



**An Overview of Issues and Initiatives**  
**Presented to the Arkansas Alternative Energy Commission**  
**November 21, 2013**  
**Presenter: Steve Patterson, Executive Director**

# What is Advanced Energy?

Advanced energy can be defined as any service or technology that makes America's energy supply more secure, clean and affordable.

This can include but not be limited to:

- Biofuels and BioProducts
- Compressed Natural Gas and other clean burning fuels
- Energy Efficient Buildings
- Energy Saving Consumer Products
- Geothermal
- Hydropower
- Nuclear
- Solar
- Wind

# Who are we and why are we here?

- **The Arkansas Advanced Energy Association (AAEA) is a non-profit, Section 501(c)6 trade association.**
- **AAEA formed to grow Arkansas's economy by expanding our energy workforce and manufacturing base through the increased development, manufacture and utilization of advanced energy technologies.**
- **Our membership is a unique blend of more than 90 manufacturers, energy providers, entrepreneurs, small business owners, educators, researchers and public institutions.**
- **These members have joined in the common interest of economic expansion and job creation in the advanced energy sector.**

# AAEA Membership

## Renewable Energy

Arklahoma Solar  
Nordex USA  
Rocky Grove Sun  
Company  
Silicon Solar Solutions  
Stellar Sun  
Sun City Solar Energy  
TradeWind Energy, Inc.  
TremWel Energy

## Alternative Fuels

alt.Consulting, Inc.  
Arkansas CNG Conversion  
Center  
Arkansas Oklahoma Gas  
Corporation  
BioEnergy Systems, LLC  
Cache River Biofuels  
FutureFuel Chemical  
Company  
Infinite Enzymes  
Pinnacle Biofuels, Inc.

## Transmission

Clean Line Energy

## Research / Education

Arkansas Energy Sector  
Partnership  
Arkansas State University  
Histecon Associates, Inc.  
John Brown University  
Mid-South Community  
College  
Philander Smith College  
Phillips Community  
College of the U of A  
Pulaski Technical College  
University of Arkansas  
University of Arkansas Fort  
Smith  
U of A, Applied  
Sustainability Center  
USGBC – Arkansas

# AAEA Membership

## Energy Efficiency

AGHco Energy

Baldor Electric Company

Brown Engineers, LLC

Clear Energy Inc.

E-3 Strategic Resources

Ellis Properties LLC

Energy Master Home Inc.

Energy Systems Group

HERS Inc.

Home ENERGY Rx

Hydro-Temp Corporation

Johnson Controls, Inc.

MESA Landscape

Architects

NextGen Illumination

Pepco Energy Services

Pinnacle Energy Services

Powers of AR

SEAL Corporation

Siemens Industries Inc.

Southeast Energy

Efficiency Alliance (SEEA)

T&T Green, Insulation

Innovations

TEKLUMEN

Turn Key Construction  
Management

Wilson's Home  
Improvement

Viridian

# AAEA Membership

## Service Provider

ARKOMA Consulting, Inc.  
Arthur J. Gallagher & Co., Inc.  
CDP Strategies  
Cimarron Capital Partners  
Genesis Capital, LLC  
Kenneth L. Smith Consulting  
Modthink  
Rivers Edge Ventures, Inc.  
Williams & Anderson, PLC  
Wilson, Engstrom, Corum & Coulter

## Other

AEDC  
City of Fayetteville  
City of North Little Rock  
Fayetteville Chamber of Commerce  
Forrest City Area Chamber of  
Commerce  
Fort Smith Regional Chamber of  
Commerce

