

**WYOMING BUSINESS COUNCIL  
Board of Directors Call-In Meeting  
November 6, 2012 1:30 PM**

**Tentative Agenda**

**CALL-IN Information:**

**Dial: 1-866-931-7845  
Conf. Code: 589138**

- 1:30 pm Welcome & Call To Order – Gary Negich, Board Co-Chair**
- 1:40 pm Business Development – Rex Lewis, Sub-Committee Chair**  
**ACTION ITEM** - Small Business Investment Companies (SBIC) Fee Rules  
**ACTION ITEM** - Parkway Plaza Properties Bond Restructure  
**ACTION ITEM** – Uranerz Energy Corporation Bond Request
- 2:15 pm Community Development – Lynne Michelena, Sub-Committee Chair**  
**ACTION ITEM** – Microsoft Dataplant Project, Community Readiness Grant  
Infrastructure Development - \$1,500,000
- 2:40 pm Old Business/New Business**  
CRC Letter  
Next Meeting – Dec. 5 and 6, Laramie Holiday Inn  
Dec. 5 – Joint Dinner with Workforce Development Board  
Dec. 6 – Late Start Time for Board Meeting – 10:30 am
- 3:00 pm Adjournment**

Addendum

**Correspondence**

<u>TOPIC</u>	<u>PAGE</u>
<b>University of Wyoming In-Kind Support</b>	<b>1 - 2</b>
<b>Western Research Institute</b>	<b>3 – 5</b>
<b>MOU Between the City of Cheyenne Board of Public Utilities and Microsoft Data Plant Demonstration Facility</b>	<b>6 - 23</b>

# UNIVERSITY OF WYOMING

## **Vice President for Research & Economic Development**

1000 E. University Avenue, Department 3355 • Room 305/308, Old Main • Laramie, WY 82071  
(307) 766-5353 • (307) 766-5320 • fax (307) 766-2608 • [www.uwyo.edu/research](http://www.uwyo.edu/research)

October 9, 2012

Randy Bruns, CEO  
Anja Bendel, Director of Business Development  
Cheyenne LEADS  
PO Box 1045  
Cheyenne, WY 82003-1045

Dear Mr. Bruns and Ms. Bendel:

The University of Wyoming is excited to be part of this public-private partnership for the Microsoft Dataplant Demonstration Project.

We have committed to provide in-kind service to support formulation of the Dataplant project. The project also provides excellent opportunities for UW to work with the other parties on further collaborations with other academic and research institutions, and we will work together to provide scientific, research and computing opportunities.

The benefits this Dataplant project provides to the University are multiple:

### **1. Educational Benefits**

The following programs will receive educational benefits: Computer Science, Computer Engineering, Electrical Engineering, Chemical Engineering, Mechanical Engineering, Energy Systems Engineering, Architectural Engineering, and Environmental Engineering. These programs will have the potential to participate in educational activities related to the Dataplant that could not be otherwise duplicated. The faculty who lead these programs are currently developing educational opportunities that use the Dataplant. Other programs at the University of Wyoming will also be encouraged to develop ways to use this unique facility to enhance educational opportunities for students.

### **2. Technology Development Benefits**

Several programs at the College of Engineering and Applied Science will receive research benefits from having the Dataplant available. A number of key research problems can be examined while the Dataplant is active including, but not limited to:

- Enhancing economic value from water reclamation facilities using fuel cells that are powered by produced biogas while ensuring continued protection of the environment,
- Understanding and improving fuel cell operation when integrated with dataplants, especially with respect to managing the effects of rapidly varying electricity demand (from the dataplants).
- Improving fuel cell design to more tightly integrate with dataplants.

- Developing technologies to make optimal use of waste heat produced by fuel cells.
- Investigating opportunities to enhance carbon dioxide recovery for economic use.
- Developing the dataplant concept for maximum economic, social and environmental benefit.

### **3. Potential Employment Benefits for UW students**

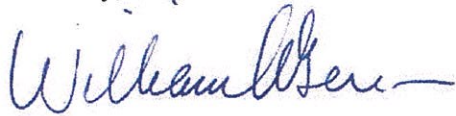
Few UW graduates are currently hired by Microsoft. This project has the potential to clearly demonstrate the capabilities of UW students. This may encourage Microsoft to recruit at the University, enhancing the opportunity for UW graduates to obtain employment with one of the world's largest technology firms.

### **4. Collaboration between UW and Cheyenne Board of Public Utilities (BOPU)**

The Dataplant will increase opportunities for BOPU and UW to collaborate to enhance the value to the public. Specifically, UW researchers can participate with BOPU staff to evaluate the operation of a biogas-fuel cell onsite to determine the full life cycle assessment (economic, environmental, operational) for keeping the fuel cell once the First Project Activities are concluded.

We look forward to the opportunities and collaborations that the Microsoft Dataplant Demonstration Project will create.

Sincerely,



William A. Gern  
Vice President  
Research & Economic Development

Mr. Gary Negich, Chair  
Wyoming Business Council  
214 W. 15<sup>th</sup> Street  
Cheyenne, WY 82002

October 12, 2012

Dear Mr. Negich,

I am writing to share my thoughts and support for the City of Cheyenne's Business Ready Community Grant known as the Microsoft DataPlant Demonstration Facility.

The proposed Microsoft DataPlant Demonstration Facility (MDDF) at the Cheyenne Dry Creek Water Reclamation Facility presents many near-term and long-term benefits for the City of Cheyenne, the University of Wyoming and the State of Wyoming that far exceed the proposal request for \$1,500,000 through the Wyoming Business Council Business Ready Community Grant and Loan Program. One immediate benefit is the donation of an information technology modular server container by the UW valued at over \$1.5 million. This provides infrastructure, computing, data storage and processing, and software application capabilities at no cost to UW. The educational and research benefits, though not quantified, provide additional immediate and recurring long-term value return to Wyoming.

Additional, near-term benefits could include lower electricity and natural gas consumption at the Dry Creek Water Reclamation Facility (DCWRF) that enables lowering electricity and gas utility expenses for the City of Cheyenne, Board of Public Utilities (BOPU). For example, assuming the minimum electricity savings at the DCWRF is 100kW per hour during the operating periods for the 18-month demonstration project. Using a conservative approach dependent upon the actual operating hours for the demonstration DataPlant, BOPU may see \$24,000 to \$36,000 in lower annual electricity bills. Natural gas bill savings are likely to be \$48,000 to \$60,000 providing BOPU with utility annual cost reduction in the range of \$72,000 to \$96,000. The total cost savings could be higher if all 300kW of fuel cell electricity are utilized by the DCWRF. In addition the anaerobic digester gas treatment system, estimated at \$860,000, will be donated to the Cheyenne DCWRF allowing the plant to continue to operate the fuel cell power plant on biogas for onsite electricity generation and thermal energy (heat).

Long-term benefits are dependent on decisions made as the 18-month demonstration project nears completion. The future use of the MDDF for new technology integration and demonstration purposes is tied to the decision that will be made. I can speak to the possibility if a "Yes" decision is made by Microsoft (MS) and the City of Cheyenne/BOPU. MS and BOPU are veto decision makers for the post-project future use activities and whether or not the fuel cell plant remains at the Cheyenne DCWRF. Four primary decision option scenarios exist for after the 18-month demonstration project as follows:

- 1 – MS and BOPU elect to retain and continue use of the fuel cell and data sever container for future new technology evaluation and demonstration purposes, including integration system



control changes for load following and perhaps direct current (DC) vs. alternating current (AC) power consumption from the fuel cell plant. This is viewed as the best case scenario.

2 – BOPU elects to have the fuel cell power plant and/or complete DataPlant demonstration facility removed at the end of the 18-month project period. This is the worst-case scenario and an outcome least expected, but is included to bookend the potential scenario options.

3 – MS elects not to pursue the longer term post-project demonstration activities and per the memorandum of understanding (MOU) BOPU elects to retain the fuel cell plant and obtain ownership rights and UW retains ownership of the ~\$1.5+ million IT modular server container. This is considered to be a second best case scenario as BOPU obtains the fuel cell power plant and the energy cost savings benefits without having paid the entire ~\$3 million capital expense to acquire the fuel cell plant.

4 – A variant on decision scenarios 1 and 3 above is that BOPU elects not to retain the fuel cell plant and MS is interested in relocating the fuel cell DataPlant with IT server container to a stranded natural gas site or other waste energy stream. This scenario includes evaluating and demonstrating the system integration and operating procedures to connect to the CO<sub>2</sub> pipeline and demonstrate and validate the integration of CO<sub>2</sub> capture and sale into the WY CO<sub>2</sub> pipeline for later Enhanced Oil Recovery (EOR) use. This will provide demonstrated proof-of- concept that CO<sub>2</sub> is a Business and Economic Enabler in Wyoming which can be promoted for all energy intensive industries to enhance business retention and recruitment. If this concept gets strong traction from Wyoming businesses, then the possibility of a fuel cell manufacturing and/or assembly plant, supporting balance of system equipment fabrication and service sector business and economic growth could be significant. This could provide a strong rationale and basis for FuelCell Energy, Inc. (FCE) to establish a significant manufacturing and service presence within WY to serve potential FCE Rocky Mountain Region market opportunities. This potential opportunity could be valued at \$20 to \$100 million for a manufacturing and assembly facility with 50 to 150 jobs over the long-term. The proposed MDDE project is the first step toward realizing this possibility.

The UW possible benefits include student education enhancement for computer hardware and software, energy systems engineering, engineering of fuel cell power technologies and system components. Also, the WY Community Colleges can use the demonstration facility for technician workforce development hands on training which can be coordinated with both MS and FCE; especially if FCE elects to establish a significant presence within Wyoming.

UW and Western Research Institute (WRI) also have research, development and demonstration (RD&D) and technology demonstration validation opportunities related to fuel cell power, CO<sub>2</sub> capture and beneficial use conversion technologies, CO<sub>2</sub> compression and pipeline connection technologies, future DataPlant architectural concepts, including DC power, and other waste energy stream preparation and utilization technologies. Possessing a demonstration facility provides strength to UW and WRI and enhances win success to competitive funding opportunities via U.S. Federal and the Wyoming Energy Conversion Technology Fund. The RD&D proposal win success value potential could range from \$500,000 to \$20,000,000 without including successful business commercialization of UW and WRI developed technologies.

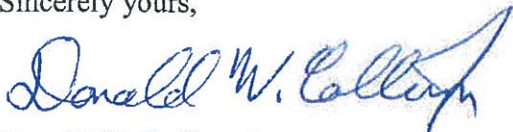
Multiple opportunities exist for public relations and business recruitment value in promoting WY as progressive in clean energy and information systems technology and advancing state-of-the-art technologies and concepts to lower data center energy consumption and environmental

footprint. Such thought and state-of-the-art leadership enhances promotion of Wyoming as a high technology and innovative business culture attractive to businesses desiring such community culture and energy to nurture their own business culture and employee performance. This has positive implications for retention and recruitment of all energy intensive industries. Through this project Wyoming in partnership with MS and FCE is leading in thought and action to facilitate companies achieving their goals and providing competitive advantages in lower operating costs while achieving responsible environmental stewardship corporate and societal goals.

