Energy Network of Education and Training for Kansas

Energy NET

Outcome: A statewide delivery system of energy education and training emphasizing hybrid courses, distance learning, and cooperative college partners. The system will have the capacity to deliver training state-wide, through a network consisting of public colleges and/or universities in Kansas. The system will provide for the specific needs of adult learners who are employed and need advanced training, for adults who need to re-skill to prepare to enter a sector of the energy industry and for traditional students entering the energy field. Programs delivered through the training network will result in stackable industry credentials and career pathways leading to academic credentials. The Kansas Board of Regents (Regents) and the Kansas Department of Commerce (Commerce) are requesting proposals to provide a model plan for a responsive learning network supporting the current and future workforce needs of the Kansas energy industry.

Funding: Regents and Commerce have blended funding sources to support the public college/university system's development of a statewide network of training partners to provide energy training for Kansas companies. As the agencies responsible for postsecondary education and training and the public workforce system, Regents and Commerce have determined that it is strategic for the state to combine resources around this central training effort. Regents and Commerce anticipate one award to a coordinating (lead) and several "partner" institutions of higher education (public community/technical college or university at Tier I and II levels) of up to one million dollars in year one, Fiscal Year 2011, and a roll-down of resources in years 2 and 3 of approximately $600,000 and $300,000 respectively, contingent on successful progress toward goals ($1.9 million total). Actual funding decisions will be based on project scope, budget plans and negotiations with the lead institution representing the "consortium".

Background: America and Kansas currently lack an energy workforce of sufficient size and capability to meet the needs of a sustainable, secure energy system.[1] Abundant job opportunities are projected in both traditional and emerging energy industries as the existing workforce retires and the replacement workers need to be trained. Additionally, the development, installation and maintenance of new technologies require skills at all levels of educational training. Energy-related jobs of installation and

maintenance cannot be outsourced and require a domestic workforce with proper training. The Kansas Department of Labor *Going Green 2009* survey reports over 10,000 jobs in energy efficiency and nearly 1,500 jobs in renewable energy in Kansas. Energy NET will provide resources to the higher education system to help meet the state's energy training needs and prepare the skilled workforce needed to support a bedrock sector of the Kansas economy.

The Energy NET model provides a network of training colleges with a lead institution providing coordination resulting in more efficient statewide training delivery. The capital-intense equipment needs should be located at a college in geographic proximity to major energy sectors. Industry itself may also provide the lab or field experience with its equipment when appropriate. To increase program participation, Energy NET will encourage basic, entry-level energy training courses delivered through multiple colleges with the more highly specialized "capstone" coursework delivered through a single institution. For example, students might complete initial courses at their "home" college, continue their specialized coursework via on-line learning through Energy NET, and finish the credential by enrolling in equipment intensive courses at one of the partner colleges.

Energy NET funds are focused on supporting a state solution and are not designed to meet institution-specific goals, while it is hoped that may be a secondary outcome. Some expected benefits to participating colleges include the opportunity to increase enrollments and retained revenue, access to statewide outreach, additional funds to adapt, re-purpose, or adopt needed curriculum materials, an avenue to improve service to students and industry, and additional recruiting tools for the college.

Business/Industry: Energy NET will be driven by industry needs. The lead institution will convene a strategic steering committee of industry and management to direct and guide the training project. Additionally, energy companies by sector will provide sector-specific guidance for training needs. Company representatives will define the needed energy training, the required competencies, and any training improvements, both at the outset and as the project progresses. The lead institution, working with the consortium, will convene business representatives from the various sectors to conduct the needs assessment process. Regents/Commerce staff will serve on the strategic steering committee and, working closely with the lead institution, will provide supporting resources, assistance with coordination, and assistance in removal of identified barriers.

