LETTER FROM THE DIRECTOR:

The 2015-16 academic year started with excitement. In September, the Institute for Energy Studies (IES) team was chosen to receive the WWU 2015 Team Recognition Award, as the university’s best example of effective collaboration in pursuit of Western’s strategic goals. Founding director, Andy Bunn, accepted the award from President Bruce Shepard, with the whole team on stage, at the 2015 Opening Convocation.

Starting last fall, we welcomed a new Energy Institute faculty member, Professor Reid Dorsey-Palmateer, who has a joint appointment in Economics. IES also appointed three new affiliated faculty: Steve Hollenhorst, Dean of Huxley College, Brad Johnson, Associate Dean of the College of Science and Engineering, and Art Sherwood, David Cole Professor of Entrepreneurship and Innovation.

This was the first academic year in which energy majors, minors and a full slate of courses were active and displayed in the Western catalogue. We now have an Energy Science Minor to complement the existing Energy Policy Minor. Our first two degree programs, the BA degree in Energy Policy and Management, and the energy concentration in the electrical engineering (EE) major, are in full swing.

The EE degree is already highly competitive, as the number of majors is limited by the availability of faculty and laboratory space. These majors will benefit from the new Alpha Technologies Electrical Engineering Laboratory.

It was a thrill to see our programs and courses appear for the first time in Western’s catalogue late last spring, and we now have new courses being added every quarter. Winter quarter Prof. Charlie Barnhart taught Life Cycle and Net Energy Analysis (ENRG 366), I taught Energy Efficiency and Carbon Neutral Design (ENRG 360), and Profs. Mark Bussell and David Patrick taught Energy Science II (ENRG 370). This quarter, Prof. Phil Thompson is teaching The Business of Energy (ENRG 284) and Prof. Tom Webler is teaching Advanced Energy Policy (ENRG 459). In the next academic year, we’ll have 7-9 new courses, including an interdisciplinary capstone course, which will bring the total under the ENRG rubric to about 30.

We have consolidated the student advising for all IES programs with our own staff. Gail Cowan is now our program advisor, and I will handle academic advising. Warm thanks to Kathy Patrick, who served ably as interim program advisor, and whose council and wise advice we continue to value.

IES hosted our first Energy Symposium April 19th on the WWU campus. The 180 participants heard from speakers such as Steve Wright of Chelan County PUD, Nancy Hirsh of Northwest Energy Coalition, keynote speaker Tom Eckman of Northwest Power and Conservation Council, and several IES faculty and advisory board members, discussing “The Future of Northwest Leadership in Electric Energy.” The event also included a student poster session, chaired by Prof. Tim Kowalczyk, that highlighted student energy research and project work at WWU.

We continue to move forward with initial planning and design of a future BS degree in energy science and technology. Our outstanding Advisory Board is helping us define the skillset for graduates of such a program, as we strive to build an interdisciplinary energy curriculum that is unique in its scope and quality. We are also working on new collaborations with the College of Business and Economics, to introduce energy content into the growing programs in Business and Sustainability and Entrepreneurship and Innovation.

Looking ahead to the next academic year, we expect to have additional new courses, including capstone courses for seniors in our degree programs. With students in these programs who are now as far along as the junior year of academic standing, we are anticipating 2017 graduations.

Joel Swisher
Director, Institute for Energy Studies
2016 ENERGY SYMPOSIUM:
“THE FUTURE OF NW LEADERSHIP IN ELECTRIC ENERGY”

Energy industry professionals from across the region gathered in Bellingham this April to join Institute for Energy Studies (IES) students and faculty in examining the future of electricity in the Pacific Northwest at the Institute’s inaugural Energy Symposium. The one-day event, which filled the Wilson Library Reading Room to capacity, shed light on the rapidly evolving nature of the modern electrical utility through panel discussions, plenary speeches, a student research showcase, and networking opportunities. Students and guests were exposed to a variety of stakeholder perspectives, from utility management and economic policy to environmental stewardship and clean technology angel investment.

The symposium keynote was delivered by energy efficiency thought leader Tom Eckman of the Northwest Power and Conservation Council. In his keynote lecture, Eckman inspired participants to think creatively about the role of energy efficiency as a resource and shared both quantitative and anecdotal evidence of the successes that follow when this mantra is put into action. The evening program also included a networking session in the lobby of the Performing Arts Center alongside the IES research showcase, where thirteen student groups from WWU and the University of Washington presented posters and demonstrations illustrating their energy research projects. Contributions to the research showcase were representative of the breadth of the IES, including presentations about energy economics, science and technology, environmental policy, and design. By bringing these contributions, and the students behind them, together in one place, industry guests and students were able to connect over common interests, and students could explore opportunities for collaboration across traditional disciplinary boundaries. The IES gratefully acknowledges the Energy Symposium’s presenting sponsor, Puget Sound Energy, as well as the Phillips 66 Ferndale Refinery, for their support of the event.

