Delaware Energy Plan
Energy & Economic Development Workgroup

Economic Development Impacts of Sustainable Energy Investments

&

Update on the Delaware Sustainable Energy Utility

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Center for Energy and Environmental Policy
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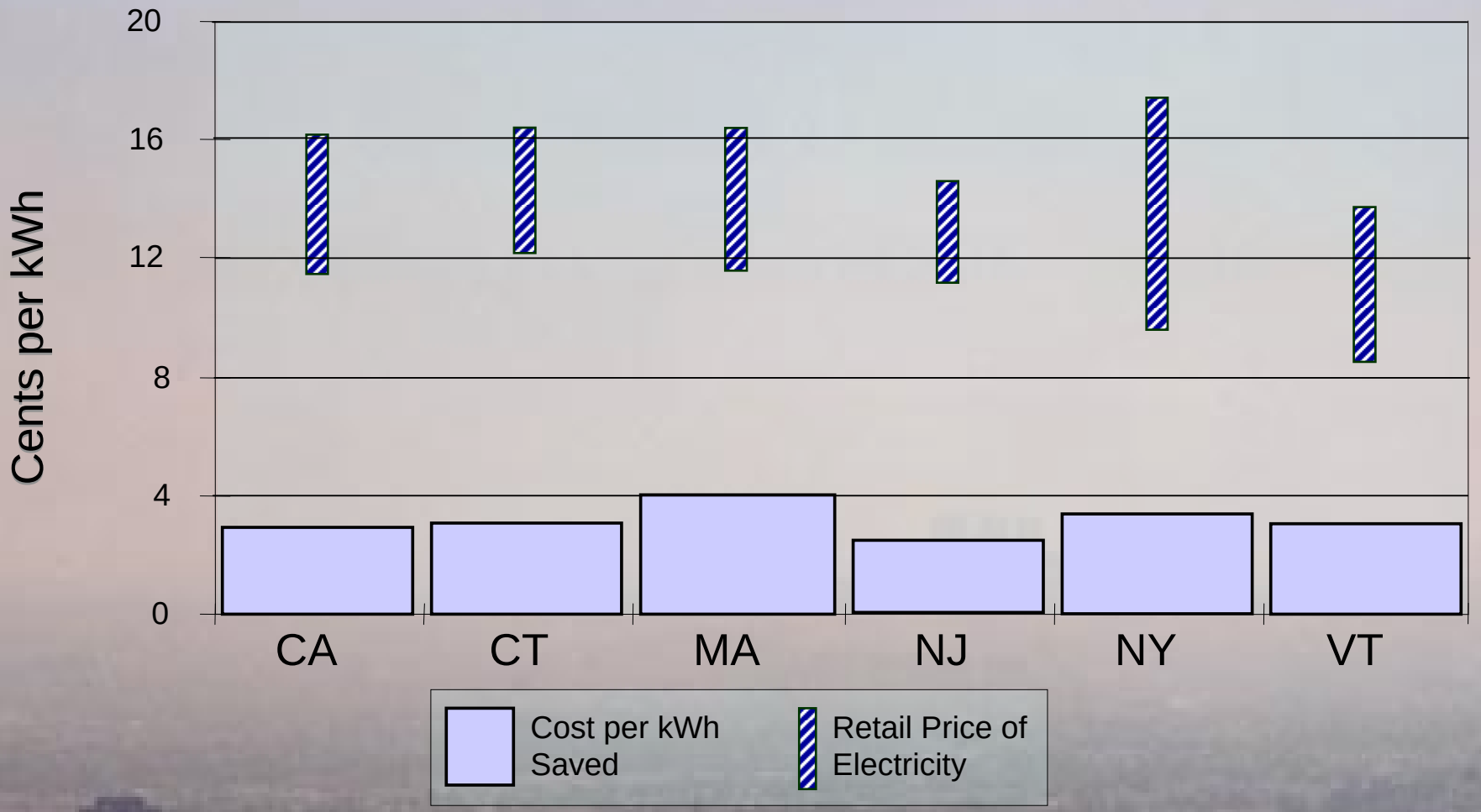
September 29, 2008

