ENERGY INTERNSHIPS IN NORTH CAROLINA: AN EVALUATION OF EXPERIENCES AND INDICATORS FOR THE FUTURE

Marie Hoepfl, Department of Technology & Environmental Design
Jason Hoyle, Appalachian Energy Center
Appalachian State University
9th Annual Sustainable Energy Conference
McKimmon Center, Raleigh, NC
State Energy Internship & Fellowship Program (SEIP) Overview

- Grant awards made to 28 projects
  - Located in 15 counties & 10 congressional districts
  - Interns/fellows placed in 47 counties
- $9.5 million program
  - $6.3 million in grant awards
  - $3.2 million in matching contributions
- Supported 569 positions* (goal = 557)
  - Positions at 242 host organizations

*as of Dec. 2011 report
Grant Awards by County

$0 (no award)
$7,200 - $165,200
$208,030 - $324,736
$400,770 - $450,419
$479,257 - $2,254,344

19 April 2012
Position Placements by County

Appalachian State University

19 April 2012
Activity of Largest Projects

Number of Positions

- Alamance CC
- Appalachian St.
- Charlotte
- NCSU Mech/Aero
- NCSU Solar Center
- NSCU Nat. Res.
- UNC-Chapel Hill
- Western Carolina

19 April 2012
Percentage of Placements by Percentage of Funding

- Government
- Non-Profit
- Higher Education
Participant survey administered between February 24 and March 20, 2012 by Appalachian State University:

- Awardees
- Host Employers
- Interns & Fellows
Survey Overview

- **Invitations were sent to 818 total SEIP participants**
  - 358 (43.7%) surveys started
  - 294 (35.9%) surveys finished

- **Survey Structure**
  - All respondents were asked a set of 12 questions
  - Grant award recipients: +19 questions
  - Interns & fellows: +16 questions
  - Host organizations: +20 questions
In your opinion, how important are programs like the SEIP in helping organizations find qualified employees?

- Very Unimportant: 9%
- Unimportant: 1%
- Neither Important nor Unimportant: 13%
- Important: 49%
- Very Important: 28%

n=310
In your opinion, how effective was the SEIP in assisting students with finding employment?

- Very Effective: 19%
- Effective: 42%
- Neither Effective nor Ineffective: 28%
- Ineffective: 6%
- Very Ineffective: 4%

n=309
All Respondents

Would you participate in the SEIP again? n=311

- Definitely yes: 54%
- Probably yes: 30%
- Maybe: 10%
- Probably not: 5%
- Definitely not: 1%
Please indicate the extent to which you agree or disagree with the following statements about the SEIP program.

- The SEIP, or a similar program, should be expanded.
  - Strongly Disagree/Disagree: 14%
  - Neither Agree/Disagree: 84%

- The SEIP, or a similar program, should be continued.
  - Strongly Disagree/Disagree: 4%
  - Neither Agree/Disagree: 95%

- Providing low- or no-cost interns to organizations is an effective way to connect qualified students with potential employers.
  - Strongly Disagree/Disagree: 5%
  - Neither Agree/Disagree: 92%

- Programs like the SEIP are useful for supporting economic growth and recovery in North Carolina.
  - Strongly Disagree/Disagree: 8%
  - Neither Agree/Disagree: 90%

n=311

19 April 2012
Please rate the importance of the following goals as they apply to your internship/fellowship program.  

<table>
<thead>
<tr>
<th>Goal</th>
<th>Not Applicable</th>
<th>Very Unimportant</th>
<th>Somewhat Important</th>
<th>Very Important</th>
<th>Somewhat Unimportant</th>
<th>Very Important</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop presence in energy sector</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete specific energy projects</td>
<td>1</td>
<td>10</td>
<td>4</td>
<td></td>
<td>17</td>
<td></td>
<td></td>
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<tr>
<td>Contribute to regional economic development</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Build or expand relationships with businesses</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplement classroom instruction</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulfill degree requirements</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Provide work experience</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td></td>
<td></td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

n=23
Grant Award Recipients

How did the number of program applicants compare to the available number of internship/fellowship positions?

- 77% Fewer interested students than available internship positions
- 18% About the same number of interested students as available internship positions
- 5% More interested students than available internship positions

n=22
Duration of Intern & Fellow Placements

How many hours of work did a typical intern in your program complete?

- Over 1,000 hours: 14%
- Between 601 and 1,000 hours: 33%
- Between 400 and 600 hours: 24%
- About 400 hours: 29%

n=21

How many hours of work did a typical fellow in your program complete?

