

THE LEED STORY

EPA SCIENCE & TECHNOLOGY CENTER



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Slide 1



AGENDA

- ❖ Beginning
- ❖ Middle
- ❖ End

- ❖ Beginning
- ❖ Middle
- ❖ End

EPA REGIONAL HEADQUARTERS

- ❖ The Green Rider requested numerous green features to be incorporated into the project



- ❖ Beginning
- ❖ Middle
- ❖ End

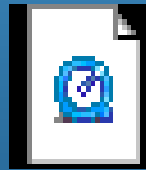
EPA REGIONAL HEADQUARTERS



- ❖ Beginning (concluded)
- ❖ Middle
- ❖ End

LEED VERSION 1.0

- ❖ LEED Pilot Program
- ❖ 20 Page Submittal hopeless!!



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- ❖ Beginning
- ❖ Middle
- ❖ End

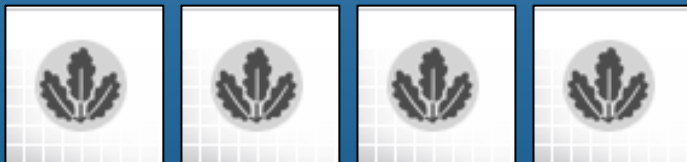
SOLICITATION FOR OFFERS EPA SCIENCE & TECHNOLOGY CENTER

- ❖ Requested numerous green features to be incorporated into the project
- ❖ Required offer to include LEED at a proposed level

- ❖ Beginning
- ❖ Middle
- ❖ End

LEED VERSION 2.0

- ❖ Certified (26-32)
- ❖ Silver (33-38)
- ❖ Gold (39-51)
- ❖ Platinum (52-69)



- ❖ Beginning
- ❖ Middle
- ❖ End

LEED GOLD AT CONSTRUCTION START

LEED Category	Possible Points	STC Points
Sustainable Site	14	12
Water Efficiency	5	4
Energy & Atmosphere	17	9
Materials & Resources	13	6
Indoor Environmental Quality	15	10
Innovation & Design Process	5	5
Total	69	46