U.S. Cost per kWh Saved versus kWh Supplied



Source: Delaware Sustainable Energy Utility Task Force (2007) http://www.seu-de.org/docs/Section_F.pdf http://www.seu-de.org/docs/Section_H.pdf and http://www.seu-de.org/docs/App_A.pdf

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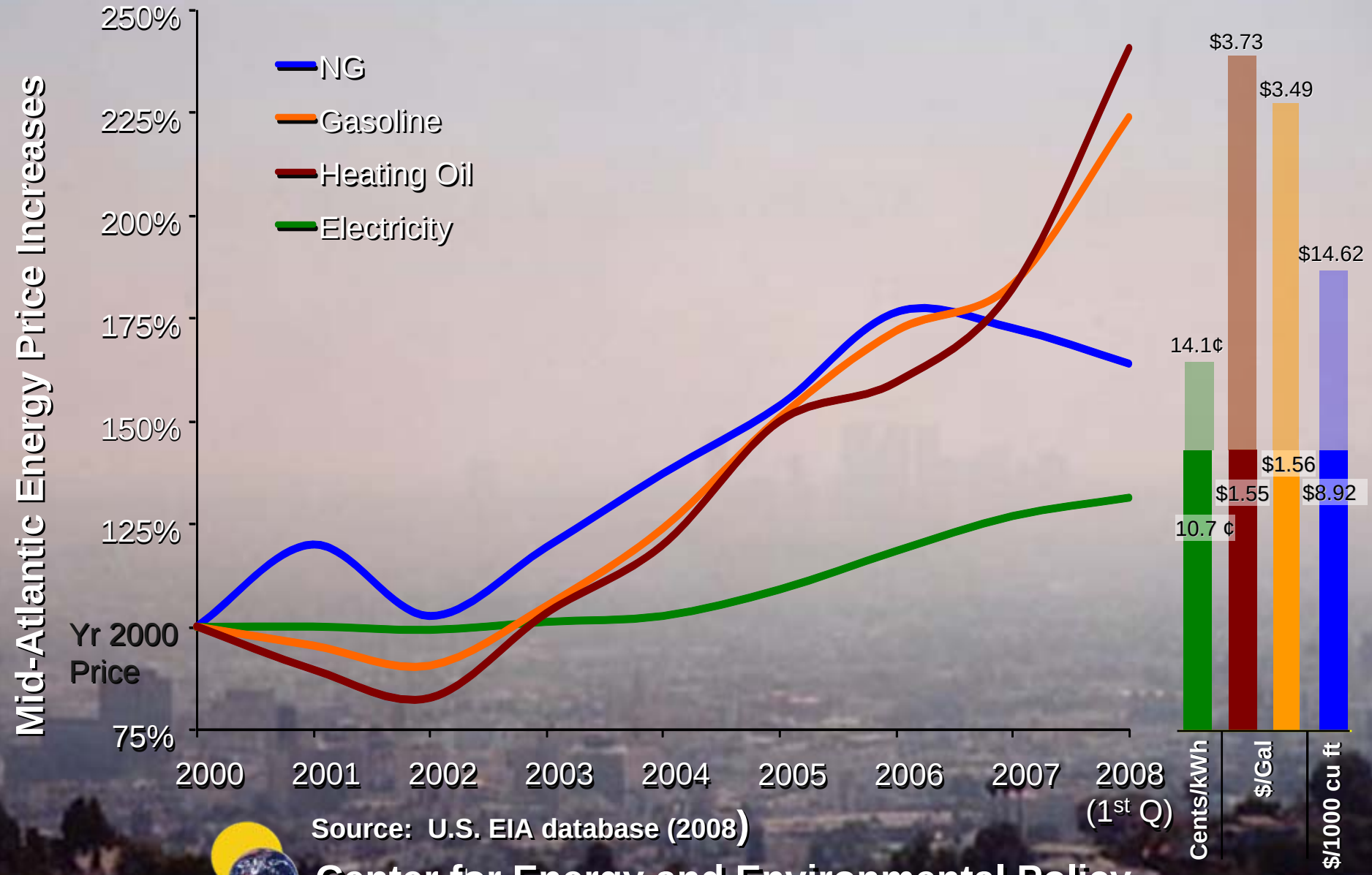
Climbing Conventional Energy Prices: U.S. East Coast Urban Corridor



Source: U.S. EIA database (2008)