Tim Kowalczyk
Faculty, Institute for Energy Studies

PUD PROFESSORSHIP RECIPIENT:
Professor Charlie Barnhart was named the second Snohomish County PUD Professor of Energy Studies at Western Washington University. Professor Barnhart will be working with Western students and Snohomish PUD technical staff to conduct a research project, “Evaluating flexible hydroelectric generation for accommodating intermittent wind power generation.”

Charlie Barnhart is an assistant professor of Energy Studies with the Institute for Energy Studies, and assistant professor of Environmental Science at Huxley College of the Environment. As a member of Western’s Institute for Energy Studies, he conducts energy systems analysis research and teaches a variety of energy courses including Energy & Society, Energy & Environment, Life Cycle & Net Energy Analysis, and Applications in Energy Production. Recently, Charlie was a postdoctoral fellow at Stanford University’s Global Climate and Energy Project. He holds a Ph.D. in planetary geophysics from the University of California, Santa Cruz (2010), a B.S. in physics and a B.S. in astronomy from the University of Washington (2004).

Charlie’s Energy teaching schedule for the 2016-17 academic year includes:

- ENRG 101: Energy & Society (F & W)
- ENRG 380: Energy and the Environment (F)
- ENRG 366: Life Cycle & Net Energy Analysis (W)
- ENRG 480: Applications in Energy Production (Sp)
I have always been motivated by public service: the opportunity to help, serve, and make a difference in my community. I recognize that so many of the issues impacting our lives today intersect in some way, requiring a working knowledge of a diversity of disciplines. Inspired early on by policy and governance, I was committed to pursuing a comprehensive education at WWU. I graduated in 2014 with a major in Politics, Philosophy, and Economics and minors in Energy Policy and Law, Diversity, and Justice. A research paper on externalities during my first economics class with Professor Dan Hagen fueled my interest in energy, leading to my enrollment in Fall 2012 as the first student in the Energy Policy Minor at the Institute for Energy Studies. During the 2013-14 academic year, serving as the Associated Students Vice President for Governmental Affairs afforded me the opportunity to represent WWU at the U.S. Department of Energy in Washington, D.C. to discuss the Institute, the Minor, and the upcoming programs and partnerships. Reflecting now, it is amazing to see how much the Institute has grown and witness its tremendous impact on students, the community, and industry.

The Energy Policy Minor continues to have immense relevance in my personal and professional life. After graduation, I moved to Washington, D.C. to work for U.S. Senator Maria Cantwell (D-WA), who is the ranking member on the U.S. Senate Committee on Energy & Natural Resources. It is an incredible experience to engage with committee staff, learn about their work firsthand, and see what I learned in class come to life at the federal level. I recently relocated back to Bellingham to work for U.S. Congresswoman Suzan DelBene (WA-01) as her Community Liaison in Whatcom and Skagit Counties. Every day I have the privilege to interface with community members and local industry in all policy arenas. It is truly motivating to see the passion and innovation our region has to offer. The energy industry is very diverse, but because of the comprehensive and balanced approach to the Energy Policy Minor, I am able to recognize how certain components fit into a broader perspective including the interconnectedness of the various stakeholders. The Energy Policy Minor was key to my academic endeavors at WWU and continues to shape my outlook on a daily basis.

Kaylee Galloway
Energy Policy Minor 2014

Women in Energy Mentoring Network: The Women in Energy Mentoring Network brings together women students with professional women in the energy field, to provide mentoring, and create a network of connections. Research has shown that people with mentors report higher salaries, more frequent promotion, higher job satisfaction, and stronger commitment to their organizations. Through monthly meetings, the WIEMN strives to develop leadership skills, encourage and retain diversity in energy studies and the energy industry, provide a network of support, encouragement, and feedback, and learn and develop professional skills. Individual mentoring relationships allow for students to be matched up with an experienced professional who shares their interests and helps them achieve their goals. For more information about joining the WIEMN, visit: https://www.facebook.com/groups/wwuwomeninenergy.
A COMMITMENT TO ENVIRONMENT AND PHILANTHROPY:

When, post-retirement, John and Marcia Harter began to divide their time between Hawaii and the Pacific Northwest, they fell in love with Bellingham. “There’s vibrancy and a sense of possibility here,” notes John. “It feels like you can really do something. It’s a likely place to drop a little seed of support.”

For both Harters, as California public school teachers and administrators with longtime environmental interests – “we met at a workshop for educators built around such issues” – the city’s environs offer plentiful outdoosy action and beauty, but Western makes it great. “Western is a jewel and is getting well-deserved recognition,” says John. “We’re happy to support a really wonderful institution – Western Washington University – and its Institute for Energy Studies, a program so full of exciting promise.”