- ❖ Beginning
- ❖ Middle
- ❖ End

SUSTAINABLE SITE

12 OF 14 POINTS

Y Prereq 1 Erosion & Sedimentation Control

1 Credit 1 Site Selection 1

Credit 2 Urban Redevelopment 1

1 Credit 3 Brownfield Redevelopment 1

1 Credit 4.1 Alternative Transportation, Public Transportation Access 1

1 Credit 4.2 Alternative Transportation, Bicycle Storage & Changing Rooms 1

1 Credit 4.3 Alternative Transportation, Alternative Fuel Refueling Stations 1

1 Credit 4.4 Alternative Transportation, Parking Capacity 1

1 Credit 5.1 Reduced Site Disturbance, Protect or Restore Open Space 1

1 Credit 5.2 Reduced Site Disturbance, Development Footprint 1

1 Credit 6.1 Stormwater Management, Rate or Quantity 1

Credit 6.2 Stormwater Management, Treatment 1

1 Credit 7.1 Landscape & Exterior Design to Reduce Heat Islands, Non-Roof 1

1 Credit 7.2 Landscape & Exterior Design to Reduce Heat Islands, Roof 1

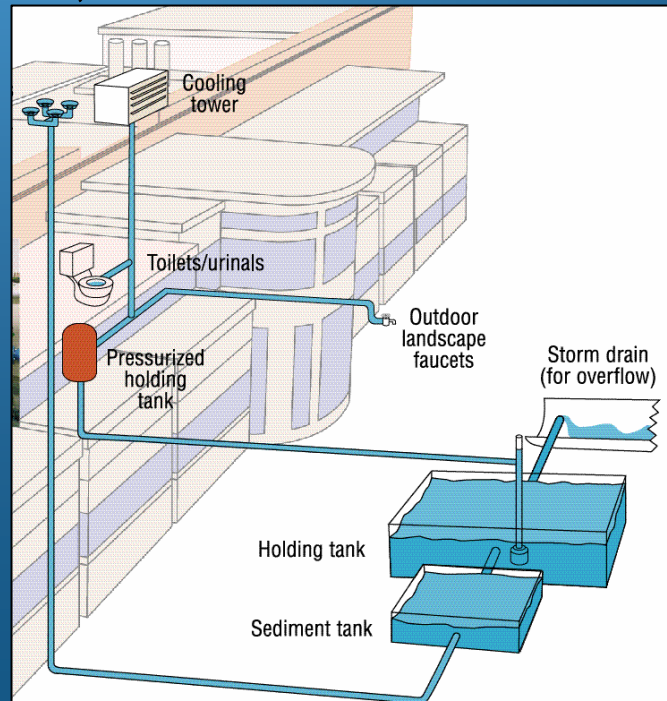
1 Credit 8 Light Pollution Reduction 1

- ❖ Beginning
- ❖ Middle
- ❖ End

WATER EFFICIENCY

4 OF 5 POINTS

- 1 Credit 1.1 **Water Efficient Landscaping**, Reduce by 50% 1
- 1 Credit 1.2 **Water Efficient Landscaping**, No Potable Use or No Irrigation 1
- 1 Credit 2 **Innovative Wastewater Technologies** 1
- 1 Credit 3.1 **Water Use Reduction**, 20% Reduction 1
- Credit 3.2 **Water Use Reduction**, 30% Reduction 1

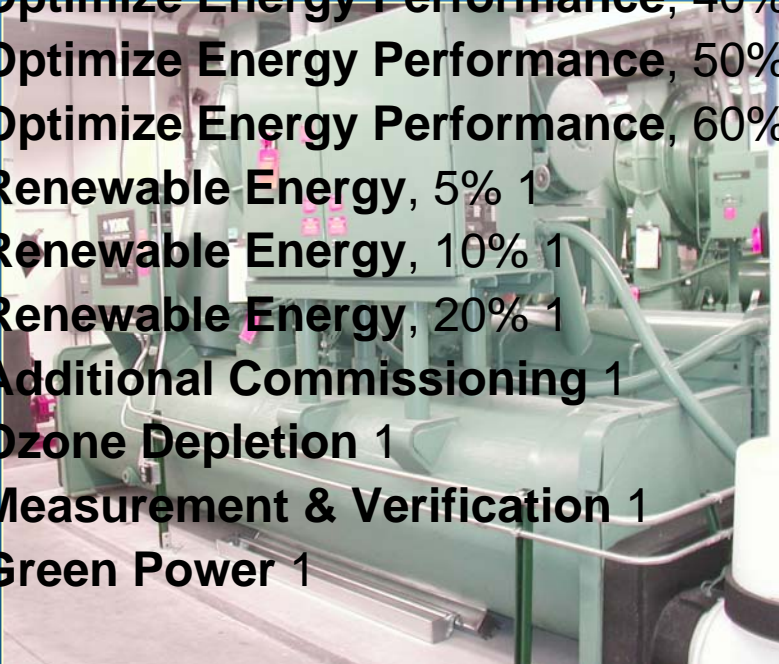


- ❖ Beginning
- ❖ Middle
- ❖ End

ENERGY & ATMOSPHERE

4 OF 17 POINTS

- Y Prereq 1 **Fundamental Building Systems Commissioning**
- Y Prereq 2 **Minimum Energy Performance**
- Y Prereq 3 **CFC Reduction in HVAC&R Equipment**
- 2 Credit 1.1 **Optimize Energy Performance, 20% New / 10% Existing** 2
- Credit 1.2 **Optimize Energy Performance, 30% New / 20% Existing** 2
- Credit 1.3 **Optimize Energy Performance, 40% New / 30% Existing** 2
- Credit 1.4 **Optimize Energy Performance, 50% New / 40% Existing** 2
- Credit 1.5 **Optimize Energy Performance, 60% New / 50% Existing** 2
- Credit 2.1 **Renewable Energy, 5%** 1
- Credit 2.2 **Renewable Energy, 10%** 1
- Credit 2.3 **Renewable Energy, 20%** 1
- 1 Credit 3 **Additional Commissioning** 1
- 1 Credit 4 **Ozone Depletion** 1
- Credit 5 **Measurement & Verification** 1
- Credit 6 **Green Power** 1