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Energy Efficiency Improvements Produce Results

Organizations have already begun to take advantage of Energy Efficiency Savings

Chicago Housing Authority

Investment	$30 million
Savings	$36 million
% Savings	20%
ESCO	Ameresco
Project	Decentralized steam plant

CHANGE.
CHICAGO HOUSING AUTHORITY

Charleston Air Force Base

Investment	$9.2 million
Savings	$800,000/yr
% Savings	40%
ESCO	Ameresco
Project	Underground heat plants

U.S. AIR FORCE

Allegheny County, PA

Investment	$8.9 million
Savings	$13.7 million
% Savings	53%
ESCO	Noresco
Project	Building Retrofits

University of Massachusetts Medical Center

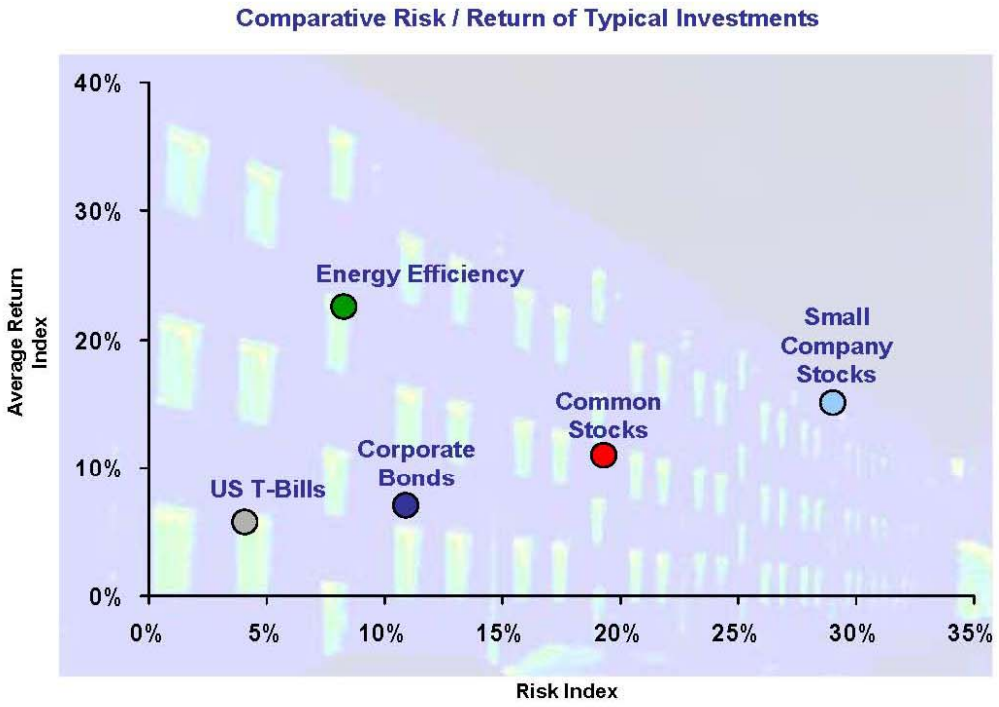
Investment	$30 million
Savings	$3.63 million/yr
% Savings	21%*
ESCO	Noresco
Project	Building Retrofits