The Harters are contributing toward that promise with a $100,000 gift that will impact several areas, including supporting the Institute’s development of a bachelor of science degree in energy science and technology. During this curricular-building process, the Institute will collaborate with sustainability and engineering think-tank Rocky Mountain Institute (RMI) as well as draw on other industry experts and professionals to create and test-drive the new degree.

Both Harters have always espoused a hands-on, project-based method to problem-solving and learning, and they recognize that model is inherent to the Institute of Energy Studies’ mission and vision, an approach that thrives on taking what people consider practical matters – technology and science and engineering – and marrying it with the creativity and innovation of entrepreneurship. “It seems to me,” says John, “that Western is at a point where it can really make a difference nationally in terms of creating – and being – a model of how you can take different parts of a university and weld them together into a meaningful program. I’ve always been a fan of interdisciplinary studies and knocking down walls; I see the Institute for Energy Studies’ programs as filling a critical need, serving the next generations’ futures as well as the planet’s future.”

Part of the Harters’ hope is to be part of a larger group of individuals, businesses and foundations that will ensure what John describes as “a promising effort to really make a difference around energy management and production. And I think for the Institute’s students, it’s a great opportunity to find a career that helps rather than hurts the planet. It’s critical for them to be trained to address our environmental and energy problems,” adds John, who draws part of his inspiration from big-name, philanthropic entrepreneurs such as Bill Gates and Warren Buffett. “Especially since they’re going to live in the future. As students and as post-graduates, they will be helping create a livable future for themselves and for their children. I like to think long-term and I just think it’s such a gift to be alive; I hate to think that I’m among the last humans to really enjoy a livable planet. Marcia and I think the most promising way that we can spend our little bit of money is to try to make an impact in how energy is produced. So this, to me, is a big deal: It’s our effort to make some difference.”

NEW COURSES FALL 2016:

ENRG 381: BIOFUELS (Greg O’Neil)
An examination of current and emerging biofuel technologies including an understanding of the processes for biomass conversion to fuel and other factors associated with commercial biofuel production. Also offered as CHEM 381.

ENRG 297B: ENERGY FROM THE EARTH (Pete Stelling)
This course covers the formation, development, extraction, limitations and technology associated with energy sources in the rocky part of Earth, particularly in the context of developing a sustainable energy mix for the future. Topics covered include a variety of fossil fuels, nuclear minerals and geothermal energy. Carbon sequestration techniques are also be discussed. Also offered as GEOL 297B.
FACULTY UPDATES:

There have been some career transitions that will affect our Energy Institute faculty roster. First, Professor Dan Hagen in Economics retired at the end of fall quarter in December. Also, Professor Mark Bussell in Chemistry will be taking a leave of absence in order to take a position at the Yale-NUS (National University of Singapore) College in Singapore, starting later this summer. Finally, Professor Tom Webler in Environmental Studies is returning to New England to take a position at Keene State College in New Hampshire. Of course, all will be missed.

In the other direction, we have hired a new faculty member Xichen Jiang, who has recently completed a PhD at the University of Illinois. Dr. Jiang will join the Electrical Engineering faculty in the fall and, among other duties, will be teaching our power engineering track courses.

STUDENT SPOTLIGHT:

Through my curriculum in the Energy concentration of EE, I was introduced to many professors and students with connections in the Institute for Energy Studies. These relationships, as well as my Energy-focused classes, granted me the opportunity to work with a group of people who are clearly passionate about the world’s energy future. This passion, combined with a rigorous understanding of the technical, economic, and political obstacles facing sustainable energy solutions, allow those involved with the Institute to provide holistic education, and create impactful programs both on campus and abroad. My experience with the students is that they have been committed and engaged, and confident about their abilities to make meaningful changes once they graduate. The professors and faculty have both the depth and breadth of experience to provide students with the tools they require to tackle the energy problems of today and the future. It has been a pleasure to work with the Institute, and I am excited to apply what I’ve learned in the Engineering field when I graduate.

Cole Rogers
Electrical Engineering/Energy

The professors and faculty have both the depth and breadth of experience to provide students with the tools they require to tackle the energy problems of today and the future.

STUDENT SPOTLIGHT:

Cole Rogers, Electrical Engineering/Energy

Electrical Engineering with an Energy Concentration

Student Spotlight: Cole Rogers
The Institute for Energy Studies at Western Washington University is a unique, multi-college collaboration. Our programs are designed to meet growing demand, from students and Washington’s clean energy economy, for interdisciplinary education related to the science, technology, policy and business aspects of human production and use of energy.

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