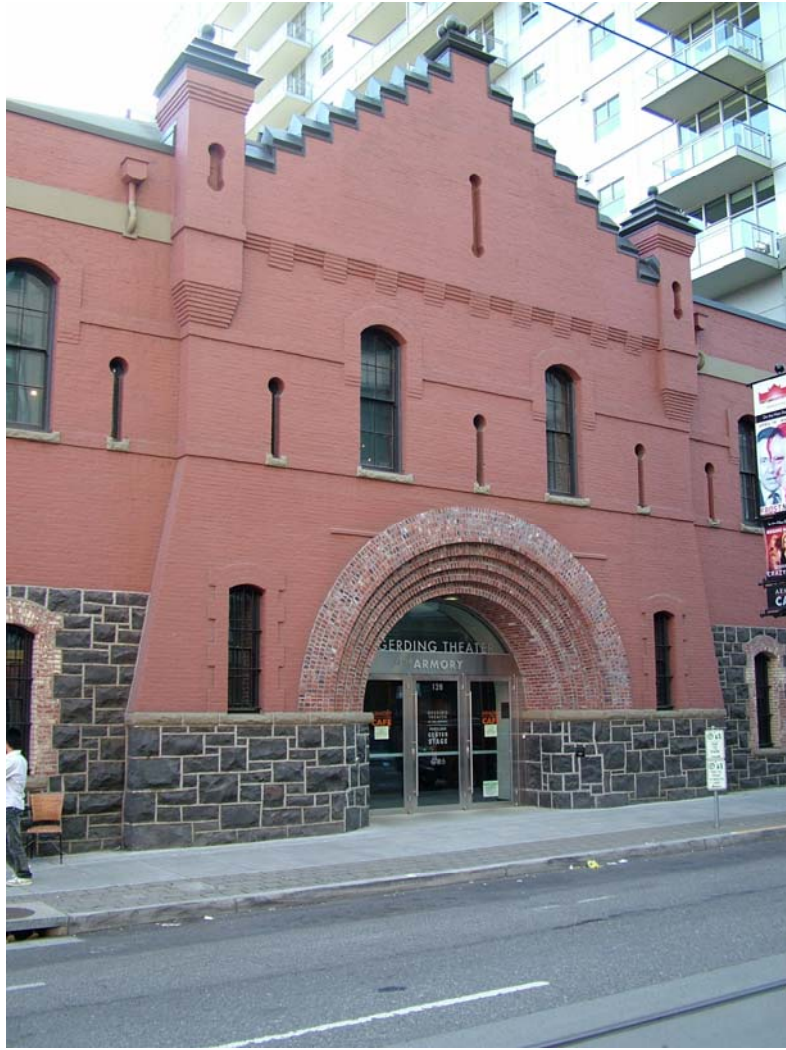


# Green Cities Conference

Portland, Oregon



An Informational Presentation to the Rapid City Council June 29, 2009

# What is Sustainability?

In 1983, the United Nations Commission on Environment and Development defined sustainable developments as those that "meet present needs without compromising the ability of future generations to meet their needs."

# What is Sustainability?

**Society**

**Economy**



**Environment**

# What is Sustainability?



Portland Skyline



# Why Try?

## Save Money

NRG Systems built a 46,000 square foot manufacturing facility and office building in Hinesburg, VT. The \$8 million building is powered primarily by renewable energy and uses one-third as much energy as a conventional building. Water-saving devices, such as dual-flushing toilets and faucet aerators, save more than 100,000 gallons of water per year. The cost of building to green standards was \$13.81 per square foot or 8.21% more. But NRG expects these additional costs to be paid for in five years.

**National Association of Manufacturers**

**Greening Industrial Facilities: A Sustainable Approach to Addressing Energy Concerns**

*David Love, Director, Industrial and Manufacturing Solutions, Johnson Controls*

*Paul vonPaumgarten, Director, Energy and Environmental Affairs, Johnson Controls*



# Why Try?

Provide economic benefits to our residents



Portland Farmers Market

An Informational Presentation to the Rapid City Council June 29, 2009



# Why Try?

Provide economic benefits to our residents



Jamison Fountain



# Why Try?

## Reduce future energy cost risks

- Energy is the largest consideration in analyzing potential savings in manufacturing facilities
- The industrial sector currently accounts for about one-third of all U.S. energy consumption (approximately \$120 billion).
- NAM says that external outlays related to energy prices (in addition to taxes, litigation, health care, and regulation) have added 22.4% to production costs.