UMASS

*Savings assumption based on a 10 year borrowing assumption

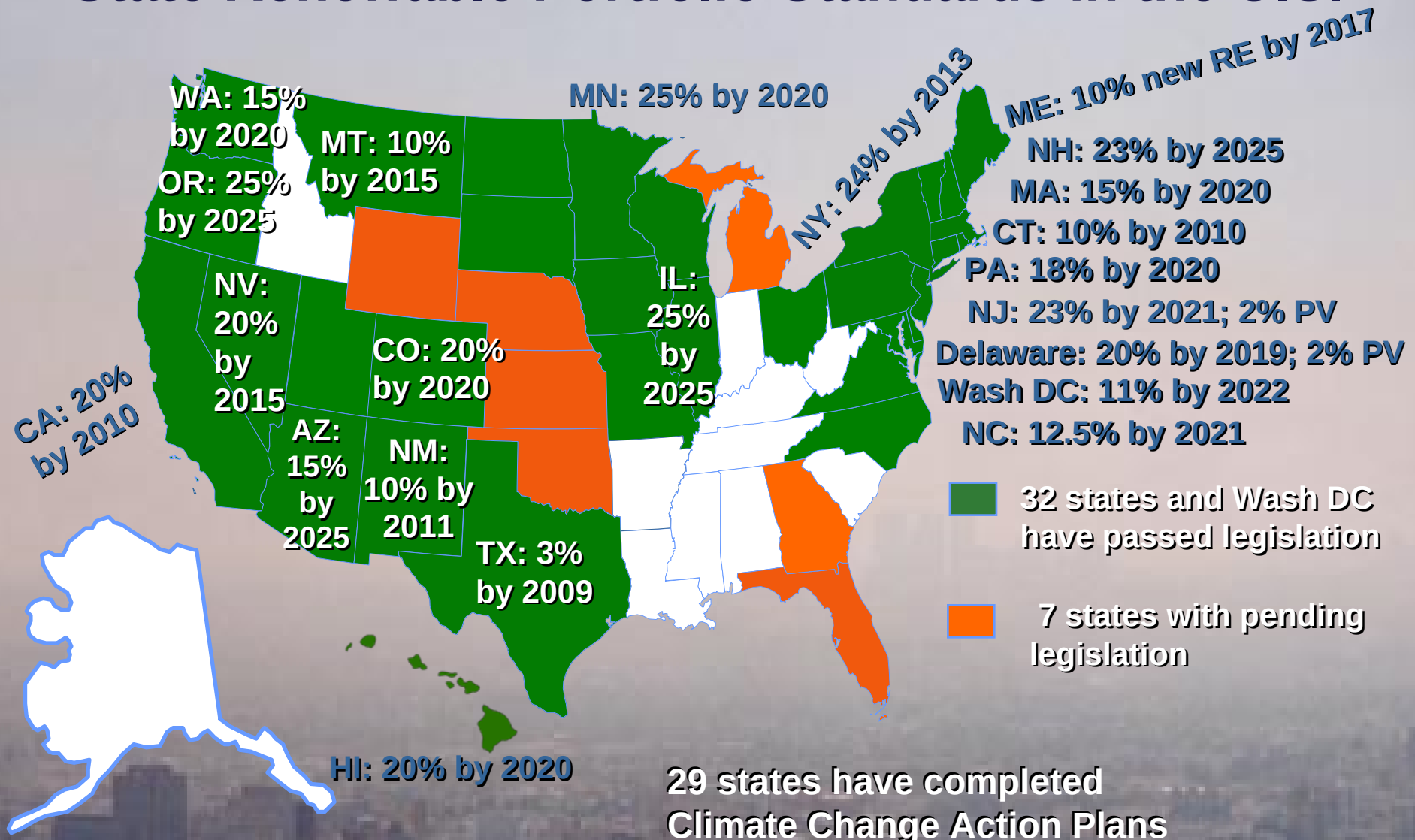
Raising the Necessary Capital

From a risk/return standpoint, Energy Efficiency investments pose a remarkable opportunity



Source: "The size of the US Energy Efficiency Market: Generating a More Complete Picture Karen Ehrhard-Martinez and John. A. "Skip" Laitner. May 2008

State Renewable Portfolio Standards in the U.S.



29 states have completed Climate Change Action Plans
http://yosemite.epa.gov/oar/globalwarming.nsf/content/ActionsStateActionPlans.html

