Minutes of the University of Wyoming Energy Resources Council August 10-11, 2006

Council members present:

Ron Harper – CEO& General Manager, Basin Electric Power Coop, (Council Chairman)
Representative Tom Lockhart (Council Vice Chairman)
Mark Davies – General Manager, Rio Tinto Energy America
Senator Bill Hawks
Paul Lang – President of Western Operations, Arch Coal Inc.
Keith Rattie – Chairman, President & CEO, Questar Corporation
Bobby Shackouls – Chairman (retired), Burlington Resources Inc.
Tom Stroock – CEO, Alpha Development Corp; former US Ambassador
Rob Wallace- Manager of Government Relations, GE Energy
Ex officio, UW President Tom Buchanan
Ex officio, RIENR Director Harold Bergman

The Council convened at approximately 8:00 a.m. on August 10, 2006, at the University of Wyoming Centennial Complex.

Welcome and Introductory Remarks

UW Vice President for Academic Affairs Myron Allen welcomed the Council members and asked the audience to introduce themselves.

President Buchanan thanked the Council members for agreeing to serve on the Council and noted that the School of Energy Resources (SER) initiative received substantial support from the Governor and the Legislature. Buchanan explained that the link between UW's strong geology and geophysics and engineering units will aid in the success of SER and that UW has a significant commitment to the state in this endeavor. Buchanan stated that SER must be connected to industry in the state and guidance from the Council is needed to steer the School in the right direction.

UW Board of Trustees President Richard Davis also welcomed council members.

Speaking on behalf of the Legislature, Senator Hawks, Cochairman of the Joint Minerals, Business and Economic Development Interim Committee, reviewed the legislative history behind the SER enabling legislation, that resulted in the appointment of the Council. Representative Lockhart, Cochairman of the Joint Minerals, Business and Economic Development Interim Committee echoed Senator Hawks' remarks and thanked Vice President Allen for all of his work on the development of the SER.

History and Concept of the School of Energy Resources

Vice President Allen commented that the SER was aligned with the mission of the University of Wyoming and provided a brief history of the development of the SER and the institutional setting at UW which included UW's mission and structure, academic organization and planning, role of the faculty, academic hiring cycles and facilities. Allen's power point is attached as Appendix A to these minutes.

The Council discussed the EOR Commission, its membership and the extent of its authority over Dr. Jim Steidtmann, Director of the Enhanced Oil Recovery Institute (EORI), who is appointed by and reports to Vice President Allen.

Overview of the Enabling Legislation & Logistics

UW Vice President for Governmental, Community and Legal Affairs Rick Miller provided an overview of the enabling legislation and briefed the Council on logistics and statutes applicable to the Council, including Wyoming open meetings laws and the public records act, as well as the appropriation for the SER. The Council meetings are to be open to the public subject to limited exceptions, and the Council may hold meetings by conference call or over the Internet.

Institutional Setting

Vice President Allen introduced Dr. Terry Roark, Interim CEO, Western Research Institute (WRI), and the Council discussed the WRI mission.

Allen provided a briefing on the UW institutional setting, including academic planning. A copy of his power point presentation is attached as Appendix B to these minutes. It was stressed that at UW, every faculty member teaches, without exception.

UW Research enterprise

UW's Vice President for Research and Economic Development, Bill Gern, provided a briefing on the University's research enterprise. A copy of his power point is attached as Appendix C to these minutes.

President Buchanan commented that he has authorized Gern to hire another Associate Vice President to address the increasing workload in the economic development area.

The Council discussed carbon sequestration generally and the possibility of working toward developing a national carbon dioxide reserve. The Council discussed the notion of considering Coal Bed Methane (CBM) water as a commodity, similar to carbon dioxide.

Council member Keith Rattie joined the meeting during the discussion on the UW research enterprise.

Ex officio Council member Harold Bergman, Director of the Ruckleshaus Institute of Environment and Natural Resources (RIENR) provided an overview of the history and mission of RIENR. He noted that RIENR intends to partner with SER extensively.

Lockhart commented that several legislators had experiences with the Ruckelshaus Institute and believed that having Director Bergman on the advisory council would lead to a stronger SER.

Allen stated that RIENR and SER will be distinct but collaborating operations at UW. UW faculty members will be involved in both schools.

