

# Budget Detail Request - Fiscal Year 2016-17

Your request will not be officially submitted unless all questions and applicable sub parts are answered.

1. Title of Project: Florida Energy Systems Consortium (FESC)
2. Date of Submission: 01/06/2016
3. House Member Sponsor(s): W. Cummings

## 4. DETAILS OF AMOUNT REQUESTED:

- a. Has funding been provided in a previous state budget for this activity? Yes  
***If answer to 4a is ?NO? skip 4b and 4c and proceed to 4d***
- b. What is the most recent fiscal year the project was funded? > 5 years
- c. Were the funds provided in the most recent fiscal year subsequently vetoed? No
- d. Complete the following Project Request Worksheet to develop your request (Note that Column E will be the total of Recurring funds requested and Column F will be the total Nonrecurring funds requested, the sum of which is the Total of the Funds you are requesting in Column G):

FY:	Input Prior Year Appropriation for this project for FY 2015-16 (If appropriated in FY 2015-16 enter the appropriated amount, even if vetoed.)			Develop New Funds Request for FY 2016-17 (If no new Recurring or Nonrecurring funding is requested, enter zeros.)			
	Column: A	B	C	D	E	F	G
Funds Description:	Prior Year Recurring Funds	Prior Year Nonrecurring Funds	Total Funds Appropriated  (Recurring plus Nonrecurring: Column A + Column B)	Recurring Base Budget  (Will equal non-vetoed amounts provided in Column A )	<b>INCREASED or NEW Recurring Requested</b>	<b>TOTAL Nonrecurring Requested</b>  (Nonrecurring is one time funding & must be re-requested every year)	<b>Total Funds Requested Over Base Funding</b>  (Recurring plus Nonrecurring: Column E + Column F)
Input Amounts:					2,500,000	0	2,500,000

- e. New Nonrecurring Funding Requested for FY 16-17 will be used for:  
 Operating Expenses     Fixed Capital Construction     Other one-time costs
- f. New Recurring Funding Requested for FY 16-17 will be used for:  
 Operating Expenses     Fixed Capital Construction     Other one-time costs

5. Requester:

- a. Name: Kelley Burk
- b. Organization: Florida Energy Systems Consortium - Administered by the University of Florida-Office of Energy
- c. Email: Kelley.SmithBurk@freshfromflorida.com
- d. Phone #: (850)617-7484

6. Organization or Name of Entity Receiving Funds:

- a. Name: Florida Energy Systems Consortium
- b. County (County where funds are to be expended) Statewide
- c. Service Area (Counties being served by the service(s) provided with funding) Statewide

7. Write a project description that will serve as a stand-alone summary of the project for legislative review. The description should summarize the entire project's intended purpose, the purpose of the funds requested (if request is a sub-part of the entire project), and most importantly the detail on how the funds requested will be spent - for example how much will be spent on positions and associated salaries, specifics on capital costs, and detail of operational expenses. The summary must list what local, regional or statewide interests or areas are served. It should also document the need for the funds, the community support and expected results when applicable. Be sure to include the type and amount of services as well as the number of the specific target population that will be served (such as number of home health visits to X, # of elderly, # of school aged children to receive mentoring, # of violent crime victims to receive once a week counseling etc.)

Additional Contact information for request - Kelley Burk, Interim Director Office of Energy and Dr. David Norton, VP of Research, University of Florida, and Interim Director, FESC, Alternate contact: Canan Balaban Associate Director, FESC are all requesters.

Organization: Florida Energy Systems Consortium - Administered by the University of Florida through the Office of Energy

Additional Email contacts: dpnorton@ufl.edu. Alternate contact: cbalaban@ufl.edu

David: (352) 392-9271 Canan: # 352-392-0899 (office); 352-672-2394 (cell)

Project Description: Section 1004.648, F.S. created the Florida Energy Systems Consortium (FESC) in 2008, for which the Legislature appropriated \$38M. As stated in the law, the purpose of FESC, or the Consortium, is to promote collaboration among experts in the State University System for the purposes of sharing energy-related expertise and assisting in the development and implementation of a comprehensive, long-term, environmentally compatible, sustainable, and efficient energy strategic plan for the state. The consortium shall focus on the research and development of innovative energy systems that will lead to alternative energy strategies, improved energy efficiencies, and expanded economic development for the state. As a result of the State's initial investment of \$38 million dollars, the Consortium generated another \$425 million dollars from external sources, for a 10 to 1 return on investment for the State.

