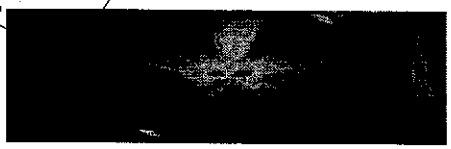
EXHIBIT 2
DATE 1/28/05
HB 5

The University of Montana Missoula College of Technology



"Knowledge is Power"

Fast Overview

1. What we are.
2. What needs to be done and why!
3. Where we are going!

UM-MCOT Vision and Mission

Vision: To be a preeminent leader and catalyst for progress in education.

Mission: To provide academically sound, socially responsible, current and accessible certificate and associate degree programs in response to individual, community, and economic development needs.

College Key Ingredients

- Positive Key Choices
- Increasing Enrollment +35%/3 yrs
- Progressive Philosophy
- Dedicated Faculty and Staff
- Commitment to students
- Expanding Outreach: On-line, Tech Prep, Dual Credit Career Academies (15)
- Productive Workloads
- Critical University Coordinated Student Services
- Application and Career Oriented
- Student Centered
- Emphasis on Student Success
- College as a "life-changing" event
- Melding of diversity

University Interface

- Ten-Year Anniversary
- Enrollment Management
- Developmental Coursework
- Continuing Education and Outreach
- Student Services Support
- Student Leadership
- Student Articulation
- BAS Program Development
- Research and Development
- Foundation Fundraising

Two-Year Education

Cost to Earnings Ratios 1:16-1:28

Radiology Program

- Graduate's Employment $38,000
- 20 Grads $760,000
- 5 Years $3.8 MM
- 7 Times Ec. Devel ROI $24.5 MM

Welding Program – All we can train!

etc. etc. etc.

Key Choices

1. **Leadership** vs. Followership
2. **Proactive** vs. Reactive Ed. & Training
3. **Collaboration** vs. Fragmentation
4. **Innovation** vs. Stagnation
5. **Funding Streams** vs. Zero Summing

Collaborations

- Surgical Tech State-wide Model
  - UM-MCOT; UM-BCOT; MSU-BCOT; MCC; (MSU-GFCOT); St. James HC; St Vincent's HC; Deaconess Billings Clinic; Holy Rosary HC; (Benefis HC)
- Hospital and Clinical Sites – 35
- Radiological Technician Program SP/C, Comm Off/MTCOT
- Pharmacy Tech & Commissioner's Off; Dept Labor
- Coding and PTA programs – MSU-GFCOT
- Carpentry Program MSU-BCOT and Contractor's Asso
- Heavy Eq- Msla Pks & Rec; Msla County, FHCC
- Fire Science – UM-HCOT

Collaborations, Continued

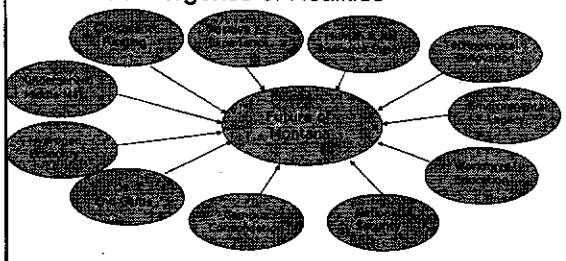
- H.S. to COT Career Academies- Carpentry & Health
- Career Assessment – Mt. Campus, Big Sky HS
- Alternative Energy Learning Site- EPSCOR & MonTEC
- Customized Training Jore, Envirocon & Stone Cont.
- Equipment Support & Donations, Miller, Freightliner, Polaris, Yamaha, others
- Technology – Montana Tech, EPSCOR, MCC, MSU-Bz, Shell Pet., Forest Serv.Department of Energy

Innovations
"there is no such thing as status quo"

- Health Core
- Faculty Professional Development
- Faculty/Staff Mgmt Team
- Grant Writing
- Outreach Program
- Distance Learning
- Program Upgrades
  - Articulated/Seamless 2-Yr RN Program – S&K
  - Computing & Electronics Department
  - Transport Department

Innovation – MT H2 Economy

"Convergence of Realities"



Innovation
"Hydrogen, Montana's Clear Solution"

- To become an international leader
- To have the best trained **workforce**
- To attract new and innovative businesses
- To have high quality jobs for Montanans
- To have the best source of **energy**
- To reduce world pollution problems
- To impact all facets of Montana life
- To fund statewide infrastructure
  - Communications, Transportation
  - Education, Health Care, Agriculture
  - Community Services, Energy