For example, Wyoming offers the opportunity for energy intensive businesses to sell CO<sub>2</sub> into a pipeline network and earn a positive cash flow at \$20/ton to \$30/ton rather than incur negative cash flow associated with conventional capture and sequestration solution options to achieve corporate CO<sub>2</sub> emission reduction and sustainability goals. An initial financial analysis performed for Microsoft revealed that for a 20MW Fuel Cell DataPlant Microsoft could earn approximately \$2.25 million by selling CO<sub>2</sub> at \$25/ton into the Wyoming CO<sub>2</sub> pipeline for tertiary EOR. At a natural gas price of \$3 per MBtu, this Wyoming income opportunity from sale of CO<sub>2</sub> enables lowering Microsoft DataPlant energy operation costs by 43%  $\{\$3,909,024 \text{ natural gas annual expense} - \$2,221,557 \text{ EOR CO}_2 \text{ sale income} = \$1,696,447 \text{ net energy annual cost}\}$ . This presents a substantial competitive business advantage for all energy intensive companies that establish operations within Wyoming. Ten businesses consuming 20MW of energy each could result in \$22.2 million in annual energy cost avoidance competitive advantage within Wyoming. This Wyoming opportunity offers the potential for one hundred such businesses to achieve \$222 million in lower operating costs by operating in Wyoming. The ongoing initiative to expand the Wyoming CO<sub>2</sub> pipeline network should further enhance this Wyoming advantage by improving site selection options. In addition to lowering the cost of operating business within Wyoming, the economic benefit for Wyoming is further increased by greater availability of CO<sub>2</sub> supplies to increase oil production via EOR CO<sub>2</sub> recovery methods.

Therefore, the Microsoft DataPlant Demonstration Facility is designed to not only aid the City of Cheyenne and Laramie Albany County, but will also aid the greater long-term goals of the State of Wyoming to establish and grow a diversified high tech economic sector. I view the Microsoft DataPlant Demonstration Facility as an innovative high tech initiative that will help advance a high tech community and image for our state. This is, one of many, vital steps toward achieving the greater state goal and I highly encourage you, the Wyoming Business Council, Wyoming State Loan and Investment Board to approve the City of Cheyenne Microsoft DataPlant Demonstration Facility application.

Sincerely yours,

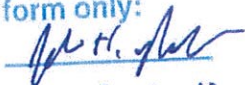


Donald W. Collins, Jr.  
Chief Executive Officer



CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATA PLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING

Approved as to  
form only:

  
Date: 9-12-12

This Memorandum of Understanding ("MOU"), dated Oct 5, 2012, by and between Microsoft Corporation (MS), located at One Microsoft Way, Redmond, Washington 98052-6399, FuelCell Energy, Inc. (FCE), located at 3 Great Pasture Road, Danbury, Connecticut 06813, and the "Wyoming Parties" (as defined below), sets forth the primary roles and responsibilities between the parties with regard to their collaboration to build and operate the Microsoft Dataplant Demonstration Facility ("Dataplant"), an integrated off-grid capable fuel cell power generation and data server demonstration facility to be located in Cheyenne, Wyoming.

**I. Background.**

A. MS is researching and evaluating ways to lower Total Ownership Cost (TOC) for online service business operations while also achieving sustainability and carbon neutral corporate strategic goals. Consistent with the MS strategic goals of supporting basic research at the frontiers of discovery, and science and engineering education at all levels, MS is pursuing the establishment of an integrated off-grid fuel cell power generation and data server demonstration capability that will enable achieving the lowest TOC with the lowest environmental emissions footprint. The establishment of this Dataplant presents an unprecedented opportunity to test and evaluate the merits of integrating molten carbonate fuel power generation plants with modular data centers containing servers. In addition, this facility combines in one place the equipment and infrastructure resources to evaluate and advance carbon neutral dataplant technologies emerging from the research and development (R&D) pipeline.

B. MS plans to build a number of dataplant facilities around the world and desires to study and evaluate the best equipment and system integration solutions available. It is important to MS that the structure and management of the Dataplant in Cheyenne be established in a manner that allows for the smooth transition to a possible longer term demonstration test and evaluation facility. Both MS and FCE will have coordinated access via the City of Cheyenne Board of Public Utilities (BOPU) to the equipment and in the facility.

C. **Public Benefit:** The parties and public will receive multiple benefits from this project. The most immediate and quantifiable benefits are to BOPU. First, BOPU will directly benefit from any excess electricity generated by the fuel cell, as that excess electricity will reduce the amount of electricity BOPU will need to purchase from outside providers. Second, BOPU will be able to reduce the flaring of excess methane that its current processes require. Lastly, BOPU will be able to use the waste heat created by the fuel cell in its internal processes, thereby also reducing its costs.

In addition, this project provides collaboration opportunities with UW and with WRI, and several other areas of collaboration have been identified by Microsoft and other project members. For example several possible projects related to dataplants have been identified that would require multidisciplinary teams consisting of combinations of: computer science students, computer engineering students, electrical engineering students, mechanical engineering students, chemical engineering students, energy system engineering students, and architectural engineering students.



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The project will also result in various intangible benefits to the state, as the parties explore other uses of natural gas, and test the implementation of "green" technology such as fuel cells as a viable use of natural resources.

**D. First Project Activities:** MS has identified a set of First Project Activities designed to achieve their objectives for supporting the Dataplant. The First Project Activities are as follows, with initial planning dates included. The project activities are anticipated to take 12-18 months:

**Pre Project: Site Construction (2 months)**

- Demonstration Facility design integration
- Site preparation
- Install infrastructure and equipment

**Phase I (1 month)**

- Connect to electrical grid
- Fuel Cell fueled via pipeline gas
- Normal start up and testing {*March 2013 desired 1<sup>st</sup> Power Date\**}

**Phase II (6 months; 7 months total = October 2013)**

- Deeper testing
- More failure modes
- Dynamic variation of load

**Phase III (3 months, 10 months total = January-February 2014)**

- Integrate biogas clean-up infrastructure
- Convert to biogas (*Complete by October 2013*)
- Repeat Phase I and II testing

**Phase IV (3 months, 13 months total = April 2014)**

- Island off-grid operation mode
- Repeat Phase I – III testing

**E.** In order to leverage existing and future resources, a number of entities have come together in the State of Wyoming to provide various resources to make the construction of the Demonstration Facility possible. These "Wyoming Parties" are:

1. Cheyenne LEADS, 121 West 15th Street, Cheyenne, WY 82001
2. The City of Cheyenne Board of Public Utilities (BOPU), 2416 Snyder Avenue, Cheyenne, WY 82001
3. Western Research Institute (WRI), 365 North 9<sup>th</sup> St, Laramie, WY 82072
4. University of Wyoming (UW), 1000 E. University Ave. Laramie, WY 82071
5. The State of Wyoming through the Wyoming Business Council (WBC), 214 West 15<sup>th</sup> Street, Cheyenne, WY 82002
6. Cheyenne Light, Fuel & Power Company (CLFP), 108 West 18<sup>th</sup> Street, Cheyenne, WY 82001

**F.** Overall, the Wyoming Parties have committed to contribute personnel time, land and equipment/facilities to support a grant application to the WBC for infrastructure funds that assist in the construction of the Dataplant in Cheyenne. The Dataplant infrastructure

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equipment and construction expenses funded via a WBC grant agreement and both MS and FCE contributions contemplated in this MOU will be owned by in part by BOPU, as described in paragraphs II.I.2 and II.I.3. BOPU will have the option to receive full ownership after completion of First Project Activities. Cheyenne LEADS, as the grant administrator, shall provide management of WBC grant contracts and overall project management with support from WRI, BOPU and the City of Cheyenne throughout the First Project Activities for the Dataplant.

G. MS, FCE and the Wyoming Parties wish to set forth an understanding of each party's roles and responsibilities through this MOU. The parties acknowledge that this MOU contains no contractual or other legally binding obligations; the parties further acknowledge that there are many contingencies and conditions precedent (such as City of Cheyenne approval and WBC grant award) associated with these initial steps and responsibilities; and, the parties further acknowledge that additional agreements will need to be executed as the project advances forward.

**II. Roles and Responsibilities.**

Because of the numerous parties and diverse areas that will need to be addressed in order to move forward with the Dataplant in Cheyenne, the following outline provides a framework to identify the roles and responsibilities of the parties.

**A. Cheyenne LEADS**

1. Project and Contract Management.
2. Infrastructure Grant and Coordination. Cheyenne LEADS agrees to work with BOPU, MS, FCE, CLFP, WRI, UW, fiber providers and the Wyoming Business Council to develop the requisite infrastructure assets to the site. Where appropriate, Cheyenne LEADS agrees to apply for or assist BOPU, MS and FCE in applying for all permits necessary for site infrastructure, development and construction. It is the intention of the Parties that any additional infrastructure development to bring the site to fully development-ready status will be funded through Business Ready Communities Grants by the WBC.

**B. City of Cheyenne Board of Public Utilities (BOPU)**

1. BOPU will not be responsible for any funding or related costs associated with the Dataplant. The parties agree that if the Wyoming Business Council awards the Business Ready Community grant to the Microsoft Dataplant Demonstration Facility, the BOPU will be provided funding through the grant for the payment of an independent engineer to review, analyze, and comment on any and all plans, contracts, specifications, and other documents submitted by the parties relating to the Dataplant.
2. Real Property. BOPU agrees to allow use of property (land) and connection to the Dry Creek Water Reclamation Facility biogas, natural gas, electrical, communications, and water and sewer infrastructure system assets.