Sources: CEEP Survey, 2008; DSIRE, 2008

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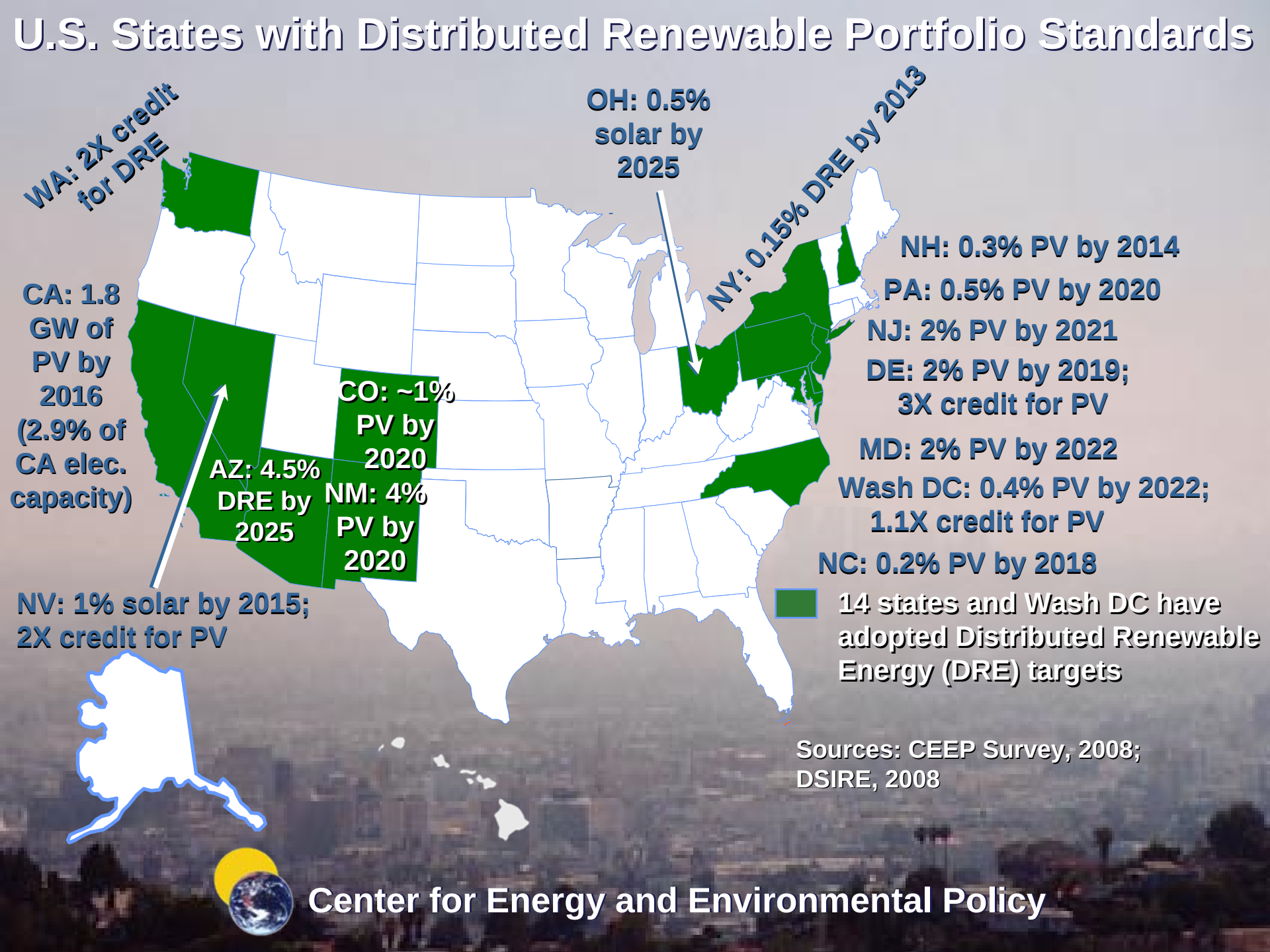
U.S. States with Distributed Renewable Portfolio Standards



Sources: CEEP Survey, 2008; DSIRE, 2008

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Green Jobs: The Sustainable Energy Advantage

	Jobs Created per Million $ Invested
ENERGY EFFICIENCY & CONSERVATION	**5.4**
Residential Buildings	8.2
Commercial Buildings	6.3
Transportation	4.6
Appliances & Equipment	4.0
RENEWABLE ENERGY	**5.3**
Wind	5.7
Solar PV	5.65
Geothermal	4.7
COAL PLANTS	**4.0**

Sources: Erhardt-Martinez & Laitner, *The Size of the U.S. Energy Efficiency Market*. ACEEE, 2008. Singh & Fehrs, *The Work that Goes into Renewable Energy*. REPP, 2001.

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June 28, 2007
State of Delaware **(pop. 850,000)**
Bill creates 1st Sustainable Energy Utility in the US

Delaware creates a new utility with $30 million in bond authority, $20 million from carbon auction proceeds, and $5-10 million from the sale of renewable energy certificates to enable citizens and businesses to choose energy conservation, efficiency & renewables as their *1st* option.