Governor's remarks

Governor Dave Freudenthal and Energy and Telecommunications Policy Analyst Rob Hurless joined the Council. Governor Freudenthal expressed his appreciation to the Council members for their willingness to serve and urged them to consider the potential and future for the school. With seven council appointments to make, Governor Freudenthal indicated he appointed three members from the oil and gas industry, two from the coal industry and one that is involved with the electric generation and transmission industry as he wanted all aspects of the energy industry to be represented.

Board of Trustees President Davis emphasized that the Trustees want to listen as well as take advice and direction on how the school will come together. The School of Energy Resources is the highest priority on campus today and it is important to have the expertise that the Council brings to the School. President Buchanan wants UW to assume a larger leadership role in workforce development and addressing state needs. The Council will provide valuable direction to UW as SER is established.

Governor Freudenthal discussed his vision for the SER to raise Wyoming's level of involvement with the energy industry. He expressed his expectation that the Council would be working board that gave direction to the School, and these were not honorary appointments.

The Council discussed measuring progress and identified that SER should produce the kinds of graduates that energy companies want to recruit aggressively, and that when technological questions arise, UW should come to mind as the first resource for answers.

Governor Freudenthal asked the Council to take the ideas for the School of Energy Resources and evaluate them to see if they make sense. He reminded the Council and the University that they need not spend SER funding today if they are not comfortable. There is a sense of urgency with the SER, but there is no obligation to approve anything until the Council has had an opportunity to review the plans, express their views and provide direction. He stressed the importance of the director search the need for thoroughness. He commented that it is a great time to be the Governor of a commodity state and concluded by stating, "Let's build a better America."

President Buchanan briefly discussed SER fundraising efforts and the availability of state matching funds for a facility for SER. The Council discussed the process for hiring a director for the SER.

The Council adjourned at approximately 5:00 p.m.

Friday, August 11, 2006

Council members present

Ron Harper – CEO& General Manager, Basin Electric Power Coop, (Council Chairman)

Representative Tom Lockhart (Council Vice Chairman)

Mark Davies – General Manager, Rio Tinto Energy America

Senator Bill Hawks

Paul Lang – President of Western Operations, Arch Coal Inc.

Keith Rattie - Chairman, President & CEO, Questar Corporation

Tom Stroock – CEO, Alpha Development Corp; former US Ambassador

Council members absent

 $Bobby\ Shackouls-Chairman\ (retired),\ Burlington\ Resources\ Inc.$

Rob Wallace- Manager of Government Relations, GE Energy

The Council convened at approximately 8:00 a.m.

Election of officers

Representative Lockhart nominated Ron Harper to serve as Chairman of the Council. Senator Hawks seconded the nomination. Ambassador Stroock moved that nominations cease and the council cast a unanimous ballot. The motion passed unanimously.

Senator Hawks nominated Representative Lockhart as Vice Chairman. Rattie seconded the nomination. Stroock moved that nominations cease and the Council cast a unanimous ballot. The motion passed unanimously.

Approval of the academic plan

Senator Hawks moved that in accordance with 2007 Wyoming Session Laws, Chapter 69, Section 2, that the University of Wyoming Energy Resources Council approve the academic plan for the School of Energy Resources as contained in the University's October 1, 2005 Academic and Financial Plan prepared for the Joint Minerals, Business and Economic Development Interim Committee of the Wyoming Legislature. However, this approval is conditioned upon and subject to the Council's right, which it hereby reserves, to consider and approve modifications to the plan in the future. Lang seconded the motion.

Rattie commented that he supported the motion on the floor, but would like to cite for the record that in the plan there may not enough emphasis on unconventional gas technology. He cited not just coal bed methane resources, but also tight sands gas and shale, which

are abundant in this state, most of which are uneconomical to recover with today's technologies. The motion passed unanimously.

The Council discussed scheduling the next meeting. Allen pointed out that a report is due to the legislature on October1 and the suggested that meeting in about six weeks would accommodate that schedule. The Council agreed that the University would poll the Council to determine a suitable date for the next meeting.

Search plan for SER Director

Vice President Allen provided an overview of the search plan for the director. A copy of his power point is attached as Appendix D to these minutes.

The Council discussed the proposed nine-month time line for the director search, which is similar to that undertaken for a college dean or senior faculty member, regarding which UW has substantial experience. The Council indicated a desire to balance the objectives of being thorough and inclusive, including identifying candidates from industry, but ensuring that a thoughtful selection was made and that the person selected would be successful in the position. The Council also discussed the possibility of an interim director.

