

UH System/University of Houston

Written Testimony for the Senate Higher Education Committee

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National Research University Fund – History and Importance

Created by the Texas Legislature (House Bill 51) and approved by voters (Proposition 4) in 2009, the National Research University Fund is one of the most important programs to be undertaken in American higher education in recent years – a firm recognition that Texas must develop more nationally competitive, Tier One research universities if we are going to compete and succeed in the global economy. Tier One universities are essential to discovering new knowledge; building a highly educated workforce; developing and commercializing new technologies; bringing the most talented students, faculty and companies to Texas; and preventing a loss of local talent to other states. They return many times more to the state economy than what is invested in them.

More recently, during the 2011 session, the Legislature passed House Bill 1000, which provides a distribution methodology for NRUF resources for the state's emerging research universities that meet the eligibility requirements. To date, two institutions have qualified for the National Research University Fund: the University of Houston and Texas Tech University, both of which received an annual appropriation of \$7.8 million for FY 2012 and FY 2013.

University of Houston – Use of NRUF and Other State Funds for Research Excellence

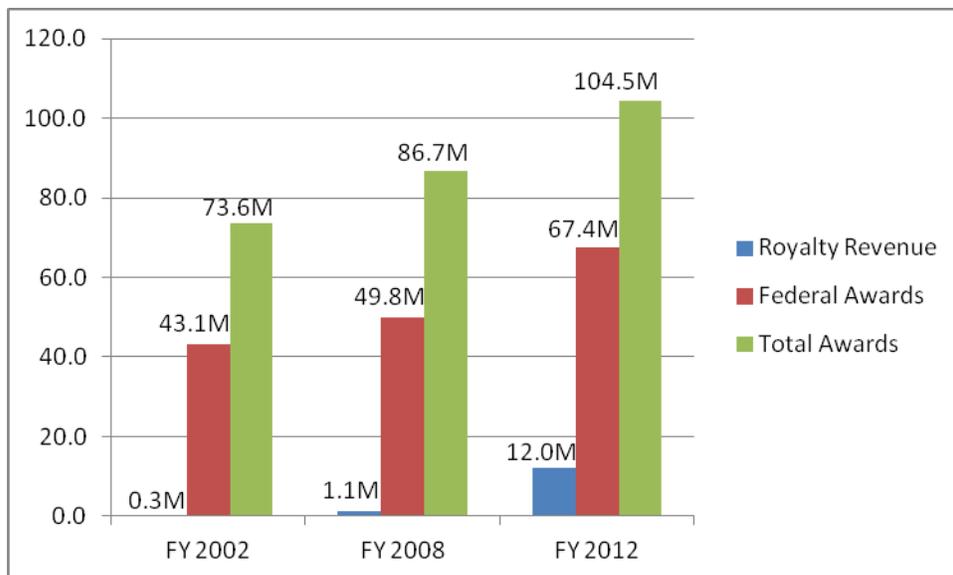
The creation of the National Research University Fund is the culmination of a decade-long investment strategy by the Legislature to support the development of Tier One universities in Texas. In addition to NRUF, the state created the Research Development Fund (RDF) in 2003, the Texas Competitive Knowledge Fund (TCKF) in 2007, and the Texas Research Incentive Program (TRIP) in 2009. For FY 2012, the University of Houston's appropriations from these four funds totaled \$24.4 million. Rather than treat these resources as discrete funds, the university has decided to combine them, beginning in FY 2013, into a single investment pool: the UH Research Investment Fund (UH-RIF). Given the extraordinary costs of the research enterprise, doing so will enable us to maximize their value to the institution.

Resources allocated from the UH-RIF will be used to fund the university's highest research priorities, with preference given to the development of core facilities to be shared by multiple faculty across multiple disciplines in the university's most productive/promising areas of research, most notably energy and the health sciences. Central to UH's research activities in these fields are the Energy Research Park (ERP), a 64-acre warehouse and office complex one mile from campus, and a new Health and Biomedical Sciences Building, which will be completed this fall. Both facilities have significant infrastructure needs that will be met through resources from NRUF and the other state funds that comprise the UH-RIF. For example, a significant part of the university's initial NRUF appropriation of \$7.8 million will be invested in animal care facilities in the Health and Biomedical Sciences Building. Other major projects to be funded include a core imaging facility, an academic computing facility, and start-up resources for the

targeted hiring of 60 new faculty members in STEM disciplines – one of universities top priorities over the next two years.

UH Research Productivity and Other Measures of Tier One Excellence

As a result of the state’s investment in the RDF, Competitive Knowledge Fund, TRIP, and now NRUF, the University of Houston is rapidly enhancing its research productivity and other measures of Tier One excellence. As the following chart demonstrates, UH has experienced significant growth in federal research awards, total research awards, and royalty revenues over the past 10 years (the time period during which Tier One resources have been available):



Particularly noteworthy, royalty revenue is 40 times greater than it was 10 years ago (UH currently ranks 34th nationally in terms of royalty revenue). This extraordinary growth is due in large part to the development and commercialization of two drugs, one of which is used to treat epilepsy, the other to treat cancer. This is a dramatic example of how intellectual property can serve not only to enhance research productivity and economic development but to extend and save human lives.

The benefits the University of Houston has received from investments in research infrastructure are truly multiform, extending beyond absolute increases in research awards, royalty revenues, etc., to faculty, students, industry and the community. For example, UH has doubled its number of national academy members from five to eleven over the past ten years. National academy membership represents the highest level of academic achievement for a faculty member in the sciences, engineering or medicine. Last year, eight UH faculty also received Career Awards from the National Science Foundation. Given to early-career scholars of exceptional promise, these awards reflect well on the quality of faculty UH is recruiting. UH has also launched new academic programs in STEM disciplines, including Petroleum Engineering and Biomedical Engineering. Located at the Energy Research Park, the new undergraduate program in Petroleum Engineering is one of the fastest growing programs at UH. Reflecting the strong workforce demand for petroleum engineers in the Houston area, enrollment has increased to over 200 students in just three years. Without state support for Tier One research excellence

over the past ten years, UH would not have been able to build the facilities, develop the programs, and attract the faculty that has led to its many accomplishments.

Looking to the Future – Increased Funding for Tier One Research Excellence

In general, the resources allocated to research activities begin to bear fruit (in terms of new resources generated) three to five years after initial investment. Therefore, the resources the state has already invested in the Research Development Fund, Texas Competitive Knowledge Fund, and Texas Research Incentive Program have begun to translate into enhanced research productivity at the recipient universities, with recent investments in the National Research University Fund certain to follow. We believe the state is earning a good return on these investments. Therefore, as we look ahead to the 83rd Texas Legislature, we will encourage members to maintain and expand if possible the state's appropriations to these funds. We realize that these are difficult financial times and that resources are scarce. We believe, however, that the sustained development and expansion of Tier One research universities is essential to the long term economic prosperity of Texas.