FESC consists of expert faculty in a variety of energy-research areas at all 12 of the public state universities and is administered by the University of Florida, which is where the Executive Director is located. In 2011, section 1004.648, F.S. was amended to require that the Executive Director of FESC report to the Commissioner of Agriculture. This budget request, therefore, has been developed in concert with the staff of the Energy Office in the Department of Agriculture.

This request is for another State investment of \$2.5M to support existing staff at the University of Florida for continued coordination of the important activities specified in the law: "Through collaborative research and development across the state, the goal of the consortium is to become a world leader in energy research, education, technology, and energy systems"; for competitive grants to be allocated to the various faculty experts in energy research based on the needs of industry; and for the development and commercialization of new technologies .

The breakdown of the requested funding is given below:

Research and Program Coordination: \$500,000 for allocation by the Dept? of Agriculture, Office of Energy, to the University of Florida, by contract. \$410,000 in recurring funds is for 3 positions and salaries, other personal services, and travel expenses, for the University of Florida, to support the coordination of large scale research proposals, supporting FL industry and FESC faculty, networking conference calls, and website development and maintenance, as required in section 1004.648, F.S. Another \$90,000 would be used to support the annual FESC workshop for researchers and the industry which is a very important linkage for the State.

Education and Outreach: \$250,000 in recurring funds for allocation by the Dept? of Agriculture, Office of Energy, to the University of Florida, by contract. To support education and outreach which will be focused on energy education for the general populace and workforce development through the state college network, also a very necessary extension activity performed by FESC administration.

Energy Technology Development Research Competitive Grants : \$750,000 in recurring funds for allocation to recipients by the Dept of Agriculture, Office of Energy. The funds are requested in order to support the FESC mission of performing quality applied research driven by real-world problems. Research will focus on providing practical answers to pressing industry and State of Florida needs. Industry would be consulted to focus research efforts on existing issues. Grants will be allocated on a competitive basis based on needs as identified by the industry.

Equipment/Facilities Support: \$1 million in recurring funds for allocation to recipients by the Dept. of Agriculture, Office of Energy.

The funds are requested to be used for targeted fixed capital outlay investments in order to enhance the equipment/lab environment to support university-industry collaboration opportunities. Funding could be made contingent upon the universities procedures for allowing industry to utilize their facilities. For example, Florida Atlantic University?s (FAU) Southeast National Marine Renewable Energy Center could apply for funding to upgrade its facility by including heavier cabling for anchoring turbines and additional sensors to increase their analytical capabilities. The heavier cabling would open up additional testing space for larger turbines while the sensors would provide more testing capabilities of those turbines. Another example could be, existing user facilities that are open for industry use, could be upgraded with state of the art equipment which would better serve collaboration with our industry partners.

Return on Investment:

The State?s initial investment of \$38M resulted in the generation of \$425M in externally-generated revenues for the State, a 10 to 1 return on investment. During this time, there was involvement in energy research with over 270 companies, over 400 faculty and 28 user facilities, investors, entrepreneurs, and

government labs. In addition, 32 new start-up companies were created, with 12 of those created by the University of Florida. There were 459 invention disclosures and 101 energy technologies licensed to industry. Finally, there were 70 energy workshops conducted for Florida industry and training. The consortium's strong faculty and industry network is a great catalyst for taking university developed energy technologies to industry, contributing to the economic development in Florida. The problems and needs of industry set the focus areas of university researchers. The program (if funded) will support Florida energy industry through faculty expertise, writing collaborative proposals to bring funding benefiting the industry members, making university user facilities available to the industry partners through collaborative work, developing new, innovative technologies, licensing these technologies to industry, forming spin off companies by using university developed technologies resulting in job growth, providing energy education to industry members, public, and students through the consortium's education and outreach program. Faculty members will leverage their seed grants out of the Technology Development Research Funds of \$750,000 to bring in Federal funding to grow their research programs to serve our state better. The associated benefits include establishment of new spin off companies (32 spin off companies formed since 2008), job growth through new companies and technology licensing to industry, assisting economic development, work force development, increasing research capability through leveraging state funds and bringing in Federal dollars. The facility investment will allow FESC faculty to perform cutting edge research in collaboration with the industry partners. The FL energy industry will have access to these advanced user facilities and use them as their research labs. The industry members will also benefit from faculty know-how facilitating the economic development.

Note: due to previous history of 10 to 1 leveraging of the State's investment it is expected that additional externally-generated funds will be generated due to the requested State investment.

8. Provide the total cost of the project for FY 2016-17 from all sources of funding:

Federal: 0

State: 2,500,000 (Excluding the requested Total Amount in #4d, Column G)

Local: 0

Other: 0

9. Is this a multi-year project requiring funding from the state for more than one year?

Yes