**Figure 5: Advanced Energy Employment in Arkansas by Category**

<b>SEGMENT</b>	<b>2010 JOBS</b>
Architecture/Construction Services	814
Appliances	300
Battery Technologies	315
Biofuels/Biomass	433
Carbon Storage and Management	Less than 100
Electric Vehicle Technologies	800
Energy-saving Building Materials	1,858
Energy-saving Consumer Products	2,033
Fuel Cells	Less than 100
Geothermal	Less than 100
HVAC and Building Control Systems	2,403
Hydropower	748
Lighting	Less than 100
Nuclear Energy	1,186
Professional Energy Services	Less than 100
Renewable Energy Services	Less than 100
Smart Grid	Less than 100
Solar Photovoltaic	Less than 100
Solar Thermal	Less than 100
Waste-to-Energy	Less than 100
Wave/Ocean Power	Less than 100
Wind	350
<b>Total</b>	<b>11,337</b>

Source: AEEI Analysis of Battelle-Brookings Database. Notes: Employment rounded to the nearest 10, those categories with fewer than 100 jobs, "Less than 100" is listed to replace the actual number, and sum may differ from the total because of rounding.

- **The Arkansas Advanced Energy Foundation (AAEF) is the educational affiliate of the AAEA.**
- **It is a Non-Profit, Section 501(c)3 charitable organization with a mission to increase utilization of advanced energy technologies through public education programs and events, workforce development and research.**



# **AAEF Activities Include:**

- **Presentation of General Assembly Candidate Workshops during Summer, 2012 in partnership with the University of Arkansas Applied Sustainability Center;**
- **Convening advanced energy working groups of industry leaders on energy efficiency, biofuels and renewable energy;**
- **Advanced Energy Public Opinion Survey, 2012 and 2013**
- **Access to Capital Report, Released October 2013**
- **Farm-to-Fuel Community Innovation Project in the Arkansas Delta in partnership with alt.consulting**
- **Supports sister organization AAEA with research and public education on advanced energy-related issues before the Arkansas Public Service Commission.**

# Advanced Energy on the Move in 2013

## Policy and Advocacy

### **AAEA-endorsed Legislation enacted during 2013 General Assembly:**

- Property Assessed Clean Energy Act 1074
- Guaranteed Energy Cost Savings Act 554
- Clean Burning Motor Fuels Development Act 532
- Revisions to Net Metering Rules Act 1221
- Energy Efficiency Bonds Authorization for State Agencies Act 1252

### **Participation at the Arkansas Public Service Commission:**

- Docket 12-060-R: to Amend Arkansas Net Metering Rules to allow aggregation by net metering customers
- Docket 13-002-U: Reauthorization of Comprehensive Utility Energy Efficiency Programs

# Advanced Energy on the Move in 2013

## Events

**Advanced Energy Day at the Legislature:** January 2013

**AAEA and AAEF Boards testify at special session of Legislative Joint Energy Committee:**  
June 2013

**Champions of Advanced Energy Reception:** June 2013

**Arkansas PACE Energy Financing Seminars:** August 2013- Present

**Fayetteville Power Hour Reception:** August 2013

**emPOWERing Arkansas:** October 2013

**Farm to Fuel: Technologies Advanced and Sold in the Arkansas Delta :** October 29, 2013 in Dewitt, AR. *This event is hosted by the Arkansas Advanced Energy Foundation*

