Energy Research Triangle – Professor Program Guidelines
A Competitive and Collaborative Grant Program

Program Description

In Governor Gary R. Herbert’s “ENERGY INITIATIVES & IMPERATIVES, Utah’s Ten-Year Strategic Energy Plan” (online: http://www.utah.gov/governor/docs/10year-strategic-energy.pdf), Governor Herbert outlines the importance of energy to strengthening Utah’s economy and preserving our vibrant quality of life. Governor Herbert acknowledges the important role of Utah’s research universities in “development and deployment of energy technologies” and supports the strengthening of the collaborative relationship between those universities.

To that end, the Energy Research Triangle – Professor grant program facilitates collaborative research by university faculty.

Topic

Rapid energy technology solutions to Utah’s air and water challenges: Conventional energy prices are experiencing record lows as new technology has allowed America to unlock previously unrecoverable resources. Similarly, capital costs for new renewable energy projects continue to see rapid declines as new technology delivers cheaper, more efficient materials. Despite these advances in energy technology, Utah’s energy production potential is still limited by air and water challenges. While many of these challenges can be addressed with innovations in materials and hardware, it remains the case that the cheapest, easiest, and fastest way to address air and water challenges is by optimizing our use of energy.

In the interest of finding fast-acting solutions to Utah’s natural resource challenges, the goal of this year’s Energy Research Triangle (ERT) is to develop rapidly-deployable energy technologies that address air quality and water scarcity challenges. However, the broadest impact can only be achieved if the solutions are in response to real challenges facing real users.

Applicants are required to develop an energy technology that could help a UT business overcome its air and/or water challenges. Examples topics are listed below, although applicants are not restricted to these topics. A letter of support must be obtained from a Utah business indicating that if the proposed technology were successful, the business would be interested in implementing the technology and/or learning more.
The following are examples of air and water challenges that affect energy use and production in the state. Proposals are not limited to the following topics.

**Water** - Novel water data management tools, efficient use of water for energy production, methods for reusing/recycling produced water or other waste streams, etc...

**Air** - Emission detection and reduction tools, increasing efficiency of residential and commercial buildings, methane and carbon capture, etc...

**Program Funding**

Each collaborative research team will receive $125,000 for research aimed at finding solutions to significant energy challenges in the State of Utah. Funds must be used for research-related costs and must be administered by PI recipient’s academic institution. Facilities and Administrative costs (F & A) will not be allowed.

Up to three one-year collaborative projects will be awarded.

**Eligibility**

The ERT-P grants are available to university research teams meeting the following guidelines:

1. Teams must include at least three researchers from at least three Utah universities, two of which must fit the Carnegie Classification of Higher Education ([http://carnegieclassifications.iu.edu/classification_descriptions/basic.php](http://carnegieclassifications.iu.edu/classification_descriptions/basic.php)), which includes University of Utah, Utah State University, Brigham Young University.

2. Teams must develop a technology with applications that can align with Utah-specific energy and natural resource challenges.

3. Teams must be developing a technology assessed to be between a TRL of 2 and 5.

**Application Requirements**

**To Apply:**

**Stage 1.** Email a letter of intent to the program manager, Olivia Dale at odale@utah.gov, by June 16, 2017. Please include: project title, PI name, PI institution, team members, respective universities, and proposed topic. A letter of intent is required to submit a full proposal.

**Stage 2.** Download application document online at ustar.org, and complete the application. Applications are due June 27th at 5:00pm.

**Stage 3.** Obtain signature of institutional official (grants officer)
Stage 4. Email a pdf of the completed application to Olivia Dale, odale@utah.gov

Incomplete applications or applications exceeding the page limits will not be considered.

**Important Deadlines:**

1. Letter of intent is due Friday, June 16, 2017 by 5:00 PM (MDT.)
2. Application deadline is Tuesday, June 27, 2017 by 5:00 PM (MDT.)

**Additional Requirements and Provisions**

Applications must be the original work of the applicant(s) and must not infringe on any third-party rights. Please ensure application responses are written in plain English, containing informative yet non-confidential information.

**Selection Process**

Applications will be screened by a panel convened by the Governor’s Energy Advisor. Notification of award or rejection may follow within 45 days of submission. Final granting authority rests with the USTAR Governing Authority and the Governor’s Office.

