

Waste Reduction Partners

Innovative Technical Assistance in Energy and Waste Reduction

Terry Albrecht, PE CEM



Waste Reduction Partners



Waste Reduction Partners

At-A-Glance

Waste Reduction Partners conducts on-site assessments and provides consulting services to businesses and public institutions throughout North Carolina.

A team of 68 engineers and scientists provide waste, water and energy reduction assessments and technical assistance to clients at **no-cost**.

The program focuses on pollution prevention, operating efficiency improvements and cost effectiveness.

Confidential - Non-regulatory - No-cost services

Clients

Businesses
Non-Profits
Manufacturing
Schools
Agriculture
Local Governments

Services and Projects

Energy Efficiency Assessments
Mentoring
Solid Waste Reduction
Water Efficiency
Greening Assessments
Pollution Prevention



WRP Statewide Volunteers

WRP utilizes retired and volunteer engineers and scientists.



WRP Land-of-Sky Regional Council - 45
Asheville, North Carolina

- ▶ Engaging the “Baby Boomer” community resource – 2 million in 2025 in North Carolina
- ▶ Staff is highly respected by clients, “Speak the Business Language.”
- ▶ Over 2300 years of cumulative experience
- ▶ Staffing able to “stay with” clients through project implementation
- ▶ Promotes sustainable economy and healthy environment



WRP Triangle J Council of Governments - 24
Research Triangle Park, North Carolina

WRP 2010 -11 Accomplishments

*\$5.6 Million- Client Acquired
Energy Grants/Incentives*

*52%- Energy Project
Implementation Rate*

*36,430 MMbtu- Client Energy
Reduction*

250 Sites- Visited in 62 Counties

**\$1.89
Million**

*Total Client
Savings*

**\$780,000
Annually**

*Client Energy
Savings*

4.8 MGY

*Water Usage
Reduction*

**20,300
Tons**

*Solid Waste
Reduction*

WRP Funding Partners

CHEROKEE PRESERVATION FOUNDATION

NCDENR

North Carolina Energy Office energync.net

ENERGY

USDA

Progress Energy

U.S. ENVIRONMENTAL PROTECTION AGENCY

RECOVERY.GOV

POLLUTION PREVENTION PAYS

BOONE North Carolina

CITY OF ASHEVILLE NORTH CAROLINA

NATIONAL PARK SERVICE

NC Department of Environmental Assistance and Outreach / NC DENR

State Energy Office / NCDOC

USDA Rural Utility Service

US EPA

Cherokee Preservation Foundation

City of Asheville – Water Resources

Progress Energy Carolinas

Town of Boone

Private Contributions

Energy Efficiency Assistance

Supporting Demand-Side Management Efforts and Greenhouse Gas Reductions

Energy efficiency projects are the smartest, most cost-effective way to reduce environmental impact and save money. WRP engineers provide clients with written reports highlighting project opportunities, energy-use benchmarks, cost/benefit analysis, financing strategies, and technical resources.

- ▶ Public Agencies, Commercial, Industrial
- ▶ Energy Assessments – Level 1 and 2
- ▶ Guidance for Performance Contracting (Schools and Local Governments)
- ▶ Strategic Energy Planning
- ▶ Supporting State's Utility Savings Initiative



Energy Efficiency Assessments

- Pre-assessment Screening
- Analyze Utility Bills
- Conduct Walk-through Surveys
- Target Energy Uses
 - Process/motor
 - HVAC
 - Lighting
- Review Building Envelope
- Seek Demand Reduction/EMS/Policies
- Consider Benchmarking
- Understand Financing Options
- Support Strategic Energy Planning Initiatives

