One-Time Funding: Research

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<th>Requested General Funds</th>
<th>Governor Recommended</th>
<th>Total of $5.9M of One-Time Money</th>
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<td>$2,000,000</td>
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What is the goal?
The goal is to grow the investment in research providing a positive impact to the state’s economy and future industry.

Why is this important to higher education and the State of South Dakota?
The fund will be used to enable the further development of research infrastructure on the six campuses of the South Dakota University System by enhancing research capacity. The fund will be made available to individual campuses based upon their response to a competitive Request for Proposals (RFP). The RFP will be tailored towards enhancing research infrastructure through initiatives including, but not necessarily limited to, new faculty start-up funds for tenure-track faculty to be hired; requests for scientific equipment necessary to enhance the capability of campus research laboratories to increase competitiveness for external research; and requests for project support that involves an industry partner bringing matching monies to conduct proposed research projects. Preference will be given to proposals that address research topics related to wind energy, biofuels development, medical research, the financial services sector, DUSEL, and/or materials science and engineering.

Research is a vital component of higher education in South Dakota and of universities nationwide. While general fund appropriations have declined over the past several years, research awards at our six campuses have grown steadily since FY2000, rising from $33.2 to $154 million in a decade, nearly matching the level of state general appropriations for the university system. However, a disturbing downward trend in research awards to our campuses occurred in FY2011 when awards totaled $134.9 million, a reduction of more than $19 million over the previous year. This trend may be attributed to a number of factors, among them reduced federal budgets, a reduction in federal earmarks, and a reduction of tenure-track faculty in response to budget cuts, reducing the number of campus researchers to support our research enterprise. This is a trend that must be reversed if we are to maximize the benefits of the research investment and continue to grow high paying research jobs.

Overall, the campuses have had to cut back support for research with state budget reductions. To be successful, research proposals must be written and submitted by highly qualified research faculty. Our research faculty are reaching their maximum capability to develop and submit proposals in addition to meeting their instructional and service responsibilities. In order to attract qualified faculty and encourage more of them to become productive researchers, thus maintaining a competitive university research environment in South Dakota, competitive start-up packages, sufficient release time from teaching, and adequately equipped research laboratories are essential.

In FY2011, full time equivalent (FTE) positions supported by federal grants and contracts (892.8), federal appropriations (78.5), state grants and contracts (56.3), and other grants and contracts (123.4) totaled 1,041, accounting for 18 percent of all FTE (including students) in the
university system. Research awards to South Dakota universities in FY2011 resulted in expenditures of $120 million yielding a conservative economic impact to the state’s economy of $173 million. The benefits of research conducted on our campuses far outweigh the state’s costs associated with its pursuit and ideally lead to increased technology based economic development to the benefit of the state and nation.

**What is the financial structure of this request?**

HB1235 approved by the Legislature in 2011 provided $1.5 million in one-time money. Of this, $920,000 was used to enhance the research agenda. A similar RFP and review process would be used for the $2.0 million proposed for FY13. Proposals will be reviewed by a five-member team consisting of legislative appropriators (2), regents (2), and the executive director of the Board of Regents. In FY12 the following projects were approved.

- $200,000 to South Dakota School of Mines and Technology, half for new faculty start-up funds and the other half directed to major research equipment upgrades.
- $200,000 to South Dakota State University to develop innovative high-density, plasma-based thin-film deposition technology for the development of high-efficiency, low-cost silicon solar cells. This proposal leveraged $320,000 in industry matching money.
- $200,000 to The University of South Dakota to develop research infrastructure for germanium crystal growth supporting research at the Sanford Underground Research Facility. Laboratory construction costs will be matched with $504,845 from institutional and third-party cost sharing.
- $184,875 to Black Hills State University for scientific laboratory equipment to support a growing research program in biomedical research, genomics, and deep underground science.
- $80,000 to Dakota State University in support of a post-doctoral researcher at the Center for Information Technology Excellence, which includes an industry match provided by Chenega Logistics to support a second post-doctoral researcher.
- $55,000 to Northern State University to acquire scientific laboratory equipment to support science faculty at NSU and their undergraduate researchers.

**What is the Governor’s recommendation?**

The Governor is recommending $5.9 million in one-time money of which $2.0 million will be used to further the state’s research agenda.