**Solution: Those that more tightly control and aggressively reduce energy consumption can minimize exposure to such volatility.**

National Association of Manufacturers  
Greening Industrial Facilities: A Sustainable Approach to Addressing Energy Concerns  
*David Love, Director, Industrial and Manufacturing Solutions, Johnson Controls*  
*Paul vonPaumgarten, Director, Energy and Environmental Affairs, Johnson Controls*





# Why Try?

Comply with and improve upon Federal clean air, clean water standards



Tanner Springs Park

An Informational Presentation to the Rapid City Council June 29, 2009



# Why Try?

Comply with and improve upon Federal clean air, clean water standards



Eco-Trust  
Parking Lot



# Why Try?

## Provide a more livable environment for our citizens

- A 2004 report from the Brookings Institution projects that by 2030, we will have demolished and replaced 82 billion square feet of our current building stock. Since it is estimated that there are about 300 billion square feet of space in the United States today, that means we anticipate demolishing nearly 1/3 of our building stock in the next 20-25 years.
- It will take as much energy to demolish and reconstruct 82 billion square feet of space (as predicted by a Brookings study) as it would to power the entire state of California – the 10th largest economy in the world with a population of about 36 million people – for 10 years.



# Why Try?

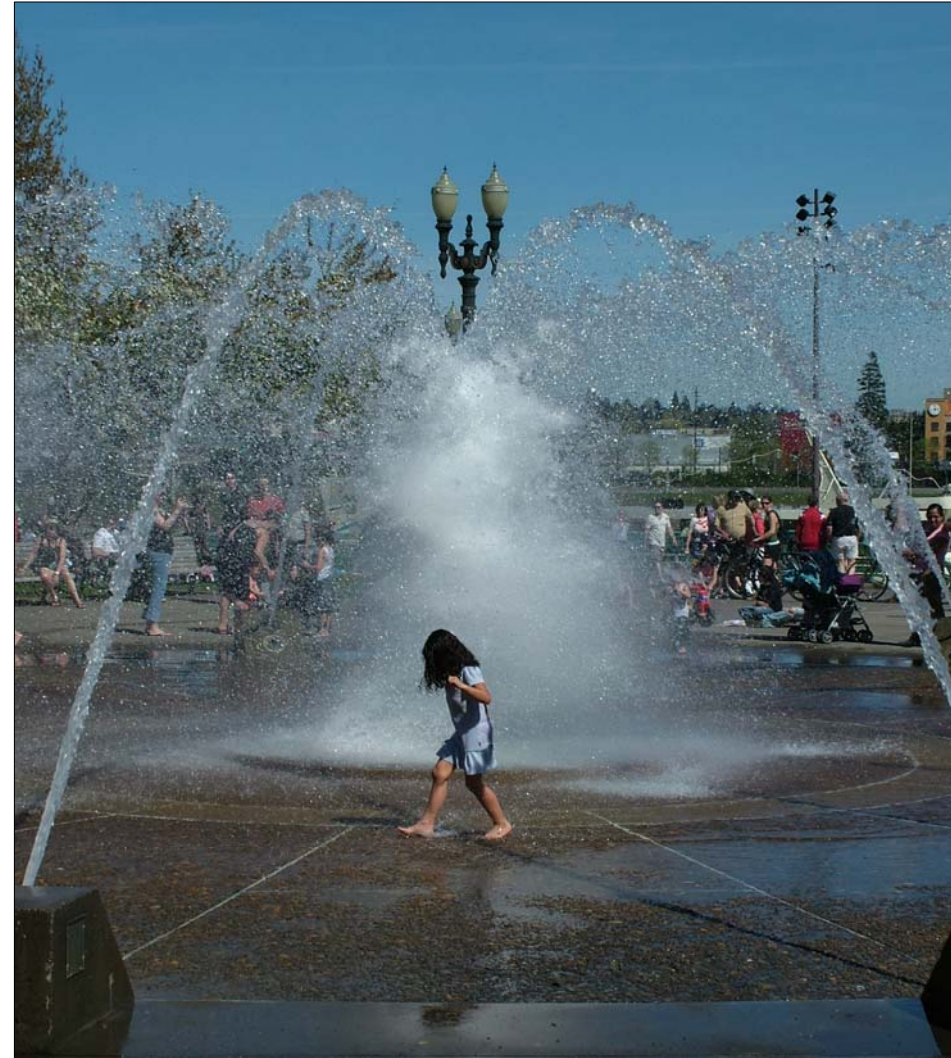
## Provide a more livable environment for our citizens