July 15, 2008
District of Columbia **(pop. 580,000)**
Landmark Energy Bill Passes

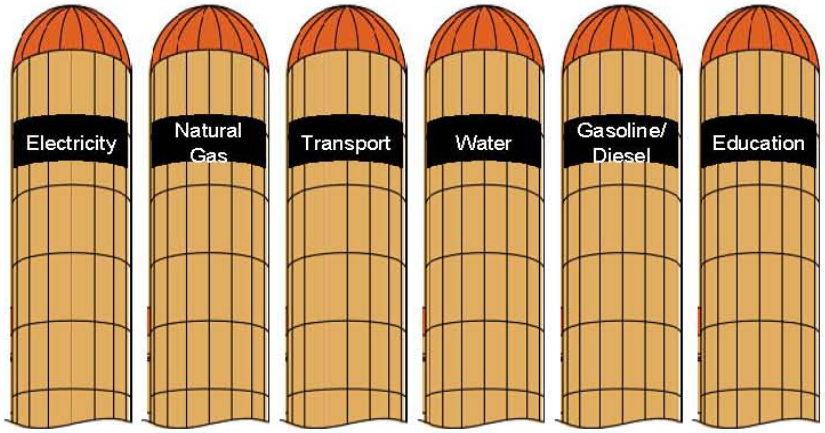
The “Clean and Affordable Energy Act” was unanimously passed on July 15, 2008 by the District of Columbia to establish the nation’s capitol “as one of the leading cities tackling climate change.” The District’s sustainable utility proposal is based on successful models in ***Delaware***, Vermont, Oregon, and New Jersey.

Delaware SEU: Our Nations *First* Demand Reduction Utility

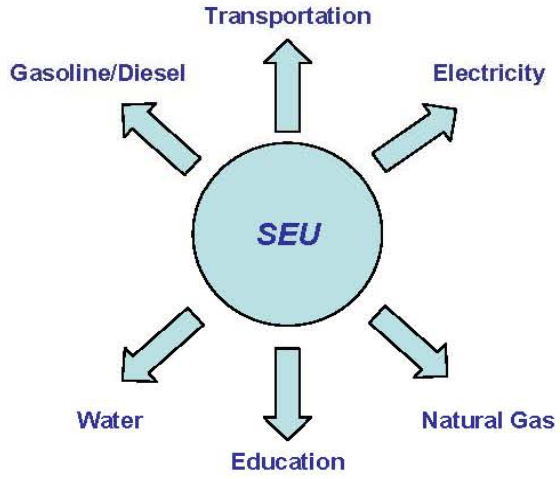
SEU will be a partner to existing utilities and a model to other communities