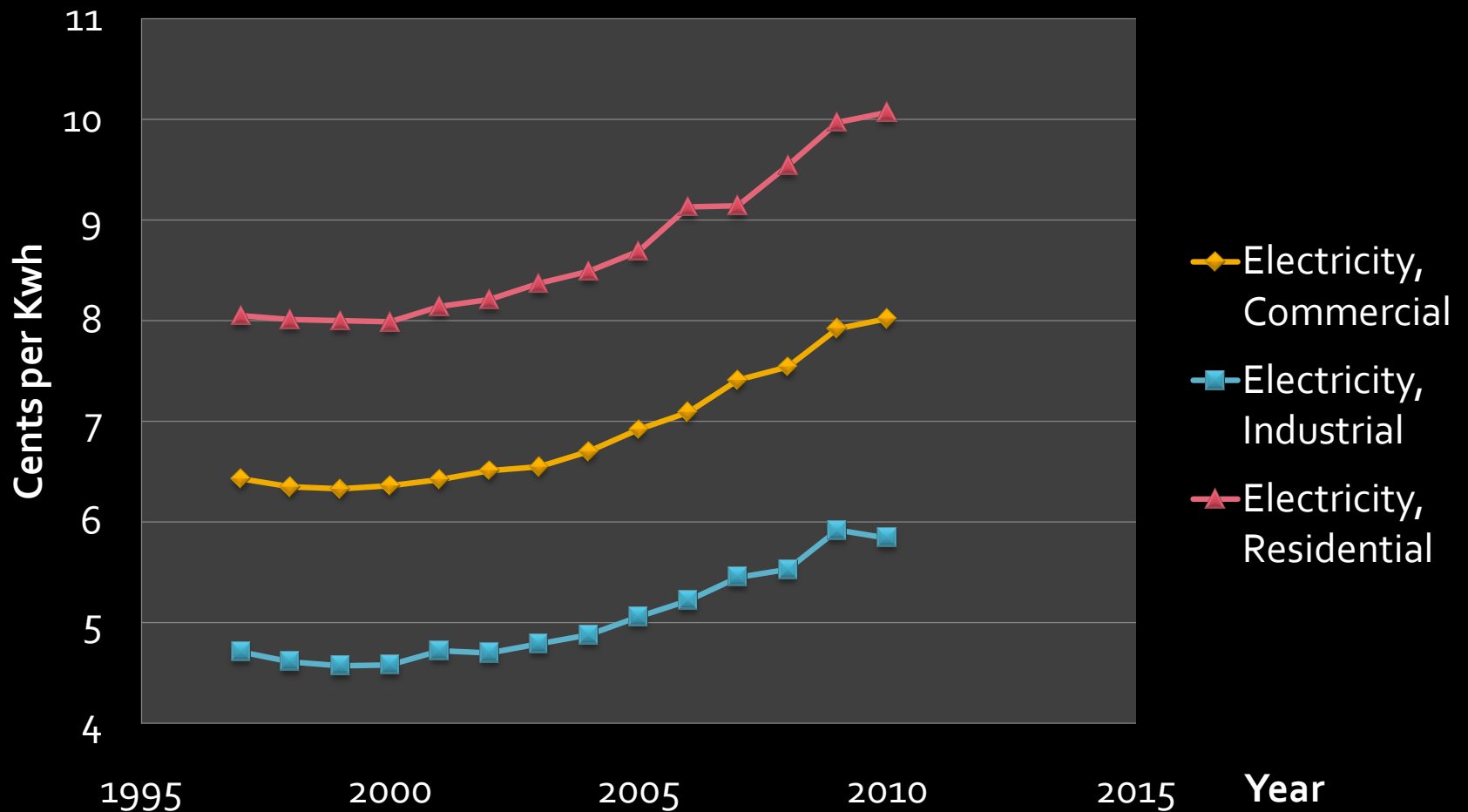


Factors Driving for Better Energy Management

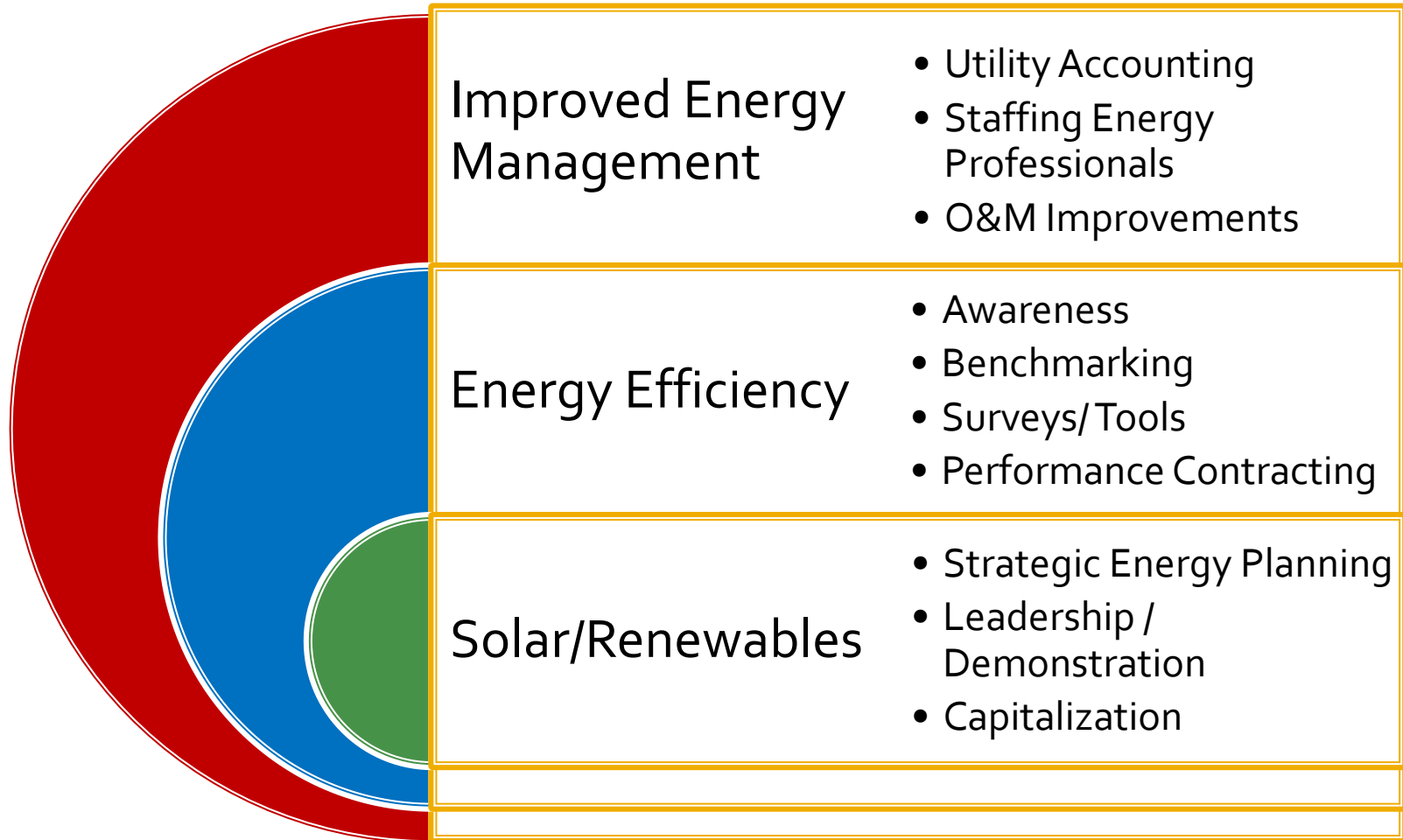
- Increasing traditional energy costs
- Need for additional supplies
- NC Renewable Energy Portfolio Standard (12.5%)
 - Utility rebates
- Tax credits and deductions (NC and Federal)
- Impending carbon regulations ?
- “Greening” Sustainability – e.g., NCLM Green Challenge
- NC agency legislative requirements
- Federal recovery and stimulus investments