- If we were to rehab even 10% of this 82 billion square feet, we would save enough energy to power the state of New York for well over a year.
- Construction debris accounts for 25% of the waste in the municipal waste stream each year. Demolishing 82 billion square feet of space will create enough debris to fill 2,500 NFL stadiums



# Why Try?

Provide a more livable environment for our citizens



Salmon Street Springs

An Informational Presentation to the Rapid City Council June 29, 2009



# Why Try?

Provide a more livable environment for our citizens



Pioneer Plaza

An Informational Presentation to the Rapid City Council June 29, 2009



# What's in it for Commerce & Industry

## Competitive Edge & Nimble in a fast changing world

"Controlling the amount of increasingly costly oil, natural gas and water used in manufacturing has become a strategic factor in determining whether or not your manufacturing business remains competitive in the global economy."

-- *NAM president John Engler*

National Association of Manufacturers



# What's in it for Commerce & Industry

## Competitive Edge & Nimble in a fast changing world





# What's in it for Commerce & Industry

## Competitive Edge & Nimble in a fast changing world

Sustainable buildings reduce operating costs so capital may be focused on other important needs like R&D, employee retention, marketing...



# What's in it for Commerce & Industry

## Resilient to shocks

Green buildings and plants employing sustainable practices are more profitable because they can reduce risk, make companies and organizations more efficient and productive, and advance them technologically. They also help to ensure the reliability of equipment and manufacturing processes, which reduce equipment and process failures and production delays.

**National Association of Manufacturers**

**Greening Industrial Facilities: A Sustainable Approach to Addressing Energy Concerns**

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# What's in it for Commerce & Industry