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3. Biogas. BOPU agrees to supply digester biogas to the FCE fuel cell power plant and to obtain a new biogas composition analysis to aid FCE design of the biogas cleanup infrastructure tailored to the BOPU digester.
4. Electrical Interconnection. BOPU agrees to work with MS, FCE and CLFP to affect installation of approved electrical interconnection equipment. BOPU agrees to work with MS and FCE to provide electrical connections and necessary communications and control connections.
5. Digester Heat Transfer. BOPU agrees to work with FCE on design and installation of heat transfer infrastructure to supply high-grade exhaust heat to support BOPU digester operation and lower natural gas consumption expense.
6. Electricity Transfer. BOPU agrees to work with CLFP on design and installation of electricity transfer infrastructure to lower electricity consumption expense.
7. Operating Control Center. BOPU agrees to work with and provide necessary communications and data to enable effective operator monitoring, control coordination and emergency actions, and the other parties will reciprocate. This information exchange is designed to ensure that BOPU has access to all necessary information, on a timely basis, that is required to manage the Dry Creek Water Reclamation Facility. This information will also help BOPU understand 1) whether the fuel cell is operating properly, 2) what fuel source is being used, 3) whether the fuel cell is delivering the anticipated heat energy to the digester, 4) how much electricity is being delivered to the Dry Creek facility, and 5) whether there are any issues potential or real safety and/or environmental concerns.
8. Testing. BOPU agrees to work with MS and FCE and coordinate with WRI to design and implement test plans and follow up reporting. This ensures that the Dry Creek Water Reclamation Facility operators are included in discussions regarding changes in the demonstration operations and are part of the decision making process regarding any changes that may be considered as the project progresses. It is the responsibility of all parties to communicate with BOPU and not to make any changes that affect BOPU or its operations without first discussing and obtaining BOPU approval.
9. Safety. BOPU agrees to coordinate MS and FCE integration and compliance with all BOPU Facility security and safety policies, procedures and instructions. BOPU agrees to provide necessary information and documentation to MS and FCE related to the security and safety aspects of the BOPU Facility, and its security and safety policies, procedures, and instructions. BOPU further agrees to provide necessary information and documentation relating to personnel and emergency responder training, including Material Safety Data Sheets.
10. Intellectual Collaborations. BOPU agrees to work with MS, FCE, WRI, CLFP and UW to jointly pursue and develop mutually beneficial opportunities for intellectual collaboration and exchange, including joint appointments, scientific and/or faculty visitor positions, and other mechanisms designed to effectively support and develop such collaborations.



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11. Other Technology Demonstration and Academic Collaborations. BOPU agrees to work with Cheyenne LEADS, MS, FCE, CLFP, WRI, and UW on further collaborations with other academic and research institutions, to provide scientific, research and computing opportunities.
12. Project Status Reporting. BOPU agrees to provide publically releasable information and demonstration results to Cheyenne LEADS, MS, FCE and WBC for internal and grant reporting purposes.
13. Reclamation. If, at any time during the First Project Activities, any party discontinue participation in the Dataplant project, BOPU agrees to cooperate with MS and FCE regarding the removal of the fuel cell and associated infrastructure within a reasonable time agreed upon by the parties, and costs for returning property owned by BOPU to its original or an otherwise agreed upon state will not be borne by BOPU.
14. Water and Sewer. BOPU agrees to work with MS and FCE to ensure that proper water and sewer connections are provided to the project.

**C. Microsoft Corporation (MS)**

1. Funding. Preliminarily, MS estimates it will fund project expenses less the reductions in expenses: \$1,500,000 in grant funds, any applicable federal, state and local tax or renewable energy credits or incentives, the cost sharing arrangement between MS and FCE on the purchase price of the fuel cell.
2. Real Property. MS agrees to use of property (land) and connections to the Dry Creek Water Reclamation Facility biogas, natural gas, electrical, communications, water and sewer infrastructure system assets per BOPU requirements and instructions.
3. Electrical Interconnection. MS agrees to work with BOPU, FCE and CLFP to affect installation of approved electrical interconnection equipment. All appropriate and approved disconnection equipment and capabilities shall be provided by BOPU. MS agrees to work with FCE to provide electrical connections and necessary communications and control connections.
4. Operating Control Center. MS agrees to work with BOPU and other parties and provide necessary communications and data to enable effective operator monitoring, control coordination and emergency actions, and the other parties will reciprocate. This information exchange is designed to ensure that BOPU has access to all necessary information, on a timely basis, that is required to manage the Dry Creek Water Reclamation Facility. This information will also help BOPU understand 1) whether the fuel cell is operating properly, 2) what fuel source is being used, 3) whether the fuel cell is delivering the anticipated heat energy to the digester, 4) how much electricity is being delivered to the Dry Creek facility, and 5) whether there are any issues potential or real safety and/or environmental concerns.
5. Testing. MS agrees to work with FCE and coordinate with BOPU and WRI to design and implement test plans and follow up reporting. This ensures that the Dry Creek Water Reclamation Facility operators are included in discussions regarding changes in the demonstration operations and are part of the decision making process regarding any changes that may be considered as

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the project progresses. It is the responsibility of all parties to communicate with BOPU and not to make any changes affecting BOPU or its operations without first discussing and obtaining BOPU approval.

6. **Safety.** MS agrees to abide by all BOPU Facility security and safety policies, procedures and instructions. MS agrees to provide necessary information and documentation to BOPU to incorporate security and safety aspects of the MS provided equipment into BOPU Facility security and safety policies, procedures, instructions and for personnel and emergency responder training and documentation requirements, including Material Safety Data Sheets.
7. **Intellectual Collaborations.** Except with regard to co-development or joint ownership of intellectual property, MS agrees to work with Cheyenne LEADS, BOPU, FCE, CLFP, WRI, and UW to jointly pursue and develop mutually beneficial opportunities for intellectual collaboration and exchange, including joint appointments, scientific and/or faculty visitor positions, and other mechanisms designed to effectively support and develop such collaborations.
8. **Other Technology Demonstration and Academic Collaborations.** Except with regard to co-development or joint ownership of intellectual property, MS agrees to work with Cheyenne LEADS, BOPU, FCE, WRI, UW and CLFP on further collaborations with other academic and research institutions, to provide scientific, research and computing opportunities.
9. **Project Status Reporting.** Except to the extent it would be disclosing trade secrets or other confidential information, MS agrees to provide publicly releasable information and demonstration results to Cheyenne LEADS, BOPU, FCE and WBC for internal and grant reporting purposes.
10. **Reclamation.** If, at any time during the First Project Activities, any party discontinues participation in the Dataplant project, MS agrees to cooperate with BOPU and FCE regarding the removal of the fuel cell and associated infrastructure within a reasonable time agreed upon by the parties, and costs for returning property owned by BOPU to its original or an otherwise agreed upon condition will not be borne by BOPU.

**D. FuelCell Energy, Inc. (FCE)**

1. **Funding.** FCE agrees to work and negotiate with MS on fuel cell initial and operating service and repair costs, and costs associated with interfacing to the BOPU Dry Creek Water Reclamation Facility to provide biogas cleanup infrastructure and heat transfer infrastructure to supply heat to the digester.
2. **Real Property.** FCE agrees to use of property (land) and connections to the Dry Creek Water Reclamation Facility biogas, natural, electrical and water infrastructure system assets per BOPU requirements and instructions.
3. **Electrical Interconnection.** FCE agrees to work with BOPU and CLFP to affect installation of approved electrical interconnection equipment. All appropriate and approved disconnection equipment and capabilities shall be provided by FCE. FCE agrees to work with MS to provide electrical connections with load follow capability to service the MS data servers.

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4. Operating Control Center. FCE agrees to work with BOPU and other parties and provide necessary communications and data to enable effective operator monitoring, control coordination and emergency actions, and the other parties will reciprocate. This information exchange is designed to ensure that BOPU has access to all necessary information, on a timely basis, that is required to manage the Dry Creek Water Reclamation Facility. This information will also help BOPU understand 1) whether the fuel cell is operating properly, 2) what fuel source is being used, 3) whether the fuel cell is delivering the anticipated heat energy to the digester, 4) how much electricity is being delivered to the Dry Creek facility, and 5) whether there are any issues potential or real safety and/or environmental concerns.
5. Testing. FCE agrees to work with MS and coordinate with BOPU and WRI to design and implement test plans and follow up reporting. This ensures that the Dry Creek Water Reclamation Facility operators are included in discussions regarding changes in the demonstration operations and are part of the decision making process regarding any changes that may be considered as the project progresses. It is the responsibility of all parties to communicate with BOPU and not to make any changes that affect BOPU and its operations without first discussing and obtaining BOPU approval.
6. Safety. FCE agrees to abide by all BOPU Facility security and safety policies, procedures and instructions. FCE agrees to provide necessary information and documentation to BOPU to incorporate security and safety aspects of the FCE provided equipment into BOPU Facility security and safety policies, procedures, instructions and for personnel and emergency responder training and documentation requirements, including Material Safety Data Sheets.
7. Intellectual Collaborations. FCE agrees to work with Cheyenne LEADS, BOPU, MS, CLFP, WRI, and UW to jointly pursue and develop mutually beneficial opportunities for intellectual collaboration and exchange, including joint appointments, scientific and/or faculty visitor positions, and other mechanisms designed to effectively support and develop such collaborations.
8. Other Technology Demonstration and Academic Collaborations. FCE agrees to work with Cheyenne LEADS, BOPU, MS, CLFP, WRI, and UW and on further collaborations with other academic and research institutions, to provide scientific, research and computing opportunities.
9. Project Status Reporting. FCE agrees to provide publically releasable information and demonstration results to Cheyenne LEADS, MS, BOPU and WBC for internal and grant reporting purposes.
10. Reclamation. If, at any time during the First Project Activities, any party discontinues participation in the Dataplant project, FCE agrees to cooperate with BOPU and MS regarding the removal of the fuel cell and associated infrastructure within a reasonable time agreed upon by the parties, and any costs for returning property owned by BOPU to its original or an otherwise agreed upon state will not be borne by BOPU.

**E. Western Research Institute (WRI)**



**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

1. Funding. WRI agrees to provide in-kind service to support formulation of the Dataplant project and submission of a grant to WBC.
2. Project Coordination. WRI agrees to support Cheyenne LEADS in project management and technical matter coordination.
3. Intellectual Collaborations. WRI agrees to work with Cheyenne LEADS, BOPU, MS, FCE, CLFP and UW to jointly pursue and develop mutually beneficial opportunities for intellectual collaboration and exchange, including joint appointments, scientific and/or faculty visitor positions, and other mechanisms designed to effectively support and develop such collaborations.
4. Other Technology Demonstration and Academic Collaborations. WRI agrees to work with Cheyenne LEADS, BOPU, MS, FCE, CLFP, and UW on further collaborations with other academic and research institutions, to provide scientific, research and computing opportunities.
5. Project Status Reporting. WRI agrees to provide publically releasable information and demonstration results to Cheyenne LEADS, MS, BOPU and WBC for internal and grant reporting purposes.

**F. University of Wyoming (UW)**

1. Funding. UW agrees to provide in-kind service to support formulation of the Dataplant project and submission of a grant to WBC
2. Intellectual Collaborations. UW agrees to work with BOPU, MS, FCE, CLFP, and WRI to jointly pursue and develop mutually beneficial opportunities for intellectual collaboration and exchange, including joint appointments, scientific and/or faculty visitor positions, and other mechanisms designed to effectively support and develop such collaborations.
3. Other Technology Demonstration and Academic Collaborations. UW agrees to work with BOPU, MS, FCE, CLFP, and WRI and on further collaborations with other academic and research institutions, to provide scientific, research and computing opportunities.
4. Project Status Reporting. UW agrees to provide publically releasable information and demonstration results to Cheyenne LEADS, MS, BOPU and WBC for internal and grant reporting purposes.