## Membership

**AAEA expanded membership from 50 in January to almost 90 companies and individuals today**

# Farm to Fuel:

Technologies Advanced and Sold in the Arkansas Delta

October 29, 2013

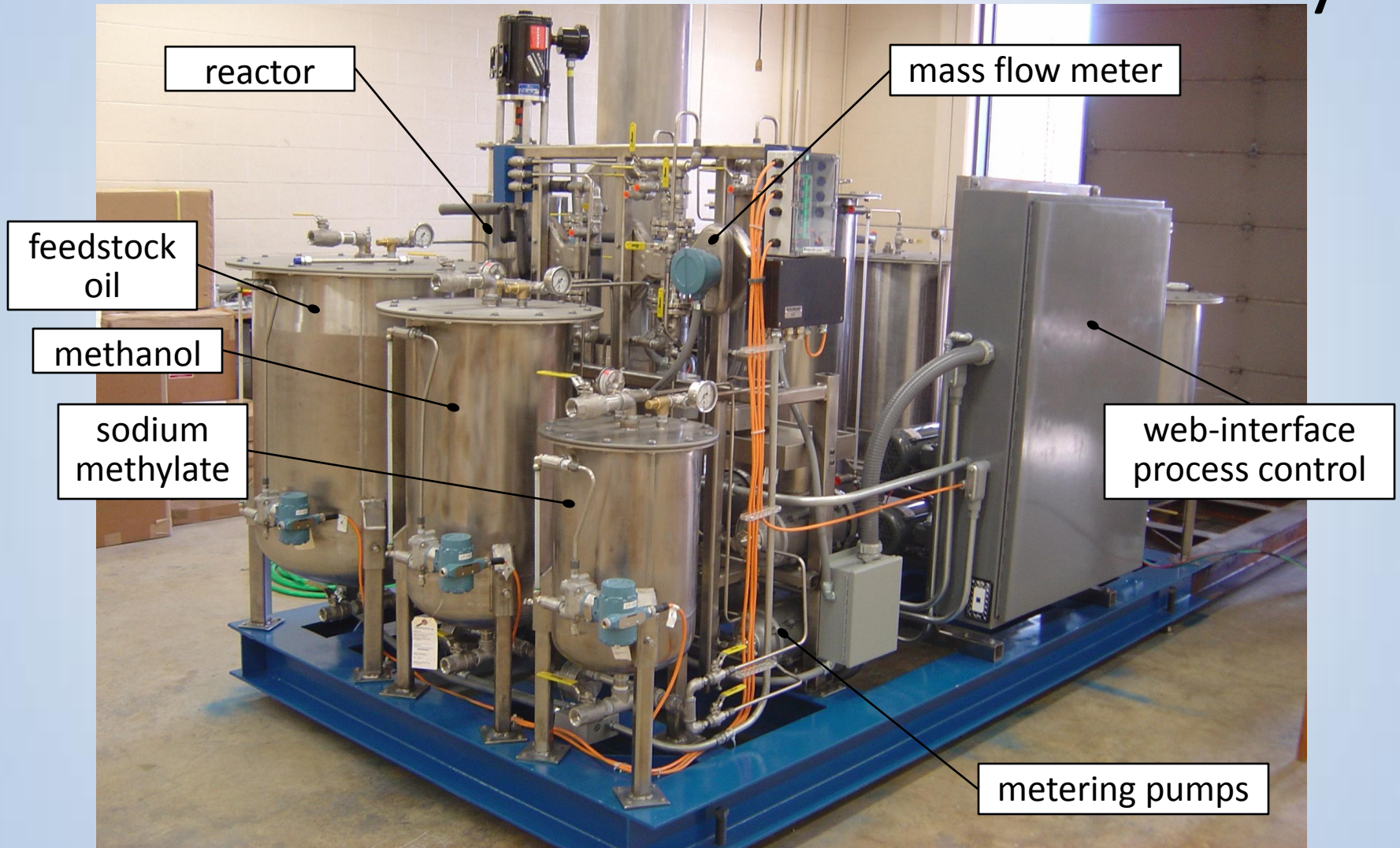
DeWitt, AR

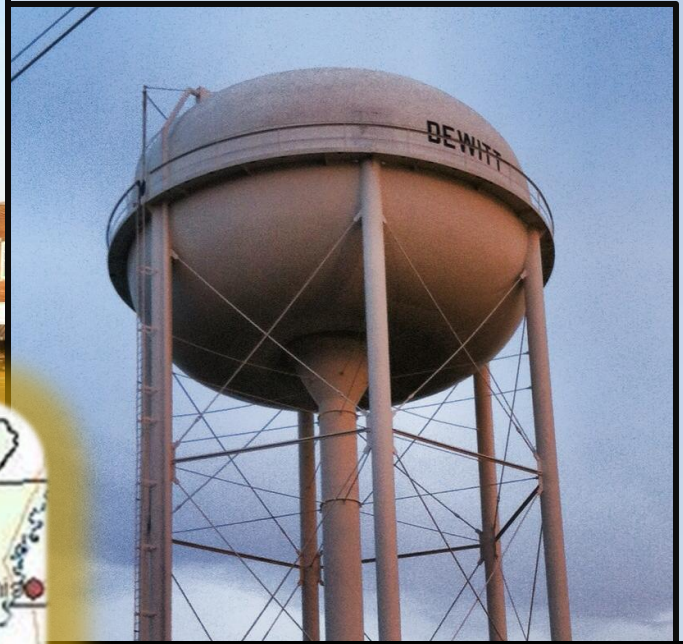


arkansas  
advanced  
energy  
foundation

**alt.**Consulting

# BEST: First Generation Micro-Refinery





**De Witt, Arkansas**

**Farm to Fuel