Unified in purpose



# What's in it for Commerce & Industry

Likely to attract and retain customers and staff



Eco-Trust Building

An Informational Presentation to the Rapid City Council June 29, 2009



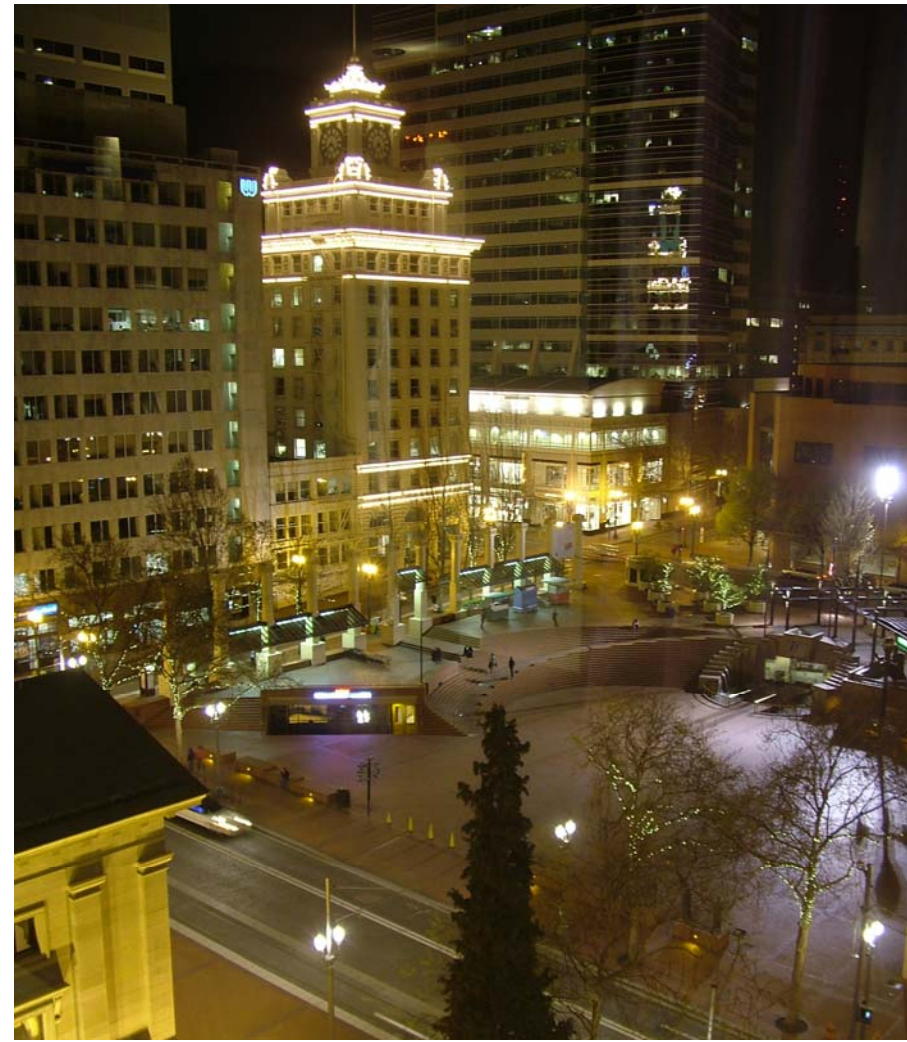
EcoComp

ENVIRONMENTAL

# What's in it for Commerce & Industry

At ease with regulators, banks, insurers and financial markets

Creating long-term shareholder value through integrated financial, environmental, and social strategies and measurements that are valued on Wall Street.



Pioneer Plaza - Night



# What's in it for our Citizens

## Financial Savings

2001 Chevy Tahoe: 13 MPG City – 16 MPG Highway

### Work Commute Only

6 miles at 13 mpg = .92 gal/trip = 4.6 gal/week \* \$2.50/gal = \$11.50/Week

4 Working Weeks / Month = \$46.00/month

### Work Commute Only

.25 miles at 13 mpg = .04 gal/trip, 4 trips / month = .16 gal \* 2.50 = \$0.40

4 Working Weeks / Month = \$0.40/month

### Passed Along Savings:

- Dream Design International, Inc. does not lease a parking permit saving \$35/month = \$420/year
- No paid weather days



# How Does a Community Become Sustainable?

- **The Community Defines Sustainability**
- **Citizens take Accountability and Initiative**
- **Manage our groundwater and surface water**
- **Protection of Water Sources**
- **Adopt Land Policies which integrate Economics, Environment and Society**
- **Develop a Transportation plan that will integrate Multi-Modal Transportation**
- **Encourage Local Production of Industry and Agriculture**
- **Promote Independence**
- **Reduce useless waste**