**G. Wyoming Business Council (WBC)**

1. Funding. Except as otherwise provided in paragraph III.E, the Wyoming Business Council agrees to consider an infrastructure grant application to support construction of the Dataplant.
2. Site Specific Investment. The Wyoming Business Council agrees to work with the appropriate City, County, or Joint Powers Boards to support an application under the Business Committed Projects grant program for up to \$1.5 million in funds for eligible site infrastructure needs, including funds for site work, permanent infrastructure equipment, roadways, sewer, gas, electrical and water connections, and fiber optic connectivity design and installation (not material).

**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

**H. Cheyenne Light, Fuel & Power Company (CLFP)**

1. Electric Service. CLFP will continue to provide primary voltage electric service and primary voltage metering for permanent BOPU Dry Creek Water Reclamation facilities. For the projected First Project Activities, BOPU will provide electrical service up to a maximum electrical load of 200 kilowatts. CLFP currently provides a primary service to BOPU pursuant to the laws, rules and regulations of the State of Wyoming and Public Service Commission.
2. Electrical Metering. CLFP agrees to provide dual register meter equipment for the Dataplant fuel cell electrical connection to the BOPU electrical system.
3. Natural Gas Service. CLFP agrees to work with BOPU, coordinate, or install natural gas connection and metering (if required) for the Dataplant fuel cell power plant. It is understood that this natural gas connection will be replaced with biogas during Phase III of the project.
4. Project Status Reporting. CLFP agrees to provide publically releasable information and demonstration results to Cheyenne LEADS, MS, BOPU and WBC for internal and grant reporting purposes.

**I. Successor Management and Ownership**

1. Successor Management of the Microsoft Dataplant Demonstration Facility. Should MS discontinue interest in the Dataplant after the first project activities are completed, then BOPU shall have first right of refusal to retain all equipment. If MS and/or FCE elect to continue to support the Dataplant for future technology integration test, evaluation and demonstrations, then MS and/or FCE and the Wyoming Parties agree to negotiate in good faith to establish an agreement for the future use and operation of the Dataplant. If BOPU does not wish to continue to use the Dataplant, then FCE shall determine the ownership of the fuel cell and its components. If no agreement to continue operation of the equipment is reached, the FCE stack module shall be returned to FCE for protection of intellectual property and proper recycling.
2. Ownership. During construction and operation of the First Project Activities, BOPU will hold title to the land and all fixed and immoveable equipment ("infrastructure equipment") at the facility and MS will hold title to all non-infrastructure equipment. If MS elects not to use the Dataplant after completion of the First Project Activities, then MS may negotiate with BOPU to dispose of the non-infrastructure equipment in place on the BOPU property and assign all ownership rights and title to BOPU. If such an election is not made by MS, then MS shall be responsible for removal all non-infrastructure equipment and restoration all interface/connections with the BOPU Dry Creek Water Reclamation Facility to conditions equivalent to pre-existing conditions or otherwise reasonably satisfactory to BOPU. If MS and/or FCE elect to pursue continued use of the Dataplant, then ownership shall not change and all parties agree to negotiate in good faith to establish an agreement for continued operation of the Dataplant after the First Project Activities.

**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

3. Ownership Transfer. Should MS discontinue funding to support the operation of the Dataplant after completion of the First Project Activities then MS and BOPU shall take the following actions:
  - a. BOPU shall take ownership of the Dataplant as specified in a purchase/transfer agreement between BOPU and MS.
  - b. In the event MS continues to fund the operation of the Dataplant past the first project, MS and BOPU shall enter into an agreement specifying the terms under which MS will continue to use the facility under BOPU ownership.
  - c. Upon satisfaction of the conditions, MS and BOPU will execute all necessary documents to affect the transfer of title to all Dataplant equipment to BOPU. Upon transfer of title, MS will be relieved of any further financial obligations associated with the construction or operation of the Dataplant, except as otherwise specified in the agreement between MS and BOPU.

**J. Design of the Microsoft Dataplant Demonstration Facility**

1. BOPU, MS, FCE, CLFP, WRI and UW shall work to finalize the Dataplant design and operational procedures, including key decision making procedures and personnel.
2. The design shall include the specifications of equipment required and the modifications to the existing Dry Creek WRF processes necessary to safely meter, monitor, control and utilize the waste heat provided by the fuel cell to heat the primary sludge digester. Provisions must be made to quickly convert back to the existing heat exchangers when fuel cell waste heat is not available. The design shall also include the specifications of equipment required and the modifications to the existing Dry Creek WRF electrical grid and power transfer devices necessary to safely meter, monitor, control and utilize excess power generated by the fuel cell to augment/reduce existing commercial and facility power requirements. Provisions must be made to ensure the excess fuel cell power does not feed back into the commercial power grid when the Dry Creek WRF is operating on facility power. Provisions must also be made to ensure excess power from the fuel cell is matched properly (phasing and voltage) with commercial and facility power

**K. Partnership Governance Board**

1. Partnership Governance Board. A Partnership Governance Board (PGB) will be established to provide overall management review and guidance for the Dataplant construction and operation and for affiliated intellectual collaborations between BOPU, MS, FCE, CLFP, WRI, and UW. The responsibilities of the PGB summarized as follows:
  - a. Monitoring the process of the Dataplant development and operation;



**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

- b. Reviewing and approving, along with MS, the Project Execution Plan for the Dataplant construction;
  - c. Reviewing and recommending whether additional entities should be admitted as a Dataplant partner; and
  - d. Reviewing and approving plans for specific intellectual collaborations between BOPU, MS, FCE, CLFP, WRI, and UW (e.g., proposed joint appointments, joint research initiatives, etc.).
2. PGB Composition. The PGB is comprised of representatives of Cheyenne LEADS, BOPU, MS, FCE, CLFP, WRI and UW, with equal representation from each entity. Members include appointed members from BOPU, MS, FCE, WRI, UW, WBC and CLFP. The PGB will provide reports to the BOPU Board of Directors. Established at the initiation of the Dataplant -Wyoming partnership, the PGB will persist throughout design, construction and operation of the Dataplant. In order to fulfill its obligations, the PGB will meet semi-annually beginning in September 2012, or more often as needed thereafter. These meetings may be face-to-face or teleconference/web-conference formats.
3. Oversight Committee. To assist in the oversight of the design and construction of the Dataplant, the PGB will form a Dataplant Oversight Committee ("Committee"). The charge of the Committee is to provide independent oversight, guidance, and input during the planning, development and construction phases of the Dataplant project. The Committee, in doing its work, will draw on expertise in the areas of construction, sustainable design, large project management, business opportunity development in the clean energy technology sector, and high performance computing operations. The Committee will consider all aspects of the project and from time to time may focus on specific details as identified by its members:: Cheyenne LEADS, BOPU, MS, FCE, CLFP, WRI, UW and/or WBC.

**III. Miscellaneous.**

A. This MOU is a preliminary understanding of the roles and responsibilities of the parties. This MOU contains no contractually binding obligations. The parties anticipate further agreements to be negotiated between the individual parties on the specific issues outlined above, including, but not limited to, access agreements, construction agreements, and operations agreements. The parties acknowledge that such agreements will include, at a minimum, insurance requirements and indemnity requirements which must be agreed to prior to the beginning of any construction work. This MOU does not involve the exchange of funds and may be terminated at any time by notice of one party to any of the other parties.

B. Contracts that involve the State of Wyoming shall be reviewed and approved by the Governor and the Attorney General for Wyoming. Contracts involving BOPU are

**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

subject to review and approval by the Board of Public Utilities, the City of Cheyenne City Council, and the City Attorney's Office for the City of Cheyenne.

C. The parties will hold each other's identified propriety or confidential information in trust and confidence and protect such information from unauthorized use or disclosure. The parties will not disclose, publish, divulge or release such information or knowledge, except as necessary to do so in the performance of the responsibilities described in this MOU. The parties will not engage in any personal or professional activity, or enter into any financial transaction, that involves, or appears to involve, the direct or indirect use of proprietary or confidential information to further a private or competitive business gain. Notwithstanding anything herein to the contrary, the parties understand and agree that all understandings, agreements, documents, and other information exchanged hereunder are subject to the duties and obligations set forth in the Wyoming's Public Records Act, Wyo. Stat. §16-4-201 et seq. Notwithstanding anything herein to the contrary, the parties agree that they will make no claim against the State of Wyoming, the Wyoming Business Council, the City of Cheyenne, or BOPU if the State of Wyoming, the Wyoming Business Council, the City of Cheyenne or BOPU makes available to the public any understanding, agreement, document, or information it receives from any other party.

D. Nothing in this MOU should be interpreted as a legal partnership or joint venture.

E. Notwithstanding anything herein to the contrary, the State of Wyoming, the University of Wyoming, the Wyoming Business Council, the City of Cheyenne, and BOPU reserve all immunities, defenses, rights or actions arising out of or under the Eleventh Amendment to the U.S. Constitution and Wyo. Stat. § 1-39-104(a) and no waiver of any such immunities, defenses, rights or actions shall be implied or otherwise deemed to exist by reason of the entry into this MOU, or any agreement related hereto, by any express or implied provision hereof, or by any act or omissions to act by any representative of the State of Wyoming, the City of Cheyenne, or BOPU, whether taken pursuant to this MOU or prior to execution hereof.

**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATA PLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

Understood and Agreed to By:

Microsoft Corporation

  
\_\_\_\_\_  
Gregg McKnight  
General Manager – MSC

FuelCell Energy, Inc.

\_\_\_\_\_  
Tony Leo  
Vice President

Western Research Institute

\_\_\_\_\_  
Donald Collins  
Chief Executive Officer

The Wyoming Business Council

\_\_\_\_\_  
Robert Jensen  
Chief Executive Officer

The University of Wyoming

\_\_\_\_\_  
Mark Collins  
Vice President for Administration

**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATA PLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**


Understood and Agreed to By:

Microsoft Corporation

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Gregg McKnight  
General Manager – MSC

FuelCell Energy, Inc.

---

Tony Lee Ross M. Levine, Esq.  
Vice President – Legal Affairs

Western Research Institute

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Donald Collins  
Chief Executive Officer

The Wyoming Business Council

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Robert Jensen  
Chief Executive Officer

The University of Wyoming

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Mark Collins  
Vice President for Administration

**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
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\_\_\_\_\_  
Gregg McKnight  
General Manager – MSC

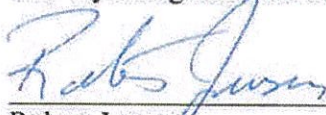
FuelCell Energy, Inc.

\_\_\_\_\_  
Tony Leo  
Vice President

Western Research Institute

  
\_\_\_\_\_  
Donald Collins  
Chief Executive Officer

The Wyoming Business Council

  
\_\_\_\_\_  
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The University of Wyoming

\_\_\_\_\_  
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**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

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Microsoft Corporation

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Gregg McKnight  
General Manager – MSC

FuelCell Energy, Inc.