Pilot Site**

# P A C E

**Now Available in Arkansas**

**Presentation by**

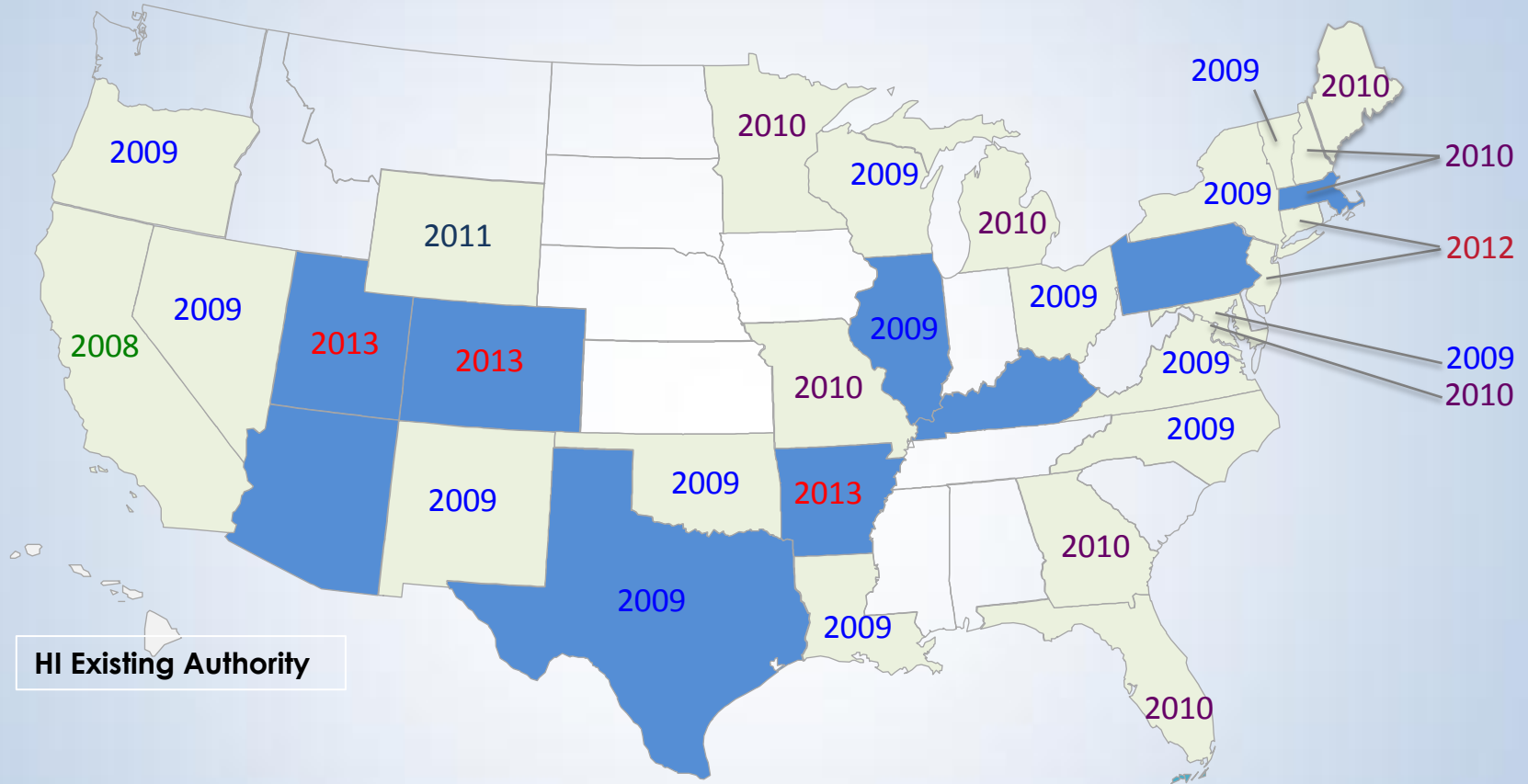


**aaea**

ARKANSAS ADVANCED  
ENERGY ASSOCIATION

# PACE Legislative History

Today – 30 states and DC account for nearly 80% of US population



HI Existing Authority

■ PACE enabled

■ 2013 legislative initiatives to establish or amend PACE legislation



# The U.S. Commercial Real Estate Market is Ripe for Energy Savings Retrofits

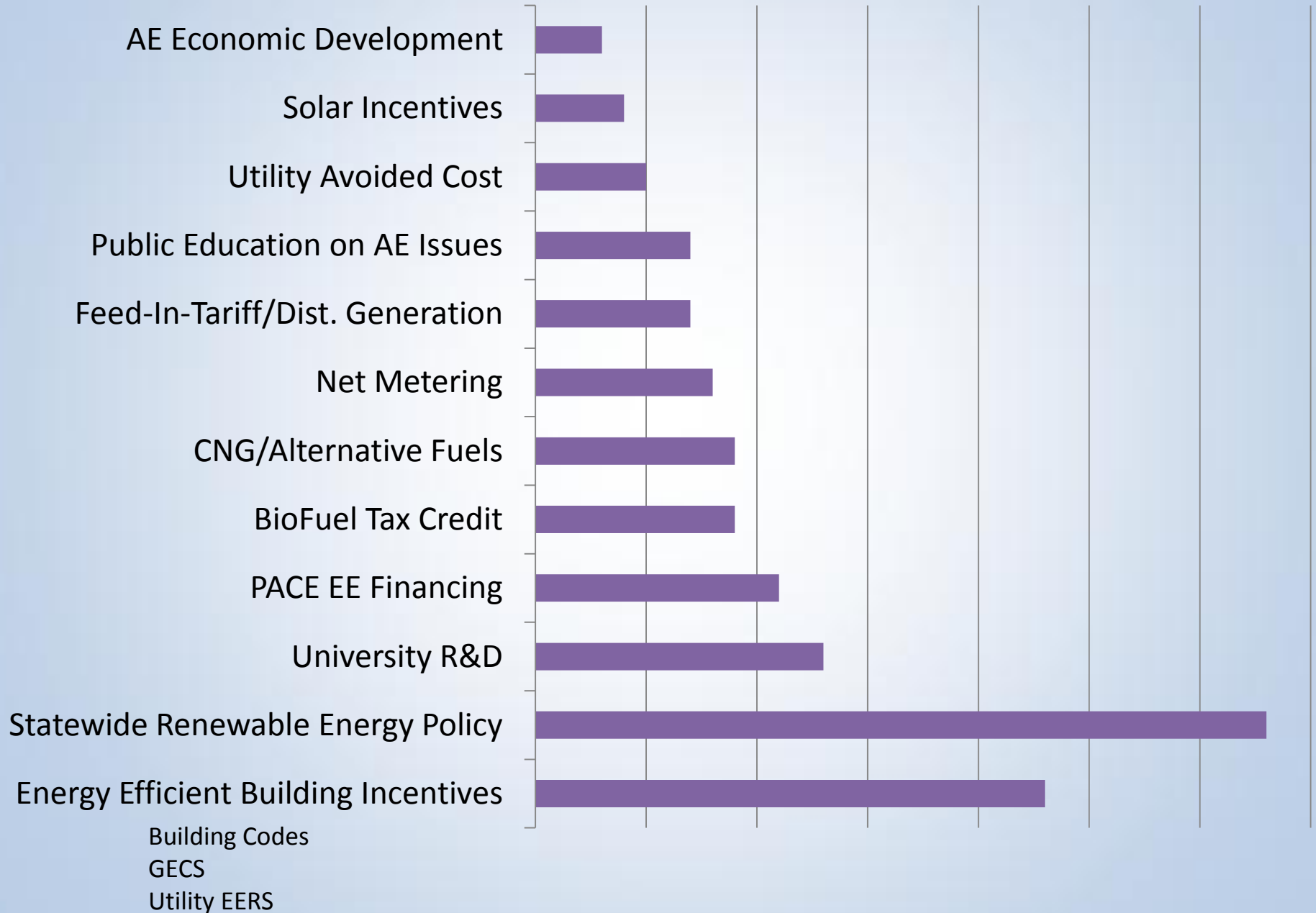
- 4.8 million office, retail, service, lodging, multifamily warehouse and storage buildings
- 75% of commercial real estate was constructed prior to 1990
- Most buildings still rely on original mechanical and electrical equipment approaching the end of its useful life.
- This has resulted in substantial pent-up demand for equipment upgrades and replacements/building solutions.