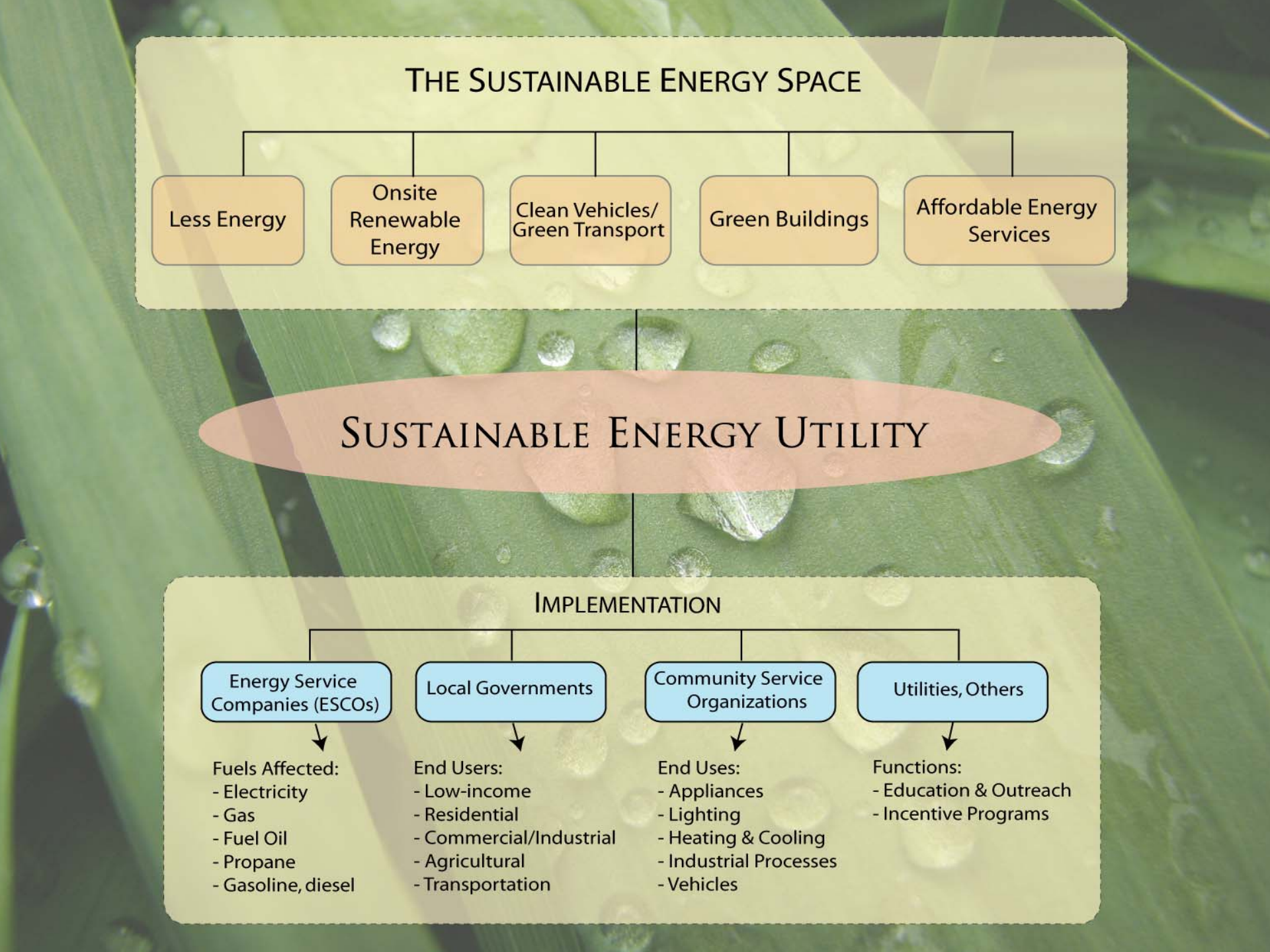
- SEU was established by the State of Delaware on June 28, 2007 for the purpose of:
  - Promoting and providing Energy Efficiency Services
  - Increasing the deployment of distributed renewable generation facilities
- SEU exists as a public/private partnership combining the best of both worlds
  - SEU will be organized as a non-profit tax-exempt 501(c)(3) or 501(c)(4) organization
  - Day to day operations will be conducted by for profit companies, specializing in the energy sector
  - Eliminates silos and provides solutions throughout the energy spectrum