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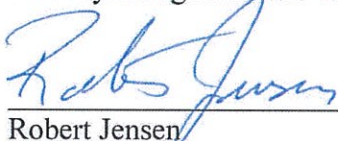
Tony Leo  
Vice President

Western Research Institute

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Donald Collins  
Chief Executive Officer

The Wyoming Business Council



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Robert Jensen  
Chief Executive Officer

The University of Wyoming

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Mark Collins  
Vice President for Administration

**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

Understood and Agreed to By:

Microsoft Corporation

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Gregg McKnight  
General Manager – MSC

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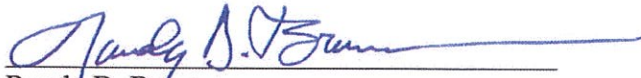
The University of Wyoming

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Mark Collins  
Vice President for Administration

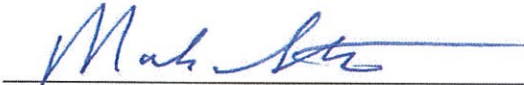
**CITY OF CHEYENNE BOARD OF PUBLIC UTILITIES  
MICROSOFT DATAPLANT DEMONSTRATION FACILITY  
MEMORANDUM OF UNDERSTANDING**

Cheyenne LEADS



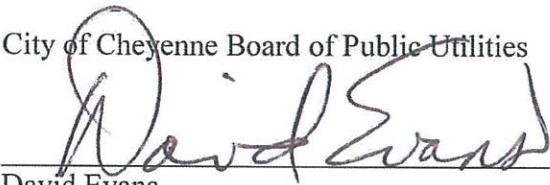
Randy D. Brans  
Chief Executive Officer

Cheyenne Light, Fuel & Power Company



~~David R. Emery~~ **Mark Stege**  
~~Chairman and CEO~~ **Vice President Operations**

City of Cheyenne Board of Public Utilities



David Evans  
Board President



Wyoming Business Council  
Business Ready Community Grant and Loan Program  
Report and Recommendations to the  
Wyoming Business Council

November 6, 2012

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BRC Project Ranking Criteria and Evaluation Chart	11
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## BRC Program Financial Summary

BRC Appropriation Summary	
BFY 2003/2004 Appropriation	\$ 8,400,000
BFY 2005/2006 Appropriation	\$ 25,000,000
Governor's Supplemental Budget	\$ 11,600,000
BFY 2007/2008 Appropriation	\$ 46,000,000
Supplemental Budget, March 2007	\$ 33,250,000
Unobligated Unencumbered Data Center Funds (reverted back to the budget reserve account)	\$ (5,000,000)
BFY 2009/2010 Appropriation*	\$ 79,250,000
FY2010 Budget Cut	\$ (4,000,000)
BFY 2011/2012 Appropriation	\$ 50,000,000
BFY 2013/2014 Appropriation (beginning July 1, 2012)	\$ 50,000,000
<b>Total Appropriations to Date</b>	<b>\$ 294,500,000</b>
*The 2009-2010 Supplemental Budget allowed the WBC to transfer up to \$10M from the BRC budget to the Community Facilities Program (CFP)	

Award Summary					
	Award	Disbursements	Deobligations	Outstanding Balance	Adjusted Award
Subtotal	\$240,924,233	\$172,462,275	\$22,889,582	\$45,572,376	\$ 218,034,651

Available BRC Funds Summary	
<b>BRC Funds</b>	<b>\$ 76,465,349</b>
Funds expended from CFP Program Authorization (2009/10)	\$(7,118,845)
Wyoming Telecommunications Broadband Initiative (2006)	\$ (250,000)
Loan Repayments	\$ 475,122
<b>Total of Available BRC funds</b>	<b>\$ 69,571,626</b>



## BRC Application and Program Summary

Currently there is \$69,571,626 available in Business Ready Community (BRC) funds. The application requests total is \$1,500,000.

BRC APPLICANT SUMMARY				
Applicant	Project	Grant/Loan Type	Requested	Staff Recommendation
Cheyenne	Microsoft DataPlant Demonstration Facility	Community Readiness	\$1,500,000	\$ 1,500,000
<b>Totals</b>			<b>\$1,500,000</b>	<b>\$1,500,000</b>
<b>Total Available BRC funds</b>				<b>\$ 69,571,626</b>
<b>BRC Funds Remaining if Recommendations are awarded</b>				<b>\$68,071,626</b>

Other contingencies for projects are spelled out in the project descriptions.

### BRC Allocation Plan for FY2011

The WBC board adopted the following allocation plan at its May 24, 2012 board meeting. The following financial allocation plan for the BRC program should be used to guide recommendations over the biennium beginning July 1, 2012 and ending June 30, 2014 (“BFY11/12”). Below displays how the current recommendation will affect the annual BRC allocation plan.

BRC Annual Allocation Plan for FY2012 (updated 10/19/2012)						
Priority	Type	Allocated Amounts	Total Funds Available	Frequency of Applications to be reviewed by the WBC	Staff Recommendations	Total Funds Available for FY2012
	Governor's Large Infrastructure Grants	\$7,500,000.00	\$7,500,000.00	Sept 2012, Dec 2012, March 2013, June 2013		\$7,500,000.00
High	Business Committed	\$6,000,000	\$6,000,000	Sept 2012, Dec 2012, March 2013, June 2013		\$6,000,000
High	Data Centers	\$3,500,000	\$3,500,000	Sept 2012, Dec 2012, March 2013, June 2013		\$3,500,000
High	Readiness Infrastructure	\$3,000,000	\$3,000,000	Dec 2012, June 2013	\$1,500,000	\$1,500,000
Medium	Main Street / Downtown	\$2,250,000	\$2,250,000	Dec 2012		\$2,250,000
Low	BRC Planning	\$500,000	\$500,000	Dec 2012, June 2013		\$500,000
Low	Child Care / Senior Care	\$1,250,000	\$1,250,000	June 2013		\$1,250,000
Low	Recreation/Enhancements	\$1,000,000	\$1,000,000	June 2013		\$1,000,000
<b>Totals</b>		<b>\$25,000,000</b>	<b>\$25,000,000</b>		<b>\$1,500,000</b>	

The allocation plan is a guide. The WBC board can make recommendations as they determine the funding meets the vision and goals of the Wyoming Business Council within the funding that is available to the program.



## Cheyenne

### **\$1,500,000 Community Readiness Grant Project for Infrastructure Development for the Microsoft Dataplant Demonstration Project**

**Staff Recommendation:  
Fund as Requested**

#### **Project Description**

The city of Cheyenne requests a \$1,500,000 Community Readiness grant for required infrastructure to install a fuel cell and modular information technology container (IT PAC) for the Microsoft Dataplant Demonstration Facility located on the city of Cheyenne's Board of Public Utilities (BOPU) Dry Creek Water Reclamation Facility. Microsoft has developed a dataplant concept, encompassing the ITPAC and fuel cell. This concept is an electrical utility independent data center which integrates modular, self-contained servers in an IT PAC that will serve as a data center simulator with a standalone device for delivering electrical power. A fuel cell device converts energy from fuel into electricity through a chemical reaction with oxygen or another oxidizing agent.

The wastewater reclamation facility, located on the eastern side of Cheyenne, houses one of three anaerobic biodigesters in the state. Anaerobic digestion is where microorganisms break down biodegradable material in the absence of oxygen. Grant funds will specifically pay for anaerobic digester, gas fuel treatment infrastructure, fiber optic installation, and related project costs such as gas treatment piping, heat exchangers, and metering and transfer switch cabinets. All grant funded infrastructure will be owned by the BOPU. BOPU will lease the grant funded infrastructure to Microsoft at a nominal rate. After this infrastructure is in place, Microsoft will install the necessary equipment for the dataplant, primarily the fuel cell and IT PAC.

#### **Purpose of the Project**

The purpose of this Community Readiness grant project is to use the biogas/methane produced by the biodigester to generate electricity to run a modular IT PAC. Microsoft predicts that this project will prove that biogas from an anaerobic digester process is a suitable and sustainable source of fuel for a fuel cell. Microsoft will be evaluating the fuel cell's ability to supply electricity under non-constant load conditions that typically occur in data centers. Briefly, the fuel cell to be used in this project will consume methane and produce carbon dioxide, steam, and heat as by-products. It is the intent that the end result of the project will be the utilization of the biogas to power the data server. This project will allow Microsoft to test the integration of a fuel cell with a modular IT PAC powered from available biogas methane created from the treatment process at the Dry Creek facility.

The Microsoft Dataplant Demonstration Facility project seeks to answer the question: *"Can a waste gas stream be managed effectively to produce a high availability energy source for data center IT equipment?"* In addition, the project will also provide acquisition of knowledge in an area that can have significant impact on the costs of operating a data center, validation of

proposed fuel cell technology benefits, experience with data center operations on a waste water reclamation plant, and precedence for securing gas at no-or-low cost. These will be addressed by performing the following:

- Constructing a dataplant facility consisting of a modular data server package and fuel cell power plant that is integrated with the Dry Creek Water Reclamation Plant.
- Testing the ability of the fuel cell power plant to provide electrical power to the data server package as it operates under various load demands that simulate actual field use under the scenarios of: fueled by natural gas, fueled by biogas, and fueled by biogas for a three-month period in an isolated mode from the electrical grid.
- Confirming the long-term operability of the fuel cell power plant from the standpoint of time between failure, maintenance requirements, and ability to follow electrical demands from servers.

Four option scenarios exist once the 18-month demonstration project objectives have been met:

- Microsoft and BOPU elect to retain and continue to use the fuel cell and dataplant for future new technology evaluation and demonstration purposes.
- BOPU elects to have the fuel cell power plant and/or complete dataplant facility removed at the end of the 18-month project period.
- Microsoft elects not to pursue additional post project demonstration activities and per the MOU, BOPU elects to retain the fuel cell plant and secures ownership, and UW retains ownership of the IT modular server container.
- BOPU elects not to retain the fuel cell plant and Microsoft is interested in relocating the dataplant to a stranded natural gas site or other waste energy stream for additional demonstration and evaluation.

### **Project Partners and Roles**

All parties participating in the Microsoft Dataplant Demonstration Facility have signed a Memorandum of Understanding. Below are a list of the partners and their roles in the project.

Microsoft serve as the project lead, design dataplant and test sequences with assistance from the partners. Additionally, it will also evaluate the success of the Dataplant Demonstration Facility.

FuelCell Energy, Inc. will be the fuel cell supplier. It will work with the partners to integrate the fuel cell into the dataplant design. It will also provide maintenance throughout the life of the project.

City of Cheyenne Board of Public Utilities (BOPU) will be the dataplant host. They will have the dataplant at their waste water reclamation facility and will work with all partners to facilitate the project.

Cheyenne Light Fuel and Power will be the private utility provider and will provide electrical and natural gas service for the dataplant.

Western Research Institute (WRI) will provide technical services both during the construction phase and the operational phases.

University of Wyoming (UW) will facilitate the intellectual and academic collaborations. UW will pursue and develop mutually beneficial opportunities for collaboration and exchange including joint appointments, scientific and/or faculty visitor positions, and other related learning and research opportunities.

Cheyenne LEADS is the grant administrator.