**Funding Distribution**

1. Funding will be provided to the lead university and will be distributed per the subcontracts to each of the supporting universities.
2. Expenses will be reimbursed, up to the award amount, upon successful completion of designated milestones.
3. Lead University shall prepare subcontracts for the supporting universities, and shall ensure that the subcontracts with the supporting universities include, at a minimum:
   a. The distribution of the funding received for this grant;
   b. Assurances that the funding will be spent only for the purposes specified in this grant;
   c. Assurances that the supporting university will keep records as required in this grant, and that the supporting university will either fulfill or support the Lead University’s fulfillment of the reporting requirements set forth.
   d. An acknowledgement that the supporting universities understand and agree that failure of the Lead University of any of the supporting universities to comply with the terms of this contract may be grounds for termination of this contract.
   e. Assurances that supporting universities shall comply with all applicable provisions of this contract and Utah Admin Rule R856-5.
Milestone and Reporting Requirements

The research team is required to provide reporting, as applicable, specified in Section 63M-2-702 and 704.

Researchers may be required to present their work at the Governor’s Energy Summit to be held between April and May of 2018 in Salt Lake City, UT.

Scoring Rubric for ERT-P

Technical Merits score (1-5)

Technical merits (score 5)
  ● Appropriate TRL 2-5
  ● Milestones are specific and measurable and aligned to technology goals
  ● Technical approach demonstrates a strong understanding and application of technology development best practices
  ● Technical approach has high likelihood of success, is well defined and considers alternative approaches if the original is not successful
  ● Reasonable timeframe for development

Technical merits (score 3)
  ● Semi Appropriate TRL
  ● Milestones are not specific or measurable, but align to technology goals
  ● Technical approach demonstrates basic understanding and application of technology development best practices
  ● Technical approach has a high likelihood of success and is well defined but no or little discussion of alternative approaches
  ● Timeframe is not well defined or unattainable

Technical merits (score 1)
  ● Not the appropriate TRL
  ● Milestones are not specific or measurable and do not align to technology goals
  ● Approach does not illustrate understanding of tech development best practices
  ● Development timeframe is not reasonable
  ● Technical approach lacks detail or has low chance of success with no discussion of alternative approaches

Economic Impact in Utah score (1-5)

Economic Impact in Utah (score 5)
  ● If successful, technology will be licensed or spun out in 1-3 years
Technology has a high likelihood of retaining economic impact in Utah once it leaves the university

- Research jobs will be created in the state

**Economic Impact in Utah (score 3)**
- If successful, technology will be licensed or spun out in 4-8 years
- Technology has the possibility of retaining economic impact in Utah once it leaves the university
- There is potential to create research jobs in the state

**Economic Impact in Utah (score 1)**
- Technology will most likely not be licensed or spun out
- Technology does not have the possibility of retaining economic impact in Utah
- New research jobs will not be created in the state

**Market need (score 1-5)**

**Market need for the product (score 5)**
- Researcher has provided data-driven definition of market
- Researcher has provided total addressable market and clear rationale
- Specific plan identified to take the technology to market
- Resources are available/attainable to commercialize technology
- Technology has defined market advantage to current competitors
- Aligns to targeted technology sectors

**Market need for the product: (score 3)**
- Researcher has provided data-driven definition of market
- Plan identified to take the technology to market
- Technology has some market advantage to current competitors
- Aligns to targeted technology sectors

**Market need for the product (score 1)**
- Market not identified, or market potential small
- No clear market advantage for this product
- Does not align to targeted technology sectors
- Unclear or undefined plan to take product to market

**Technical Capability of Team (score 1-5)**

Technical capabilities/experience of the team that will enable market success (score 5)
- The team has the technical background and experience to meet the milestones identified in the proposal and experience taking technology to market
- The team has experience working together with a history of success
- The team has diversity of technical expertise to overcome challenges

Technical capabilities/experience of the team that will enable market success (score 3)
- The team has sufficient technical credentials to meet the milestones identified in the proposal
- The team does not have prior experience with taking technology to market
- The team has minimal experience working together
- The team has some team diversity, but gaps exist in expertise to accomplish milestones

Technical capabilities/experience of the team that will enable market success (score 1)
- The team does not have the adequate technical capabilities and experience for market
- The team does not have experience working together as a team
- The team has no diversity of technical experts

**Realism of cost (score 1-5)**

Realism of the proposed costs and availability of funds (score 5)
- Proposed budget is both adequate and sufficient to complete the proposed work
- The personnel budgets provide adequate hours for the work to be completed
- Categories and expenses are reasonable and appropriate for the work

Realism of the proposed costs and availability of funds (score 3)
- Proposed budget may be insufficient or more than necessary to complete the work
- Budget is not reasonably distributed across collaborators
- Categories and expenses are generally acceptable

Realism of the proposed costs and availability of funds (score 1)
- Proposed budget is not realistic
- Budget is not reasonably distributed across collaborators
- Cost categories and expenses are unreasonable and not appropriate for the work