Energy Supply - Cost Trends

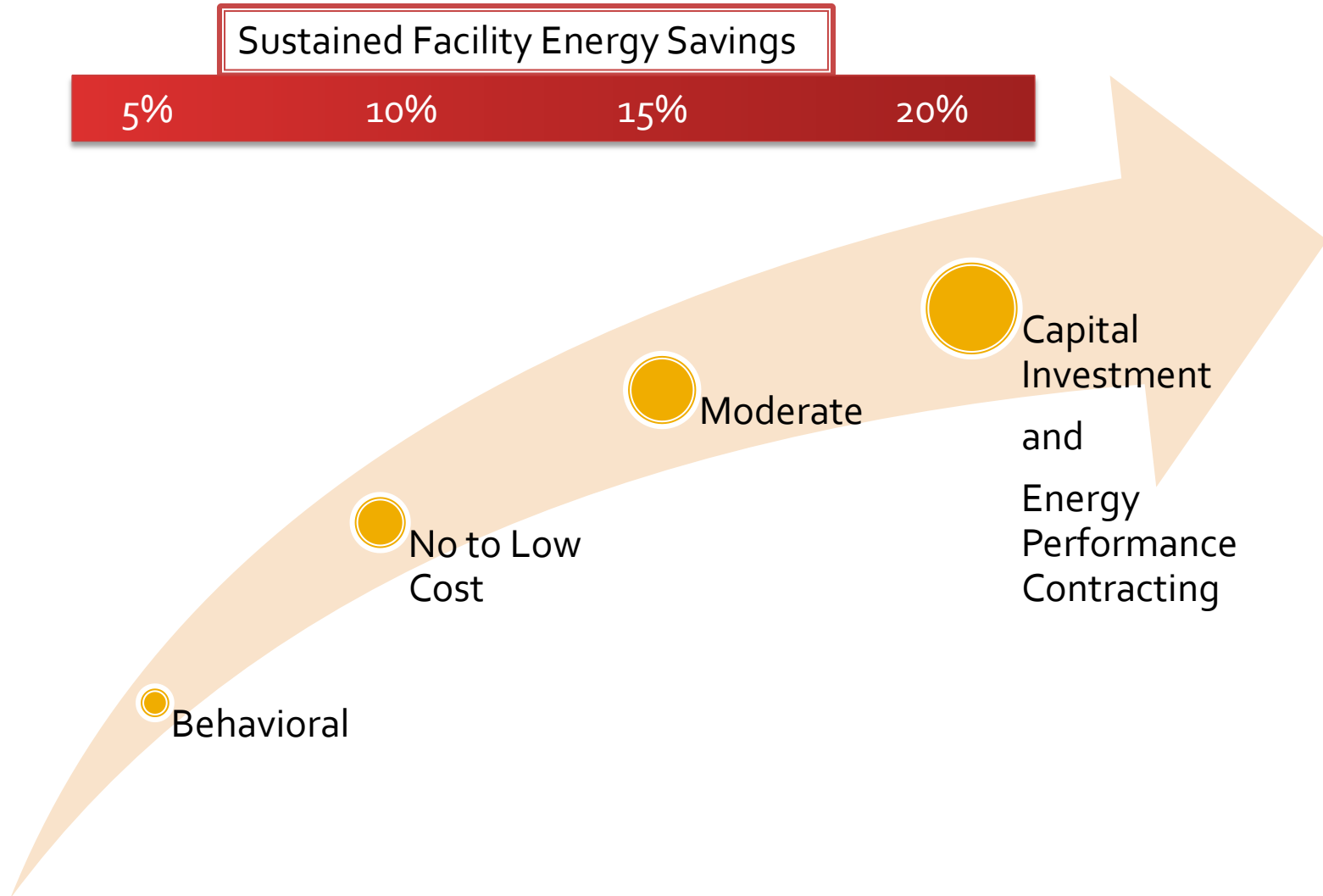
Average Retail Electricity Costs in North Carolina



Energy Saving Advantage: 3-30% Potential Energy Savings for Facilities



What Does It Cost To Save Energy?



Financing Approaches

No Cost / Low Cost

- No-cost measure – implement first
- Increment implementation (O&M budget)

Capital Projects


- Traditional financing
- Grants
- Utility rebates
- Performance contracting
- Special lease-purchase terms – renewables

2010 Energy Efficiency Measure Implementation Study - WRP

ECM	Frequency Recommended	Simple Payback Range	Percentage Implemented
Upgrade Lighting	24	2.7 – 5.0 years	64
Improve Envelope	17	0 – 20 years	76
Upgrade HVAC	15	Variable	47
De-lamp Vending	12	No cost	25
Improve HVAC Maintenance	12	Low cost	58
Reduce Lighting	10	No cost	50
Rate Reviews	9	No cost	33
Exit Light Upgrade	8	< 2.0 years	75
Occupancy Sensors	7	2.3-4.6	29
Compressed Air Leaks	7	0.1	57
Deactivate Equipment	6	No cost	33
Premium Efficiency Motors	6	2.0 year (20 HP)	33


WRP Contacts

WRP - Land-of-Sky Regional Council



339 New Leicester Hwy, Suite 140
Asheville, NC 28806
828-251-6622 wrp@landofsky.org
Russ Jordan, WRP Energy Manager

WRP - Triangle J Council of Governments



PO Box 12276
Research Triangle Park, NC 27703
919-558-2702 wrp@tjcog.org
Conrad Meyer, Technical Manager
Syd Jeffrey, Program Administrator