### **Project Goals and Public Benefit**

The demand for clean, renewable, and low cost power is expected to increase within the data center industry. Microsoft's objective is to reduce its dependency upon the power grid, and to lower capital and operational costs while improving sustainability and reducing its carbon footprint. Microsoft is exploring opportunities to accomplish this by incorporating renewable resources among its power resources for its data centers. This project will allow Microsoft to do this by testing its dataplant concept outlined here. Microsoft is looking to advance the state of the art data centers by exploring new technologies and methods not currently used in data center design. Having this additional testing facility in Cheyenne is a great opportunity for Wyoming to partner on a clean energy project with a company as important globally as Microsoft.

This project includes multiple benefits to the partners involved. BOPU will benefit by being able to use the excess energy generated by the fuel cell. It will be able to reduce flaring of excess methane and will be able to use the waste heat created by the fuel cell in its internal processes, thereby reducing its cost of operation.

The University of Wyoming (UW) will participate in educational and technological development activities related to the project that could not be duplicated in a classroom setting. The following programs in the College of Engineering and Applied Science will receive educational benefits from the project: Computer Science, Computer Engineering, Electrical Engineering, Chemical Engineering, Mechanical Engineering, Energy Systems Engineering, and Architectural Engineering. More than 750 students will have the potential to participate in dataplant activities that would have otherwise been unavailable to them. Faculty members who lead these programs are currently developing educational opportunities that use the facility. Further, this project will motivate Microsoft to recruit and retain UW graduates with dataplant related employment. There is also potential for other educational benefits such as internships.

WRI has research, development, and technology demonstration validation opportunities related to fuel cell power, carbon dioxide capture and beneficial use carbon conversion technologies. Additionally, it has carbon dioxide compression and pipeline connection technologies along with future dataplant architectural concepts, and other waste energy stream preparation and utilization technologies. The Microsoft Dataplant Demonstration Facility will improve WRI's chance at competitive funds through the U.S. Federal Government.

There is a public relations opportunity promoting Wyoming as a leading player in clean energy technology, advancing technologies and approaches to lower data center energy consumption and environmental footprint. This will not only have positive implications for the data center industry, but for all energy intensive industries.

### Revenue Recapture

The proposed grant funded infrastructure is not revenue generating infrastructure. However, revenue will be generated through several sources. The BOPU will experience a revenue savings through the ability to utilize the excess electricity produced by the fuel cell and not utilized by the dataplant at an estimated savings of \$24,000 to \$36,000 annually (approximately 10% of their electrical bill). The BOPU will experience a revenue savings through decreased natural gas usage at an estimated savings of \$48,000 to \$60,000 annually. In addition, Microsoft has indicated that they are willing to donate the fuel cell and dataplant to the city, UW, WRI, or another appropriate partner. The value of the fuel cell is \$2,353,485 and the value of the dataplant is \$1,526,398.

### Timeline

Site construction is anticipated to be completed in two months following the executed grant agreement. Within a month after that, the individual components of the dataplant plant will be connected. All of this should be in place by April 2013. At this time multiple testing phases will commence. The data server container will be connected to the electrical grid and the fuel cell will be fueled via pipeline natural gas allowing the fuel cell to be tested on standard electricity and natural gas. By February 2014, the dataplant will then begin to switch its fuel source from natural gas to biogas produced by the biodigesters. In April 2014, the final phase will be implemented for the dataplant to be entirely independent of electricity and natural gas.

### Project Funding

The total eligible project cost is estimated at \$1,936,200, of which the city of Cheyenne is requesting \$1,500,000 of Community Readiness funds. Microsoft is anticipating a cash match up to 23% totaling \$436,200. If total eligible project costs are lower, Microsoft will have a minimum cash match of 15%. Microsoft will also invest an additional \$5,563,121 for the fuel cell and IT PAC. In addition, FuelCell Energy, Inc will provide the base for the fuel cell totaling \$750,000.

Sources	
BRC amount	\$ 1,500,000
Cash Match	\$ 436,200
<b>Total eligible project cost</b>	<b>\$ 1,936,200</b>
BRC % of total eligible project costs	77%
Local % of total eligible project costs	23%
Uses	
Non Construction Costs	\$230,000
Construction Costs	\$1,706,200
<b>Total Project Cost</b>	<b>\$1,936,200</b>

The grant request exceeds the \$1,000,000 limit for Community Readiness grants. The applicant can request more than the maximum amount if the project is a unique economic development



opportunity. Staff believes this project is a unique economic development opportunity for the community and the state.

### **Regional Comments by Tom Johnson**

Southeast Wyoming is quickly becoming a destination location for site selectors and companies looking to expand their data center presence. Several factors have contributed to this:

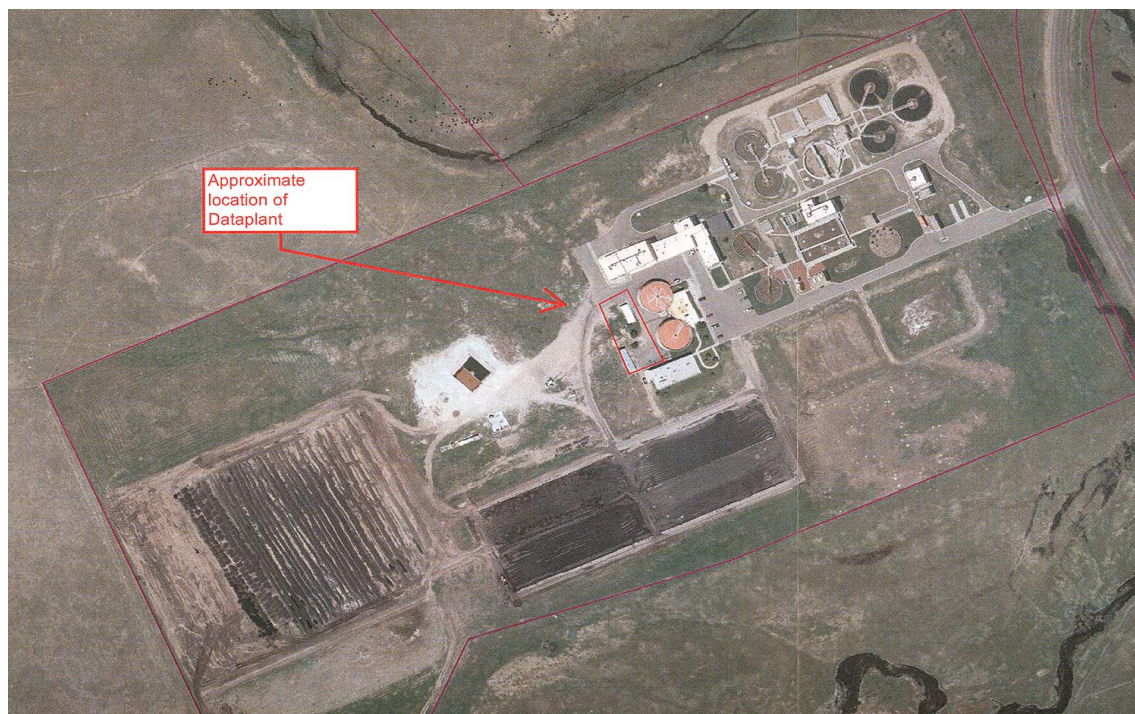
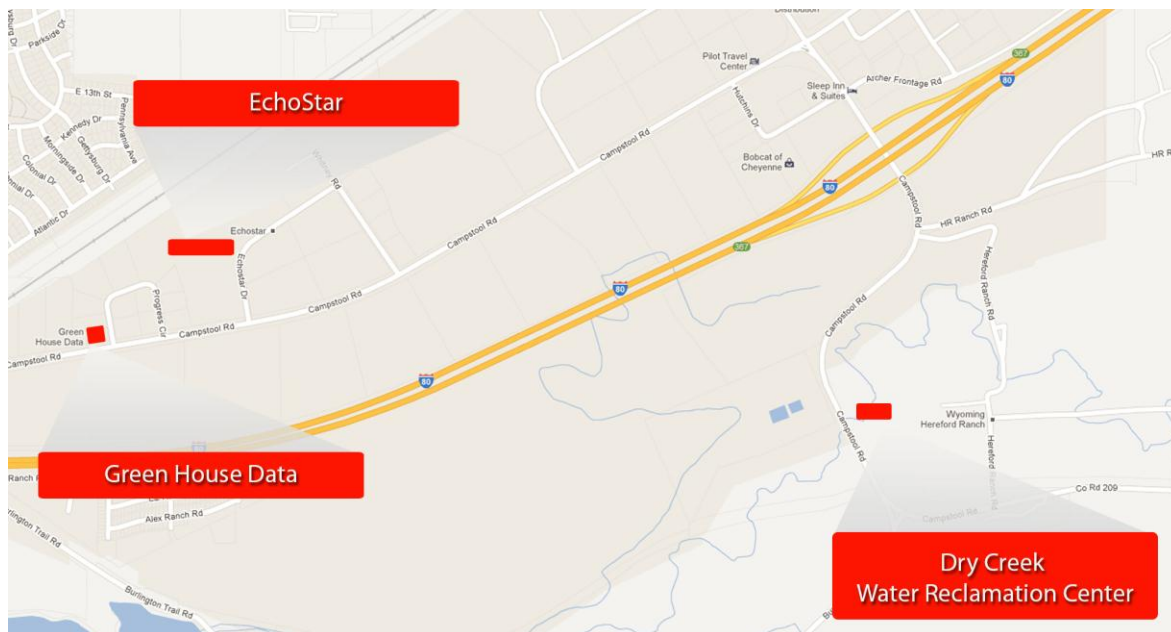
- 1) The cost of electricity, which is competitive nationally. Since 80% of a data center's ongoing costs are driven by electricity rates, this gives southeast Wyoming an advantage over other states;
- 2) The availability of electricity, which gives southeast Wyoming a capacity advantage for data centers that need 10MW-70MW;
- 3) The availability and redundancy of telecommunication infrastructure. Since large data centers require both geographic and carrier redundancy, southeast Wyoming is a good location. The area has a variety of local and long-haul carriers who can serve the needs of any data center.
- 4) Wyoming's cool climate, which provides a more efficient and lower-cost method for cooling servers. Data centers utilize exchangers to simply take advantage of Wyoming's ambient air temperatures. This is one of Wyoming's greatest advantages over other locations;
- 5) Wyoming tax climate and incentives, which include the exemption of sales tax on equipment used in data centers and also the Managed Data Center Cost Reduction program.

If current trends continue, and data center technology requires the need for abundant and inexpensive electricity, carrier redundancy, and cooler climates, southeast Wyoming will see more growth in the next several years. Our conversations with site selectors seem to confirm this. They expect the next three to five years to be a time of increased expansion in the data center industry. Southeast Wyoming will be ready.