# Keeping It Simple

Financing approvals are simple, but PACE funded improvements must be permanently affixed to the property and save money for the property owner.



# List Top Policy Issues that are Most Important to You



# **Arkansans Support Advanced Energy**

Results of the 2013 Energy Survey  
by Arkansas Advanced Energy Foundation



arkansas  
advanced  
energy  
foundation

# **Advanced Energy Technologies are Important for our Future**

- 84 percent of Arkansans believe that advanced energy technologies are important for Arkansas's future. 50% say it's very important.

# **Our Political Leaders need to Boost Advanced Energy Development**

- 86 percent believe it's important for the state's political leaders to do more to further advanced energy in the state.

# Advanced Energy Needs State Government Support

- By almost two to one, more Arkansans believe the state government should do more to further advanced energy in Arkansas rather than leave it to private industry to go it alone. Only conservatives and Republicans (roughly 35% of adult Arkansans self-identify in these groups) believe that private industry should do more than state government to further this emerging industry.

# Advanced Energy Creates Jobs

- By a two to one margin, more Arkansans believe that an increase in the use of energy-saving technologies like high-efficiency lighting, appliances and insulation will mostly create American jobs rather than cost us American jobs.



# **Advanced Energy Products Should be Manufactured Here**

- 84 percent of Arkansans think it is important (55% say very important) for advanced energy products like LED lighting products, high-efficiency motors and equipment, and wind turbine components to be manufactured in Arkansas.

# **Arkansas Should Better Utilize Natural Energy Resources**

- Nearly all respondents - 89 percent - believe it is important (66% say very important) that Arkansas adopts policies that allow us to better utilize energy resources that naturally exist in the state.

# Arkansans Like Wind and Solar Energy

- Arkansans overwhelmingly support solar energy. 63 percent support a state income tax credit for homeowners and apartment building owners who install solar energy systems for heating and cooling buildings or for heating water. Only 15 percent opposed.
- 66 percent would support measures to encourage development of utility scale wind power resources in Arkansas. Only 7 percent oppose. This is significant as the recent wind study published by our Arkansas Energy Office indicates several locations where large-scale wind generation could be installed.

# Arkansans Support Energy Efficiency Policies

- We asked several questions about energy efficiency and found Arkansans recognize that the cheapest energy is the energy you don't use:
  - 58 percent support PACE financing for energy efficiency improvements to buildings. Only 8 percent oppose;
  - By a five to one margin, respondents believe advanced energy technology will save money and energy while creating jobs and boosting the economy, rather than cost too much and not reduce energy consumption enough (60% to 12%;
  - 62 percent said they would pay about \$1300 more for their home if it was built to higher energy efficiency standards;
  - 68 percent support placement of a “home energy label” on homes for sale so consumers can compare energy costs just like they do miles per gallon on a new car.