The Demand for Hydrogen

- H2 is the most plentiful element on earth
- H2 is non-polluting, value-added product
- H2 is safer than most present-day energy
- H2 will produce 16 times more MW of electricity than coal fired methods
- Presently produce and use 9 MM Tons
- Hydrogen Economy needs by 2020
  - Half of all transportation and electricity
  - 40 MM tons of H2 or 15.3 QD cubic feet
  - Workforce, Value-added products

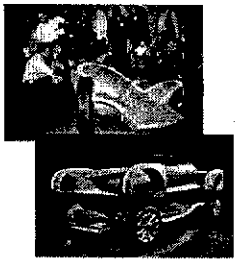
MT H_2 Production Economics

Energy Development

- Coal Value Added Example:
  - 40 MM Tons @ $6.23/ton = $250 MM
  - 40 MM Tons = 1.72 TT cu. ft. H2 = $7.4 BB
- Petroleum Reforming
- Renewables: Wind, Solar, Biomass
- By-products/pollution control
- Platinum and Palladium

Uses of Hydrogen

- Transportation
  - ICE and Fuel Cells
- Electricity Production
- Distributive Energy
  - Homes
  - Schools
  - Buildings
- Appliances
- Anything that needs ENERGY



The Canadian Hydrogen Experience

- 2001-2002
  - Surveyed 32 companies (28)
  - Revenue $97MM
  - R&D $179MM
  - Jobs 1772
- Projected – *Growth Environment*
  - Revenue $165MM >70%
  - R&D $358MM >100%
  - Jobs 2639 >49%
- >70% of workers in the hydrogen and fuel cell industry have a post secondary education
- 24% of Montanans have a post secondary education
- In successful economic development environments, one and two year focused training are the foundation

No Time to Ponder!! (20+)

- Ohio – Key Ec. Devel. Emphasis
- Connecticut – Bus. Partnership
- Hawaii- State H_2 Plan & Power Park
- California – FC Partnership
- North Dakota –Coal Gasification & Pipeline
- Florida – Coal Gasification
- Iowa – Bio Project
- Michigan— "NextEnergy": is a comprehensive set of actions and incentives designed to position Michigan as the world's leading center for alternative energy technology, research and development, education and manufacturing" – SMART ZONES

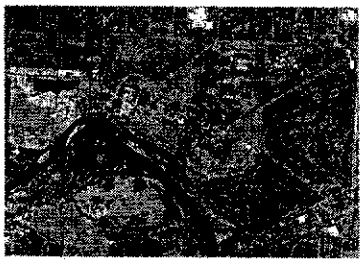
Innovation is Key

- Montana Hydrogen Futures Project- Statewide
  - 2002 Legislature Support Resolution
  - Montana Energy Park of the Future
  - Alternative Energy Technicians Program
  - Sustainability across the curriculum
  - National Hydrogen Safety Training Center
  - DOE International K-12 H2 Energy Education Web Site
  - Montana Transport Institute for PRT
  - Forest Service biomass to H2 project
- Alternative Energy Learning Site
- Phase I Planning: MT Hydrogen Futures Park @UM
  - Consolidated Campuses and Programs
  - Community Super-park Anchor
  - Expanded Community Service
  - Gateway to MT Alternative energy, hydrogen economy & training; sustainable living; leading-edge technology

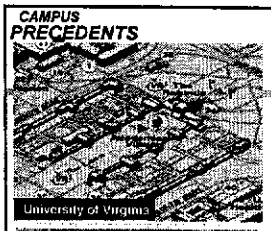
MT Hydrogen Futures Park @UM

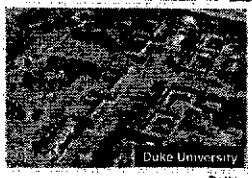
- Phase II Construction $24MM
  - National Model>Platinum LEED Certified
  - Expanded, Existing Programs and Collaboration
    - Business, Health, Comp/Elec, Trades, Asso Arts
  - Synergisum with Parks, Rec., Bus, Culture, Environment and Learning
  - Learning, working and demonstrating:
    - Alternative Energy;
    - Sustainability;
    - Nanotechnology;
    - Robotics; Laser; CNC;
    - Dist. Power Generation;
    - Mini-Medical Center;
    - National Technology Demo & Applications Center;
    - Business Entrepreneur Ctr;