### **Staff Recommendation**

Staff recommends funding this project as requested. Staff believes this project is a unique economic development opportunity that merits the funding because of future economic development potential for the region and state. This project helps to put Wyoming on the leading edge of integrating fuel cells with data centers using alternative fuel sources. The Microsoft Dataplant Demonstration Facility will help not only Southeast Wyoming, but the state as a whole furthering growth in the high-tech and renewable energy sectors. Additionally, the benefits of the project have the ability to impact research and collaboration by both WRI and UW. Staff also recommends a waiver of the rules to accept the Community Readiness application past the application submittal deadline. Staff understands the time constraints for this project and supports a rule waiver. Funding is contingent upon the following:

- Provide an executed Contingency and Development Agreement between the city, Microsoft, FuelCell Energy, Inc., and LEADS
- Provide an executed lease agreement between the city and Microsoft



## Detailed Analysis of Project

Cheyenne			
	Evaluation Criteria	Criteria Met	Notes
Primary Job Creation (Jobs bringing new wealth to the community)	Future Creation	Yes	The project has the potential to create future wealth and job creation.
Community Workforce Development	Develops Community Momentum in Unique Market Niches	Yes	The project further establishes Cheyenne and Wyoming as a key player in technology.
	Helps Meet Demand for Social Services	N/A	
	Helps Diversification Efforts	Yes	
	Community/Economic Dev. Goals Related to Specific Plan	Yes	The project meets goals established in the High Plains Economic Development 2010 CEDS plan.
	Improved Ability to Retain, Attract, Expand Businesses	Yes	The project builds the relationship with Microsoft improving the chances for future expansion of Microsoft's presence in the state.
	Improved Workforce or Entrepreneurial Training	Yes	Potential to hire and retain Wyoming graduates and could lead to other educational opportunities such as internships.
	Economic Development Recapture Plan	N/A	
	Satisfactory Performance on Past Projects	Yes	
Additional Evaluation Criteria	Leverage Additional Private Investment	Yes	Microsoft will invest an additional \$5,563,121 and FuelCell Energy will donate \$750,000.
	BRC Loan	No	
	Main Street or Certified Tourism Community Project	N/A	
	Project Readiness	Yes	

## BRC Project Rankings and Evaluation

### Evaluation Criteria and Ranking

The WBC evaluates a proposal independent of other proposals and utilizes one or more of the criteria and measures found in the following chart. There may be other aspects of a proposal that prevent it from being recommended for funding. In addition to the evaluation criteria set in rule, applicants are asked to compare jobs to be created with the Wyoming Self Sufficiency Standard wage rate for the county. The Self Sufficiency Standard measures how much income is needed for a family of a certain composition in a given place to adequately meet their basic needs including: housing, child care, food, transportation, health care, and taxes. For the purposes of BRC, Self Sufficient Wages were averaged for about 30 common family types, all headed by a single wage earner.

		Request	Job Creation			Community/Workforce Development								Business Development							Add'l Eval Criteria				WBC Recommendation	
			Direct Creation over Three Years	Future Creation (Additional Business Ready Space)	Wages Exceed Self Sufficiency, Mean or Median	New Wealth in Community	If not new wealth, then Social Services	Builds upon Unique Assets and Market Niches	Diversification Efforts	Community/Economic Dev. Goals Related to Specific Plan	Improved Ability to Retain, Attract, Expand Businesses	Improved Workforce or Entrepreneurial Training	Satisfactory Performance on Past Projects	Economic Development Recapture Plan	Business Startup	Business Recruitment	Business Expansion	Private Investment	Increase in Business Revenue	Business Plan	Increase in Market Share	Leverage Additional Private Investment	BRC Loan	Main Street or Certified Tourism Community Project	Project Readiness	
Cheyenne	Microsoft Data Plant Demonstration Facility	\$1,500,000	N/A	N/A	N/A	+	N/A	+	+	+	+	+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	+	-	N/A	+	\$	1,500,000

**LOAN PORTFOLIO AGENDA ITEMS**  
**WBC Board Meeting**  
**11-6-12**

- SBIC Fee Rules (**Action Item**)
- Parkway Plaza Properties, Inc – Modification to the 10-04-2011 State Treasurer \$3,930,000 bond recommendation (**Action Item**)
- Uranerz Energy Corporation - \$20 million State Treasurer bond recommendation (**Action Item**)



To: WBC Board of Directors  
From: Ryan Whitehead  
Date: 10-24-2012

Per W.S. 9-12-1308 (iv) (b), the business council shall set annual certification fees through rule and regulation. A Wyoming small business investment company shall pay a nonrefundable annual certification fee, set by rule, to the Council not later than April 1 of each year.

The Rule is being amended to increase the annual certification fee to one hundred sixty one thousand nine hundred fifty six dollars (\$161,956) to match the 2013 fiscal year budget plus an outstanding receivable from the 2012 fiscal year budget.

**Recommendation:**

**Staff recommends that the Board of Directors of the Council make a favorable recommendation to amend the SBIC Fee Rules to increase the annual certification fee to one hundred sixty one thousand nine hundred fifty six dollars (\$161,956).**

Ryan Whitehead  
Small Business Investment Credit Program Manager



STATE OF WYOMING

WYOMING SMALL BUSINESS INVESTMENT CREDIT PROGRAM

Rules and Regulations

CHAPTER 2 – WYOMING SMALL BUSINESS INVESTMENT CREDIT PROGRAM FEE SCHEDULE

**Section 1.      Purpose.** These rules are adopted in order to implement W.S. 9-12-1301 through 9-12-1312, specifically setting the application fees and annual certification fees for Wyoming small business investment companies.

**Section 2.      Authority.** Authority for the promulgation of these rules is granted in W.S. 9-12-104(a)(iv).

**Section 3.      Fee Schedule.**

(a)      The application fee to become a Wyoming small business investment company shall be equal to the annual certification fee for a Wyoming small business investment company. The annual certification fees collected from Wyoming small business investment companies shall be adequate to cover direct and indirect costs of program administration. Annual certification fees may vary over time depending on the number of Wyoming small business investment companies that are operating in Wyoming.

(b)      The annual certification fee shall be set at ~~one hundred fourteen thousand four hundred five dollars (\$114,405.00)~~. one hundred sixty one thousand nine hundred fifty six dollars (\$161,956).

To: WBC Board of Directors  
From: Ben E. Avery  
Date: 10-24-2012 (Modified)  
RE: Parkway Plaza Properties, Inc. – modification to the bond recommendation

On October 4, 2011, the WBC Board of Directors approved the recommendation to the Governor, Attorney General and State Treasurer to purchase Natrona County bond issue as authorized in W.S. 9-4-715(m) in the amount of \$3,930,000 (three million nine hundred thirty thousand dollars), subject to covenants and conditions for the benefit of Parkway Plaza Properties, Inc.

Since the October 2011 recommendation further discussions have taken place with the applicant and State Treasurer's office and a late fourth quarter 2012 scheduled bond closing, specific material changes to the original recommendation have occurred.

These changes are noted in the original recommendation in the form of track changes to the original proposal as outlined in the subsequent pages.

The changes are supported by the following reasons.

The change from the fully amortized P&I payments over 20 years to interest only for the first 2 years and P&I fully amortized over 18 years is supported by the Treasurer's office.

1. Staff recommends waiving the requirement of the \$244,000 deposit at closing to cover the estimated shortfall of the 2012 bond payments. This is supported by the lapse of year 2012 at the time the bond financing is projected to close. WBC staff has reviewed the 2012 seven month interim, which appears to have adequate cash flow to service the proposed debt.
2. Reserve fund to be established in a control account that is equal to 12 months of bond payments be increased from \$285,780 to \$305,000.
3. Decrease the required reserve account for replacement from \$258,360 to \$255,000.

**Recommendation:**

**Staff recommends that the Board of Directors of the Council make a favorable recommendation to the Governor, Attorney General and State Treasurer to modify the terms and conditions as presented in the foregoing recommendation dated October 4, 2011 (Modified 10-24-2012).**

Ben E. Avery  
Business and Industry Division Director

**Applicant:** Parkway Plaza Properties, Inc.  
**Date:** October 4, 2011 (Modified 10-24-2012)  
**Purpose:** Industrial Development Bond Financing  
**Proposal:**

Parkway Plaza Properties, Inc. (PPP) has applied to the Wyoming Business Council (Council) for review and recommendation of a project to be financed with Industrial Development Bonds within the authorization of State Treasurer permissible investments W.S. 9-4-715(m).

**History and Background:** PPP is a newly organized company formed to purchase the Parkway Plaza Hotel and Convention Center in Casper Wyoming from Hospitality Development Corporation. Pat Sweeney owns 75% and Jason Beck owns 25% of the corporation.

Hospitality Development Corporation (HDC) first purchased the property in May of 1994 when it was named the Casper Inn. The property was purchased out of bankruptcy and reported less than a million in annual revenue. HDC made \$1,300,000 in Capital improvements and saw increased revenue which continued as the business grew until it was sold in December of 2008 to Amidee Wyoming LLC. Revenue approached \$7 million in 2008. Amidee purchased the property on a contract for deed. Payments were made as agreed until August of 2009. Difficulties were observed in September of 2009 which led to the Amidee's default on the contract for deed. HDC worked with Amidee's turnaround company LECG from January of 2010 to regain control of the property, which occurred on July 8, 2010.

Prior to taking the property back in July of 2010, HDC attempted to put money together for remodeling and operating capital but was unable to borrow the money from traditional sources. A sister company, Poor boys Steakhouse of Casper loaned \$700,000 to HDC which has helped provide working capital and fund some renovation of the property. HDC has been working with lenders in an attempt to refinance debt and obtain more money to put into remodeling of the property. Additionally, HDC has spoken to private individuals about making an investment.

**Project Request:** PPP's request is \$4,500,000 which would fund the purchase of the property for \$3,880,000, with the balance of \$620,000 to go towards renovation and issuance costs of the industrial development bonds. 76 guest rooms in the tower have undergone renovation. 6 tower rooms are in the process of renovation at this time. The renovation budget outlined in the application materials discusses replacing carpet in the mallway, lobby and ballrooms (\$256,500), addressing meeting and function space needs, including banquet tables and chairs, paint, decorative items and audio/visual components (\$178,500), purchase of two vans for guest transportation and the balance to go toward room renovation and bond issuance costs.

**Analysis:** Council staff analyzed the application and also contracted with Hospitality Real Estate Counselors (HREC) to provide consulting services in support of due diligence matters concerning the proposal. HREC is a leading national hotel and casino advisory firm specializing in property sales, debt financing, consulting, appraisal and litigation support. HREC reviewed the renovation and refurbishment plans, pro-forma financial projections, other consultant's reports, appraisals and market data and conducted relevant market research. HREC prepared a



written report detailing their opinion of the viability of the proposal including adequacy of collateral and projected cash flow from operations. HREC's three year forecast of income and expense is attached to this recommendation.