Old Model



New Model



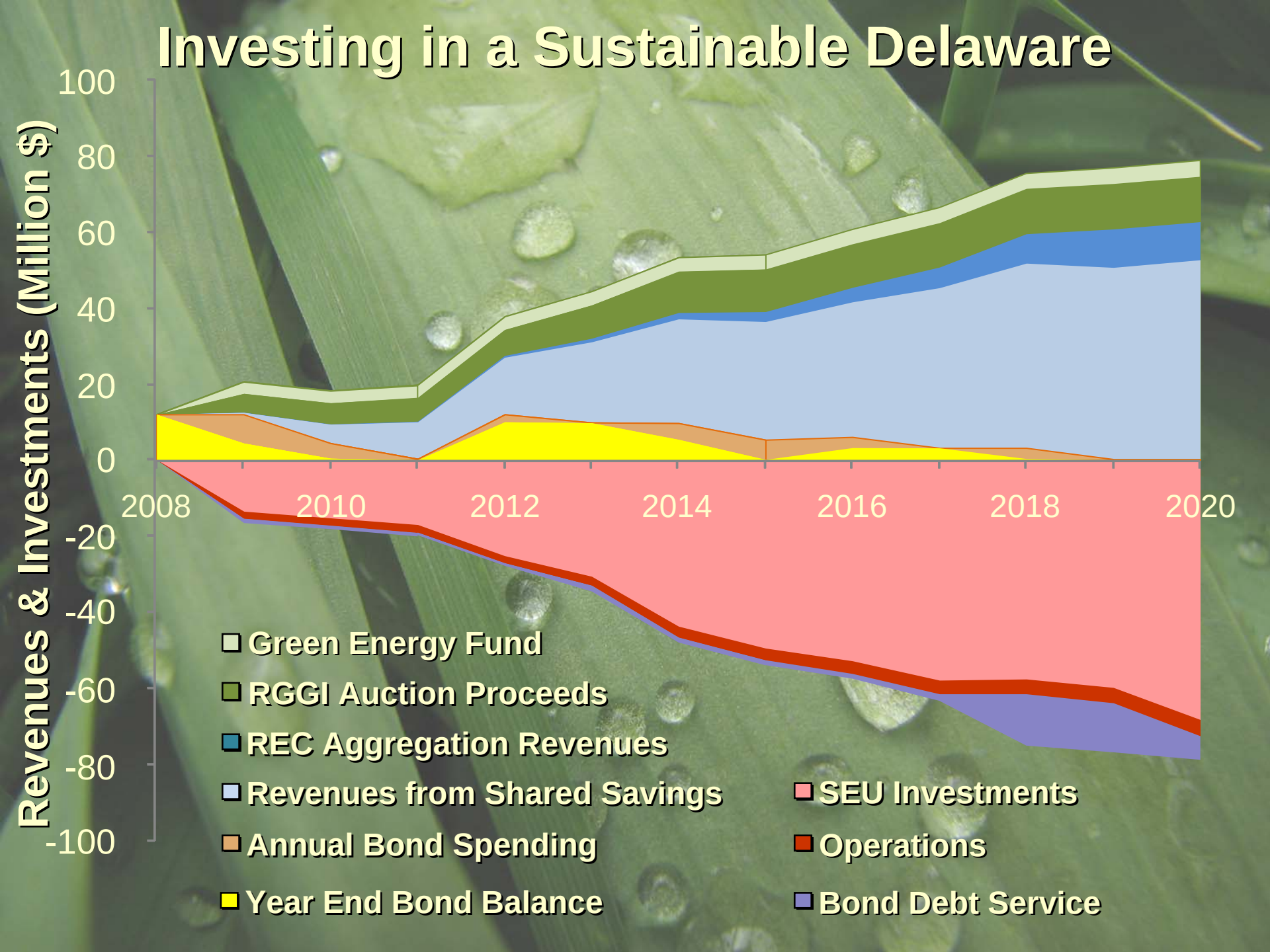

THE SUSTAINABLE ENERGY SPACE
Less Energy
Onsite Renewable Energy
Clean Vehicles/ Green Transport
Green Buildings
Affordable Energy Services
SUSTAINABLE ENERGY UTILITY
IMPLEMENTATION
Energy Service Companies (ESCOs)
Local Governments
Community Service Organizations
Utilities, Others
Fuels Affected:
- Electricity
- Gas
- Fuel Oil
- Propane
- Gasoline, diesel
End Users:
- Low-income
- Residential
- Commercial/Industrial
- Agricultural
- Transportation
End Uses:
- Appliances
- Lighting
- Heating & Cooling
- Industrial Processes
- Vehicles
Functions:
- Education & Outreach
- Incentive Programs

Delaware Sustainable Energy Utility

Legislation Goals & Board Recommended Targets

- **Reduce conventional energy consumption by 30% for Participants by 2020 (assumed 2020 participation rate = 33%)**
- **Invest in 300-40 MW of Renewables installed onsite (by 2020)**
- **Double yearly Low- & Moderate Income Weatherization rate by 2012 under the SEU's Affordable Energy Program**
- **Create Green Communities Program to assist school districts, local governments and public university and health care facilities to 'go green' (annual investments might total $2-4 million)**

Investing in a Sustainable Delaware



Delaware Sustainable Energy Utility

*** Delaware's 2005 CO_2 Emissions = ~17.8 million short tons**

Sustainable Energy Utility

Website: http://www.seu-de.org/

See also feature article in *IEEE Spectrum*:
http://www.spectrum.ieee.org/may08/6216

For more information, please contact:

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Co-chairs, SEU Oversight Board