Site Aerial

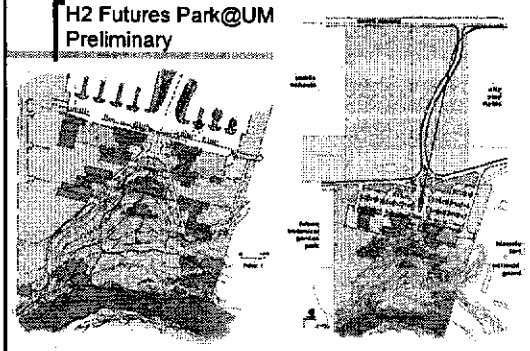


CAMPUS PRECEDENTS

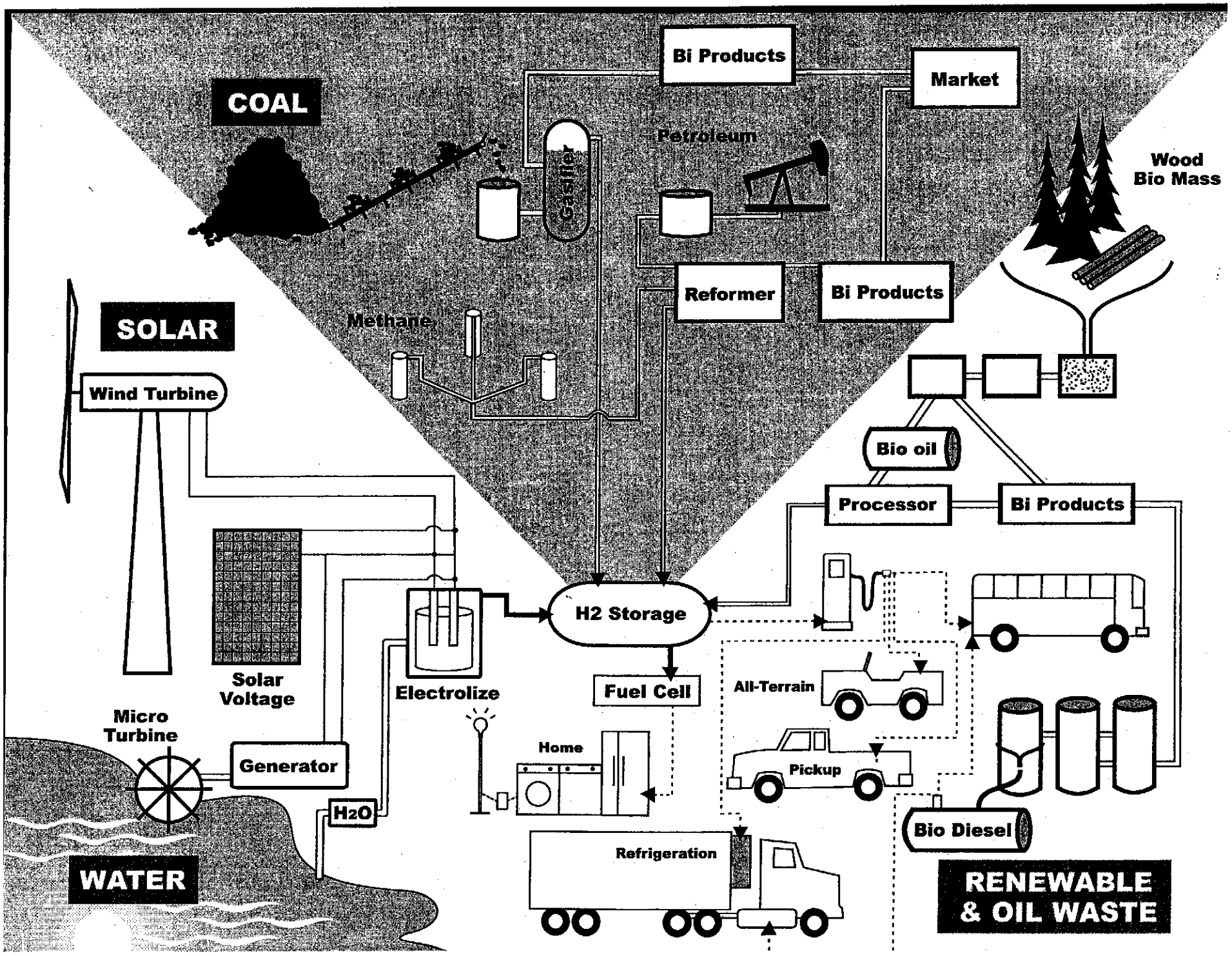




H2 Futures Park@UM Preliminary



Making a Difference ------ *Leaving a Legacy*


COAL
Bi Products
Market
Petroleum
Gasifier
Wood
Bio Mass
Reformer
Bi Products
SOLAR
Methane
Wind Turbine
Bio oil
Processor
Bi Products
H2 Storage
Solar
Voltage
Electrolize
Fuel Cell
All-Terrain
Micro
Turbine
Generator
Home
Pickup
H2O
Bio Diesel
Refrigeration
WATER
RENEWABLE
& OIL WASTE