Distance Learning: A central component of Energy NET is a robust system of distance and electronic learning to deliver energy education state-wide and meet the needs of a highly mobile workforce. These may include on-line, computer assisted, digital interactive, synchronous and a-synchronous, high definition TV, 3G and other technologies. In addition to distance learning delivery, most technical education requires hands-on skills practice to ensure competency attainment. It is logical to place the necessary field instruction in settings close to the industry or in colleges where the expensive equipment and lab set-ups currently exist. Although on-line and hybrid courses will help address geographical separation of learners and institutions, the successful proposal should include partner institutions located near a concentration of businesses within the energy sector.

Displaced workers specifically need immediate access to training and cannot wait for traditional technical education program start dates of one or two times per year. These unemployed and underemployed workers also need training that is flexible in delivery modes and allows them to maintain family responsibilities while earning technical training credentials.

Leveraged Resources: The lead institution will leverage existing resources to support Energy NET. The resources *may include* the colleges' general fund, Perkins and other funds, existing competitive grant funding, future competitive grants, and retained revenue from custom training. The lead institution is encouraged to list leveraged funds from participating college institutions and other partners in their proposal.

Partnerships: The American Recovery and Reinvestment Act funds to the Workforce Investment System (WIA) provide an opportunity to support an energy training system with college partners and should be utilized as leverage in the proposal. The successful applicant will exhibit a strong working relationship with the State and Local Workforce Investment Boards. This partnership will include training projects mutually planned to meet industry needs and blended funding models (using WIA dollars in combination with PELL grants, scholarships, industry tuition reimbursement, etc.) to serve training participants and business customers. The workforce system partnership should also be used to place trained participants in employment. The education/training must be designed to meet the needs of adult and dislocated workers. It should also have the flexibility needed to serve youth, older workers and Adult Education participants.

Additional partnerships with industry associations, community based organizations, support systems providers and others are also encouraged.

Suggested Roles for Lead and Partner Institutions:

Lead Institution

The "Lead" institution will serve as project manager and coordinate all online aspects of Energy NET for Tier 1 and Tier 2 partners including curriculum adoption, MOU development, articulation plans and on-line courseware development/purchase. The lead institution may also be a direct provider of Energy NET training. The "Lead" institution will provide a project director, support staff and appropriate office space.

Tier 1 Partner

It is expected that 3-5 colleges will collaborate with the "lead" institution as Tier 1 partner institutions. Tier 1 partners will likely offer technical courses and/or technical programs for one or more of the identified energy sectors to support Energy NET. As direct providers of Energy NET training, Tier 1 partners can expect to receive support to increase delivery capacity as energy coursework is ramped up. Funding may be used for items such as curriculum upgrades, digital interactive e-learning tools, and embedding industry credentials as appropriate.

Tier 2 Partner

Energy NET will be designed in a manner allowing all interested institutions not already a part of the initiative in phase 1 (start-up year) to offer standardized coursework in energy-related technical and academic subjects in support of Energy NET on an ongoing basis.

Energy Sectors: Energy NET, when fully developed, should provide training for the following suggested critical energy sectors. The list of energy sectors is subject to change as energy needs and the energy environment evolves, industry requests materialize, or training demands change.

1. Emerging energy (wind , solar, photovoltaic, biomass, geothermal)
2. Traditional energy (gas, coal and oil)
3. Electric power transmission and distribution
4. Smart grid and energy security
5. Energy efficiency (residential, commercial, industrial)
6. Power generation

Proposal Components: The coordinating institution is expected to present a plan including examples of the following key components. Innovation is encouraged and the college may include additional original approaches beyond the examples listed below to deliver the defined outcomes. Energy NET training plans *may include* training that:

1. delivers industry-endorsed credentials (such as AWEA and others) and produces graduates that meet standardized outcomes required by industry
2. uses flexible training formats to meet the needs of the adult working learner and dislocated worker – open start times, evening and weekend course times, as needed
3. develops or purchases high quality digital interactive on-line courseware
4. delivers hybrid courses with at least 2/3 of content delivered on-line or in computer assisted delivery mode
5. develops criteria, with partner colleges, for quality control of courses – application, review, and selection criteria
6. provides for synchronous and a-synchronous learning with HD TV, IM, Wiki, or other technology
7. presents options for credit and non-credit courseware and flexible admission procedures for non-degree seeking participants
8. leverages and adapts the curriculum and training materials in existence –current college offerings, Midwest Governor's Association curriculum, industry provided training materials, etc.
9. pilots a model to set energy standards for a statewide articulation model with secondary schools for beginning and prerequisite coursework
10. sets a prototype for standards for technical certificates, AS, AAS to BS articulation model with universities
11. provides samples of Memorandum of Understanding to be used among colleges providing training in cooperation with the lead institution
12. provides models for cost sharing among institutions providing course components
13. includes concrete industry commitment (e.g., internships for students/faculty, OJT, equipment donation, field training experiences, guaranteed interviews for program graduates, etc.)

14. engages industry partners to provide continued involvement and direction (e.g., evaluate student work products or portfolios, conduct training site visits, provide guest instruction, etc.)
15. incorporates Kansas **WORK***Ready*! Certificates
16. uses the apprenticeship model where there is an industry fit
17. creates a model of career pathways or career lattices using stackable credentials leading a participant from certificate to AAS to BS
18. Incorporates proven strategies for student success to increase retention and completion rates for adult learners.

Capacity Expectations for Lead Institution:

1. Existing strong industry partnerships with at least one energy sector and/or documented expertise in on-line training and college partnerships
2. Proven capacity to listen to business needs and design responsive training programs
3. Existing strong partnerships with other community and technical colleges
4. Existing strong delivery model for high quality distance learning (ITV, HD, blended, etc)
5. Sufficient staffing resources to implement and coordinate the energy sector partnership
6. Strong financial management and ability to meet reporting requirements
7. Proven track record of delivering training outcomes as promised – high pass rates for licensure and credentials, strong retention and placement rates
8. Sound history of securing additional funds from various sources – federal grants, business investments, etc.

Procedures and Timeline: Institutions interested in serving as the lead institution for Energy NET will prepare a concept paper describing their approach to delivering the outcomes. The concept paper should be no more than 5 pages in length and include a brief statement as to how the institution will address the Energy Sector Components and evidence of capability to coordinate the initiative. The institution is not required to have full college partnership plans nor a budget in place by this date. The timeline is:

May 19, 2010 – Energy NET released

May 27, 2010 - Webinar overview and expectations for concept paper

Time: 9:00 to 10:00 a.m. Central
URL: http://www.meetingcenter.net
Meeting Number: 597 558 245
Meeting Password: 123
Teleconference: 1-866-620-7326
Conference Code: 854 799 8672

June 7, 2010, noon – Questions and clarification requests due to khund@kansascommerce.com

June 11, 2010 – Answers posted on KBOR website and sent to webinar participants

June 30, 2010 4:00 pm - Concept paper due to khund@kansascommerce.com

Pending evaluation of concept papers, it is anticipated 3 to 5 institutions will be invited to respond with a full proposal for Energy NET. More details will be provided to institutions preparing a full proposal including specific metrics to measure outcomes. A selection committee including Regents and Commerce staff and industry representatives will review final proposals.

Sustainability: The colleges invited to present full proposals will include a plan for sustainability for the project beyond the life cycle of the award to include projected expenses, retained revenue, and additional possible funding sources. Regents and Commerce expect to make a three year investment in Energy NET to provide for start-up costs, development and project launch.

Technical Assistance and Support: Regents and Commerce will provide technical implementation assistance and support to the coordinating institution and partner colleges including but not limited to:

- connections to employers,
- access to Midwestern Governor's Association information, green curriculum and workforce development efforts,
- support of the **KANSASWORKS** State Board,
- outreach and marketing through existing networks and websites,
- access and assistance with Commerce' HD network,
- connections to the Lt. Governor's Green Taskforce,
- support of the apprenticeship consultant team,
- integration with the State Energy Sector Partnership Training grant's committee,
- and other supports as available.

---

1. E&E News "Industry can't meet demand for green construction". November 11, 2008