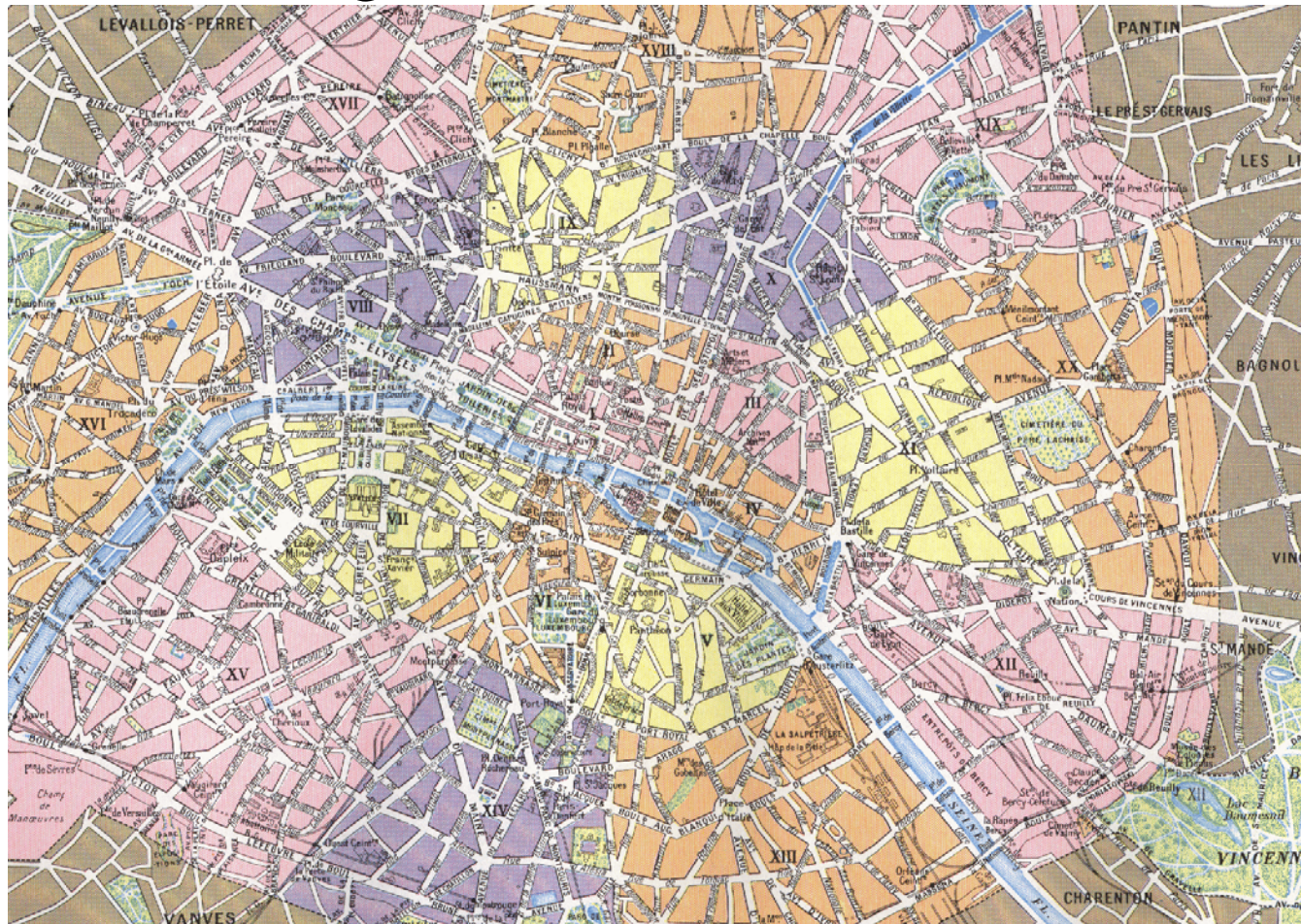
# Where do we go from Here?





# Where do we go from Here?

Create a community Roadmap for Rapid City's continued green and sustainable efforts.



# Where do we Go from Here?

## **Recommendation: A Process**

The Council recommends this roadmap as a process, by which citizens, business, and government can explore and plan, both independently and cooperatively to become a greener and more sustainable Rapid City.



# Where do we Go from Here?

## Recommendation: A Process

2009 and 2010 the Roadmap begins

### **Celebrate and Showcase Rapid City's current Green/Sustainable Achievements.**

- Water, source water, water rates encouraging conservation
- MIRV and compost
- New City Energy Policy
- Stormwater criteria manual
- Historic preservation
- Stronger neighborhoods, Downtown Rapid City, Roosevelt Park, North Rapid
- Bike Path update and Jackson Blvd planning
- Re-use Centers and Restore
- Pedestrian/walkability, complete streets



# Where do we Go from Here?

## Recommendation: A Process

2009 and 2010 the Roadmap begins

Celebrating and Showcase Rapid City's current green/sustainable achievements.

- SDSM&T and downtown redevelopment
- Traffic lights, LED, solar flashers
- Farmers Market
- Septic System program
- Energy Plan capability
- Landfill gas facility
- Green building standards



# Where do we Go from Here?

## Recommendation: A Process

2010 the Roadmap Continues

1. Begin the Discussion: Hold a series of symposiums under community leadership.
2. Establish a *Green City Task Force* with wide community representation and expertise.
3. Organize a first annual Green/Sustainable Summit bringing like minded communities of interest (Rapid City Garden Club, Mayor's Beautification Committee, Mt. Rushmore Road Group and many others) for regular discussion and communication .



# Where do we Go from Here?

## Recommendation: A Process

### 2010 the Roadmap Continues

1. The Green/Sustainable Task Force would be charged with proposing a draft mission statement and goals as a point of departure for discussion.
2. Public meetings, focus groups and polling would be used to further define, redraft and test public support for goals. Focus groups, representing a wide diversity of interests and backgrounds, would encourage participation by those not always involved in planning and whose voices are often under-represented.
3. Convene a series of general public meeting to begin ratification of proposed goals. Public meetings would be widely advertised to build community interest and support.



# Where do we Go from Here?