Stroock moved that the council authorize the administration of the University of Wyoming to recruit an interim director, approve the proposed timeline to recruit a full time director position, and provide that persons from academia and industry will be eligible to be in the recruitment pool. Rattie seconded the motion. After discussion, the motion passed unanimously.

Discussion of SER Director job announcement

Vice President Allen briefed the Council on a draft job announcement for the SER Director. His power point is attached as Appendix E to these minutes.

The Council discussed the draft and issues including the extent to which SER funding is stable, the relationship of the Director to the Council, whether the Director would be required to teach or whether teaching experience is a preferred qualification, and whether fundraising and development responsibilities should be referenced in the job description. Vice President Allen confirmed that he would take the Council's comments into consideration as the recruitment process moved forward.

Discussion of faculty hiring

Vice President Allen briefed the Council on the faculty hiring process and the specific positions targeted in the first year. His power point is attached as Appendix F to these minutes.

The Council discussed the faculty hiring process, including existing University strengths in energy related disciplines, a list of the current faculty chairs at the University by discipline, the need to establish a truly distinctive school, assurance that these new positions would complement and coordinate with current faculty to develop a network of resources, that the initial faculty hiring would focus more on existing UW strengths, but that subsequent hires might be in other disciplines, and that positions would be qualified to address energy issues that might take years to resolve, e.g. gas trapped in tight sands.

College of Engineering Dean Gus Plumb described three principles that guided the identification of the first four faculty positions to be filled:

- 1. Avoid hiring in a discipline where UW had no existing expertise.
- 2. Ensure that disciplines relate to energy issues that are of critical importance to Wyoming, e.g. coal research.
- 3. Identify disciplines where there is national interest to enhance the capability to compete for external funding.

Hawks noted there was an attempt in the legislature to include uranium and other resources in the legislation, but it was rejected. Uranium as such was certainly not rejected, and should be a topic that SER addresses.

President Buchanan indicated that by approving the academic plan, the Council has given UW the formal action that was needed to move forward with the hiring process for the initial faculty positions, and no further formal Council is required. UW will consider and be directed by the Council's discussion as it pursued the recruitment of the four faculty described.

Academic coordinator's plan

Dr. Andy Hansen, Professor of Mechanical Engineering, has agreed to serve as the Academic Coordinator for SER for the coming year. Hansen briefed the Council on the Academic Coordinator's plan for the coming year. His power point is attached as Appendix G to these minutes.

The Council discussed the Academic Coordinator's plan, including SER's participating in existing summer institutes, and expanding them, for K-12 students and teachers, how the curriculum is developed in University academic departments, and the Haub School of Environment and Natural Resources as a model for the interdisciplinary efforts pursued by SER.

SER Fundraising and Development Plans

UW Vice President for Institutional Advancement, and UW Foundation CEO, Ben Blalock noted that Exxon focused their television advertising for the Masters Golf Tournament on its relationship with the Stanford School of Energy. There is clearly an opportunity for SER to collaborate with corporate sponsors. He briefed the Council regarding fundraising activities, including discussions with EnCana with the involvement

and support of the Governor, the State of Wyoming's endowment and academic facilities matching programs which have been extremely successful and continue to be funded by state government, and that fundraising for SER is the University's top development priority, including a \$40 million facility to house it. There will be a meeting with the Governor in Cheyenne with energy industry corporate leaders regarding support for SER, and he asked that the Council be represented there.

Senator Hawks nominated Council member Shackouls to be the contact between the UW Foundation and the Council. Representative Lockhart seconded the motion, and the motion passed.

SER Budget

Vice President Allen briefed the Council on the SER's budget. His power point is attached as Appendix H to these minutes.

The Council discussed the SER budget including confirming that there were adequate funds to hire an interim director if necessary, the need to fund start up expenses of new hires, the expectation that UW provide a status report on the SER budget at each Council meeting, that the budget is part of the block grant but must be accounted for separately, and that funds could be carried forward to a subsequent biennial budget period.

Council member Rattie departed the meeting during the budget discussion.

Chairman Harper thanked the council for its vote of confidence in electing him Chairman. He indicated his management philosophies are communicate, communicate, communicate. He observed that the council has been charged by the governor and the legislature to help the university be successful in establishing and operating SER.

The meeting adjourned at approximately 10:30.

Respectfully submitted,

Ron Harper, Chairman