **General Assembly: A Needs Based Analysis of the UCHC Facilities Plan (2008)**

CONNECTICUT ACADEMY OF SCIENCE AND ENGINEERING: *AN OVERVIEW*

- ◆ CTDOT: Weigh Station Technologies and Practices(2008)
- ◆ CTDOT: Applying Transportation Asset Management in Connecticut (2008)
- ◆ OPM: Development of a Real-Time Energy Report - to encourage energy conservation (2008)
- ◆ **ConnDOT on behalf of the General Assembly: The Feasibility of Utilizing Fuel Cells to Generate Power for the New Haven Rail Line (2007)**
- ◆ DPH/Stem Cell Research Advisory Committee: Guidelines for Developing a Strategic Plan for Connecticut's Stem Cell Research Program (2007)
- ◆ **General Assembly: Energy Alternatives and Conservation (2006)**
- ◆ **General Assembly: Evaluating the Impact of Supplementary STEM Educational Programs (2006)**
- ◆ **General Assembly: Advanced Communications Technologies (2006)**
- Technical Reviews and Assessments
 - ◆ DEEP: Peer Review of CL&P/UConn Reports on Energy Reliability for Critical Facilities
 - ◆ DPH: Biomedical Grant Proposal Review Project – *Assistance to DPH for the review of research grant proposals in the fields of heart disease and cancer, as well as other tobacco-related diseases. Funding for this grant program is provided through the state's Tobacco Fund (2009 - 2014)*
 - ◆ DPH and the Connecticut Stem Cell Research Advisory Committee (SCRAC) – Responsible for managing and overseeing the CT Stem Cell Research Program's Peer Review Process (2012-2014)
 - ◆ DEP/DPH/UCHC/CT Agricultural Experiment Station: Peer Review of the state's "Evaluation of the Health and Environmental Impacts Associated with Synthetic Turf Playing Fields Study" (2010)
 - ◆ Clean Energy Fund: Hydro Tidal Turbine Technology Proposal Review (2008); Solar Thermal Technology Proposal Review (2007); Low-Head Hydro Power Proposal Review (2007)
 - ◆ Connecticut Innovations: Extended-Life Oil Filter Technical Review (2007)
 - ◆ Connecticut Center for Advanced Technology: Review Draft Fuel Cell/Hydrogen Economic Development Plan (2007)
- Strengthen Connecticut's Student Science and Technology Programs:
 - ◆ Celebrating the achievements of young scientists and engineers through the Academy's Annual Student Awards Program
 - ◆ Serving on executive advisory boards for: CT FIRST; Connecticut Junior Science and Humanities Symposium; and Connecticut Association for Mathematically Precocious Youth. Also, serving as a member of the advisory board for the University High School of Science and Engineering; Connecticut Girls Collaborative Leadership Team
 - ◆ Assisted the Stepping Stones Museum for Children in the development of a new Energy Exhibit that will be, as well as the development of a related traveling Energy Exhibit for use in schools around the state and at the One Thing Energy Exposition in the Fall 2008.
 - ◆ Conducted exciting science pilot programs on behalf of Connecticut Science Center and the Connecticut Department of Education; Westinghouse Electric Company; Connecticut Career Choices (Office for Workforce Competitiveness)

Contact:

Rick Strauss, Executive Director
Connecticut Academy of Science and Engineering
805 Brook Street, Building 4-CERC
Rocky Hill, CT 06067
Telephone: 860-571-7135
Email: rstrauss@ctcase.org