- Over 1,000 hours: 68%
- Between 601 and 1,000 hours: 16%
- Between 400 and 600 hours: 11%
- About 400 hours: 5%

n=19

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Focus of Intern/Fellow Work

With which energy technologies or resources did your interns/fellows work? Please select all that apply.

- Other (please specify) 17%
- Smart grid 6%
- Electric vehicles 10%
- Energy efficiency 73%
- Fuel cells or hydrogen 2%
- Geothermal 6%
- Wind 12%
- Solar electric (i.e., photovoltaics) 40%
- Solar thermal 21%
- Biofuel (biodiesel or ethanol) 11%
- Nuclear 1%
- Oil, Gas, or Coal 25%

n=81

19 April 2012
Interns & Fellows

Had you applied for or obtained another internship/fellowship position prior to your participation in the SEIP program?

- Applied for, but did not receive: 16%
- Applied for and obtained internship: 21%
- Had not previously applied for an internship: 64%

n=214

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To what extent do you feel that your internship/fellowship will assist you in obtaining full-time employment after college?

- Definitely will not: 1%
- Probably will not: 5%
- Not sure: 15%
- Probably will: 32%
- Definitely will: 26%
- Already did: 20%

n = 215
Interns & Fellows

Have you received a full-time employment offer as a result of your SEIP internship/fellowship?

- Yes: 17%
- No: 45%
- Continuing as student: 25%
- Offered but declined: 11%
- Other: 2%

n=214

19 April 2012
Host Employers

Please select the choice below that best describes your organization.

- For-profit business, 38%
- Higher education, 26%
- Non-profit, 12%
- Local government, 16%
- Other, 6%
- Regional partnership, 1%

n=81

19 April 2012
Please rate your level of satisfaction with the interns/fellows who were placed with your organization based on the criteria below.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Very Dissatisfied</th>
<th>Dissatisfied</th>
<th>Neutral</th>
<th>Satisfied</th>
<th>Very Satisfied</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Energy knowledge at the end…</td>
<td>4</td>
<td>22</td>
<td>52</td>
<td>22</td>
<td>80</td>
<td>80</td>
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<tr>
<td>Energy knowledge at the start…</td>
<td>12</td>
<td>18</td>
<td>37</td>
<td>22</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Overall performance</td>
<td>1</td>
<td>7</td>
<td>29</td>
<td>43</td>
<td>80</td>
<td>80</td>
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<tr>
<td>Ability to learn on the job</td>
<td>1</td>
<td>4</td>
<td>29</td>
<td>46</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Work ethic</td>
<td>1</td>
<td>7</td>
<td>28</td>
<td>42</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Professionalism</td>
<td>1</td>
<td>3</td>
<td>31</td>
<td>40</td>
<td>80</td>
<td>80</td>
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<tr>
<td>Work-related skills</td>
<td>11</td>
<td>4</td>
<td>35</td>
<td>39</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

n=80
Host Employers

Were any interns/fellows placed with your organization offered a job following their internship/fellowship [or are there plans to make an offer(s)]]?  

- Yes, filled (or will fill) an existing position
- Yes, created (or will create) a new position
- No, wanted to hire/make offer but not able at this time
- No

n=81
“Lessons Learned” - Awardees

- **More time**: delays in placing interns and in building relationships with employers.

- **Reporting from**: establish better strategies for intern/fellow reporting of activities.

- **Reporting to**: modify reporting required of awardees.

- **Better direction from SEO**: guidance on best practices for intern/fellow placements.
“Lessons Learned” – Host Employers

- **Expectations**: provide an orientation session for employers.
- **Be prepared**: have a plan for the intern/fellow scope of work and a plan for integrating them into the workplace.
- **Make a space**: provide the necessary tools for intern/fellow success.
- **Identify deliverables**: set clear goals for the intern/fellow and provide assistance in meeting those goals.
- **More outreach**: involve more employers; provide more opportunities for interaction among interns/fellows.
“Lessons Learned” – Interns/Fellows

- **Pay level**: high enough to cover living expenses.

- **Preparation**: give structured training sessions to better prepare interns/fellows; make expectations clear.

- **Expand opportunities**: include a broader range of employers, particularly with organizations where full-time employment possibilities exist.

- **More interaction**: provide opportunities for interns/fellows across the state to meet and interact.

- **Advertising and Exposure**: do a better job advertising the program and documenting the program’s success.
Final Comments

- **Host Employers:** “Positive experience for the host and the intern;” “Extends our capacity”

- **Interns/Fellows:** “Great (Fantastic, Phenomenal) experience!” “My internship experience was very beneficial to my career and work future.” “I would like to thank everyone involved in organizing and managing the SEIP program.”