- ❖ Beginning
- ❖ Middle
- ❖ End

MATERIALS & RESOURCES

6 OF 13 POINTS

Y Prereq 1 **Storage & Collection of Recyclables**

Credit 1.1 **Building Reuse**, Maintain 75% of Existing Shell 1

Credit 1.2 **Building Reuse**, Maintain 100% of Shell 1

Credit 1.3 **Building Reuse**, Maintain 100% Shell & 50% Non-Shell 1

1 Credit 2.1 **Construction Waste Management**, Divert 50% 1

1 Credit 2.2 **Construction Waste Management**, Divert 75% 1

Credit 3.1 **Resource Reuse**, Specify 5% 1

Credit 3.2 **Resource Reuse**, Specify 10% 1

1 Credit 4.1 **Recycled Content**, Specify 25% 1

1 Credit 4.2 **Recycled Content**, Specify 50% 1

1 Credit 5.1 **Local/Regional Materials**, 20% Manufactured Locally 1

1 Credit 5.2 **Local/Regional Materials**, of 20% Above, 50% Harvested Locally 1

Credit 6 **Rapidly Renewable Materials** 1

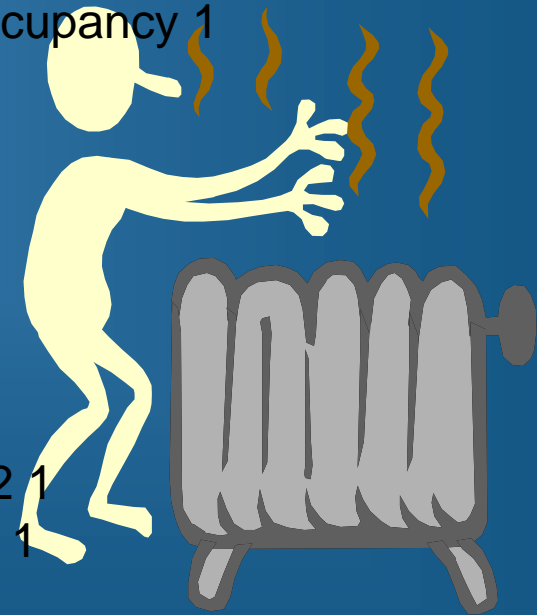
Credit 7 **Certified Wood** 1



- ❖ Beginning
- ❖ Middle
- ❖ End

INDOOR ENVIRONMENTAL QUALITY – 9 OF 15 POINTS

- Y Prereq 1 **Minimum IAQ Performance Required**
- Y Prereq 2 **Environmental Tobacco Smoke (ETS) Control**
- 1 Credit 1 **Carbon Dioxide (CO₂) Monitoring** 1
- 1 Credit 2 **Increase Ventilation Effectiveness** 1
- 1 Credit 3.1 **Construction IAQ Management Plan, During Construction** 1
- 1 Credit 3.2 **Construction IAQ Management Plan, Before Occupancy** 1
- 1 Credit 4.1 **Low-Emitting Materials, Adhesives & Sealants** 1
- 1 Credit 4.2 **Low-Emitting Materials, Paints** 1
- 1 Credit 4.3 **Low-Emitting Materials, Carpet** 1
- Credit 4.4 **Low-Emitting Materials, Composite Wood** 1
- Credit 5 **Indoor Chemical & Pollutant Source Control** 1
- Credit 6.1 **Controllability of Systems, Perimeter** 1
- 1 Credit 6.2 **Controllability of Systems, Non-Perimeter** 1
- 1 Credit 7.1 **Thermal Comfort, Comply with ASHRAE 55-1992** 1
- 1 Credit 7.2 **Thermal Comfort, Permanent Monitoring System** 1
- Credit 8.1 **Daylight & Views, Daylight 75% of Spaces** 1
- Credit 8.2 **Daylight & Views, Views for 90% of Spaces** 1



- ❖ Beginning
- ❖ Middle
- ❖ End

INNOVATION & DESIGN PROCESS – 5 OF 5 POINTS

- 1 Credit 1.1 Innovation in Design: Recycle Content – Achieved 107% 1
- 1 Credit 1.2 Innovation in Design: Local/Regional Materials – Achieved 75% 1
- 1 Credit 1.3 Innovation in Design: Energy Recovery Technology 1
- 1 Credit 1.4 Innovation in Design: Variable Speed Drive Technology 1
- 1 Credit 2 LEED™ Accredited Professional 1



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- ❖ Middle
- ❖ End

LEED GOLD

FINAL POINTS

LEED Category	Possible Points	Start Points	Final Points
Sustainable Site	14	12	12
Water Efficiency	5	4	5
Energy & Atmosphere	17	9	4
Materials & Resources	13	6	6
Indoor Environmental Quality	15	10	9
Innovation & Design Process	5	5	5
Total	69	46	41

- ❖ Beginning
- ❖ Middle
- ❖ End

CRITICAL SUCCESS ELEMENTS

- ❖ Written into contracts
- ❖ Started from beginning
- ❖ Dedicated team



- ❖ Beginning
- ❖ Middle
- ❖ End

EPA SUCCESSES



Science & Technology
Center

Regional headquarters



- ❖ Beginning
- ❖ Middle
- ❖ End (Really)

QUESTIONS



BUILDING GREEN MAKES CENTS

Thank you
and
enjoy your tour!