Analysis on the application materials by staff and HREC led to the following conclusions which directly influence the recommendation:

- Hotel investors would utilize an annual deduction from the cash flow stream (prior to debt service) that accrues for the replacement of short-lived items, known as a "reserve for replacement" amount. Depending on the asset, amounts typically range from 3% to 5% of gross revenues. HREC assumed 4%.
- Hotel investors would utilize an annual deduction from the cash flow stream (prior to debt service) that accrues for management expenses at 2% of gross revenues to reflect the expense that would be realized should the property go into liquidation.
- Due to the age and current condition of the Parkway Plaza, a loan amortization no longer than 20 years is recommended.
- The "as-is" value in the appraisal as of December 21, 2010 shall be used to calculate the recommended bond issuance amount.

Staff recommends a bond purchase not to exceed \$3,930,000 which is 75% (as allowed in statute) of the current appraised value of \$5,240,000. The initial interest rate recommended will be 4%, adjustable every five (5) years to an index tied to the 20 year US Treasury bond rate. ~~The recommended term and amortization of the bond issue will be 20 years with monthly payments of approximately \$23,815 or \$285,780 per year.~~ The recommended term and amortization of the bond issue will be interest only for the first two (2) years followed by principal and interest fully amortized over the remaining 18 years with monthly payments of approximately \$25,553 or \$306,633 per year. All bond issuance costs shall be the responsibility of the borrower, including title work, environmental reports and attorney and trustee fees. Bond issuance costs may be paid out of closing proceeds. The recommendation is also subject to the following conditions/covenants:

1. ~~As projected cash flow is calculated for 2012 (after management expenses of 2% and reserve for replacement of 4%) to be approximately \$42,000 with annual debt service calculated at approximately \$285,780, the borrower will be required to contribute, at the time of closing, the estimated shortfall into a controlled account to cover 2012 bond payments. The approximate amount for 2012 is \$244,000.~~
2. That a reserve fund be established in a controlled account that is equal to 12 months of bond payments (approximately ~~\$285,780~~ \$305,000) to cover any payment shortfalls should business conditions deteriorate. Distributions above normal salary to owners should not occur unless the reserve fund is fully funded. This reserve could be released by the trustee at the request of the borrower and with approval of the State Treasurer after a minimum of ten years of consecutive monthly payments during which time there has been no past due payments.
3. That a reserve fund be established in a controlled account that is equal to 4% of annual gross revenue (approximately ~~\$258,360~~ \$255,000) as reserve for replacement. Distributions to owners above normal salary should not occur unless the account is fully

funded. Proposed renovations shall be approved by Bondholder or their designee and funds released to complete the renovations. It is further recommended that if drawn on, the borrower must maintain this account with the trustee at a balance of \$255,000 at the end of each calendar year for the term of the bond.

4. Until such time that conditions 1-3 are met, along with actual financial results demonstrating cash flow coverage of 1.5X, distributions to owners should not occur. Cash flow is defined as revenue minus expenses including management expenses of 2% and reserve for replacement of 4%. Cash flow divided by debt payments equates to cash flow coverage.
- ~~5. That each owner of PPP fully guaranty the bonds.~~
6. That any future borrowing by PPP is approved in advance by the bond holder and that payments for future borrowing be subordinate to bond payments to the bond holder.
7. \$1 million in life insurance on each owner shall be required. Life insurance shall be assigned to bond holder.
8. PPP shall pay \$10,000 toward the cost of the report issued by HREC.
9. Clear title, free of tax liens and mortgages shall be demonstrated by title policy issued on the subject property
10. The property shall be free of any environmental contamination which injures the appraised value of the property or presents a danger to customers or employees of PPP.

**Economic Benefit:** PPP projects increasing employment back to levels prior to the sale to Amidee (190 employees). Additionally, PPP projects enhanced tax revenue and expansion of the Natrona County economy.

**Collateral Analysis:** The collateral recommended is a first mortgage on real estate located in Natrona County along with a first lien on furniture, fixtures, equipment, inventory, accounts receivable and general intangibles to be located at the Parkway Plaza. The total collateral has been appraised as of December 21, 2010 with the maximum bond not to exceed 75% of the appraised value.

**Recommendation:**

**Staff recommends that the Board of Directors of the Council make a favorable recommendation to the Governor, Attorney General and State Treasurer to purchase Natrona County bond issue as authorized in W.S. 9-4-715(m) in the maximum amount of \$3,930,000 (three million nine hundred thirty thousand dollars), subject to the covenants and conditions outlined, for the benefit of Parkway Plaza Properties, Inc.**

Ben E. Avery  
Business and Industry Division Director



**Applicant:** Uranerz Energy Corporation  
**Date:** October 24, 2012  
**Purpose:** Industrial Development Bond Financing  
**Proposal:**

Uranerz Energy Corporation (Uranerz) has applied to the Wyoming Business Council (Council) for review and recommendation of a project to be financed with Industrial Development Bonds within the authorization of State Treasurer permissible investments W.S. 9-4-715(m).

**History and Background:** Uranerz was incorporated under the laws of the State of Nevada in 1999. The company was relatively inactive until 2005 when it began acquiring mining claims and leases in Wyoming. To date, Uranerz has acquired controlling interest in 80,640 acres of land in the Powder River Basin area of Wyoming. The company has acquired assets, funded the permitting, bonding and operations in the past through funds raised by equity offerings of approximately \$100 million.

The head office is located in Casper, Wyoming with a small investor relations and SEC regulatory compliance office in Vancouver, British Columbia, Canada. There are currently 13 employees in the Casper office, 24 employees at the mine and 5 employees in Vancouver.

The project will be an in-situ mining process. In-situ is a Latin word that literally means “in the place.” Unlike conventional mining methods, in situ recovery (ISR) removes the ore while leaving the rock “in the place.” ISR utilizes a series of EPA Class III wells to inject native groundwater, fortified with oxygen and baking soda into the ore zone. This solution is commonly referred to as lixiviate. The lixiviate dissolves uranium as it is drawn through the ore zone by a pump in a nearby production well. The pump in the production wells collects the uranium laden water and sends it to the processing plant where the uranium is removed by ion exchange. The water is then refortified with oxygen and baking soda and sent back to the ore zone to recover more uranium. The native groundwater continues in this cycle until uranium extraction is complete.

Wyoming has benefited from other successful uranium mining operations such as Cameo’s Smith Ranch facility in Converse County. This is in large part due to the in-situ mining process which is much more economical and less disturbing to the environment than old hard rock mining methods of uranium.

Nearly \$60 million has been invested to date in the project for mineral interest acquisition, core drilling, permitting and other development costs. Partial development of plant, equipment and wellfield construction has began.

**Management:** Uranerz is staffed with a very strong and experienced management team led by Glenn Catchpole, President and CEO. The combined management team has over 125 years experience in ISR mining and is staying current with new technologies in the industry.



**Project Request:** Uranerz is requesting \$20 million dollars in bond financing to build plant, purchase equipment and drill the initial injection and recovery wellfield. Total construction costs are estimated to be \$35,215,000 (see attachment D)

**Analysis:** Council staff has analyzed the application and propose to contract with Behre Dolbear & Company (USA), Inc. for a third party review to validate the economics and appraise the assets. Behre Dolbear Group Inc. is one of the oldest, continuously operating, mineral industry advisory firms in the world. Since 1911, they have specialized in studies for commercial and multilateral financial institutions, mining companies, governments and governmental agencies, legal firms, and other parties with interests in the minerals industry. Behre Dolbear's global experience covers the full spectrum of technical, operational, and financial issues in a broad range of commodities including base and precious metals, coal, industrial minerals, diamonds and gemstones, ferrous metals, and construction materials.

The business plan includes detailed cash flow projections for 7 years with supplemental economic assessments. Projections of future demand of uranium for nuclear energy producing facilities are strong as the USSR is anticipated to discontinue selling uranium from decommissioned nuclear warheads to US utilities.

Uranerz has uranium sales agreements in place for approximately 1/3 of their projected annual production. Some of these agreements are at firm delivery prices in the mid \$60's per pound. The following are historical average uranium prices:

<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>Current</u>
\$48	\$99	\$63	\$46	\$43	\$57	\$50

The applicant has projected uranium prices to be \$67 in year one ranging upward to \$72 in years 2 through 7 (see attachment A). Staff has prepared two more conservative cash flow projections. One assumes a 30% increase in operating expenses (see attachment B). The other assumes a 30% decrease in uranium prices (see attachment C). Cash flow and debt coverage ratios are very strong in the applicant's projection and staffs projection with a 30% increase in operating expenses. However, if uranium prices decline by 30% cash flow becomes negative. This is somewhat unlikely due to increasing global demand.

WBC staff has communicated with Mark Rogaczewski in the Sheridan, Wyoming DEQ office and Deanna Hill in the Cheyenne DEQ office. Mark and Deanna have been working with the applicant on permitting and surety bond requirements for reclamation. According to Mark all of Uranerz's drilling notifications and permits are active and in good standing. Reclamation bonds are required a year in advance of production with a bonds currently in place for \$7.7 million. Included in the cash flow projections are adequate funds for cash and surety bond premiums throughout the production and reclamation of the project. The permitting process is complete.

Staff recommends a bond purchase not to exceed \$20,000,000 which is 57% of the estimated costs of construction. The interest rate recommended will be 4.25% fixed for the term of the bond. The recommended term and amortization of the bond issue will be 7 years with interest payable quarterly the first year thereafter quarterly principal and interest payments amortized



over 6 years. All bond issuance costs shall be the responsibility of the borrower, including any consultant contracted by the Wyoming Business Council, title work, environmental reports and attorney and trustee fees. Bond issuance costs may be paid out of closing proceeds. The recommendation is also subject to the following conditions/covenants:

1. Borrower is Uranerz Energy Corporation
  - a. We will need appropriate corporate resolution and authorizations
2. Final approval of the bonds is subject to the WBC's consultant providing written confirmation that validates the economics of the project
3. Appraisal of mineral rights, mining claims and leases at a minimum of \$35 million
4. All permits approved and in place including the deep well disposal permit
5. Covenant that surety bonds will comply with DEQ requirements

**Economic Benefit:** Uranerz projects to pay @\$14 million to the state and county in severance, ad valorem and property taxes through the first 7 years of operation (bond financing period). 18 additional permanent jobs will be created bringing total employment to 60 with average salaries of \$50,000. It is estimated that over \$20 million in salaries and benefits will be paid during the initial 7 years of operations.

**Collateral Analysis:** The collateral recommended is a first mortgage on all leasehold improvements located in Johnson County along with a first lien on furniture, fixtures, equipment, inventory, accounts receivable and general intangibles. As an abundance of caution a first lien on all mineral resources owned in Reno Creek, South Doughstick, Doughstick Properties and Nichols Ranch.

**Recommendation:**

**Staff recommends that the Board of Directors of the Council make a favorable recommendation to the Governor, Attorney General and State Treasurer to purchase Johnson County bond issue as authorized in W.S. 9-4-715(m) in the maximum amount of \$20,000,000 (twenty million dollars), subject to the covenants and conditions outlined, for the benefit of Uranerz Energy Corporation.**

Ben E. Avery  
Business and Industry Division Director.