

Regional Roundup

The Changing Face of Market Transformation

Panelists

Claire Fulenwider, Northwest Energy
Efficiency Alliance

Bruce Johnson, National Grid

Gene Rodrigues, SCE

Deb Sundin, Xcel Energy

Moderator

Marc Hoffman

CEE Executive Director



Working Together, Advancing Efficiency

Purpose

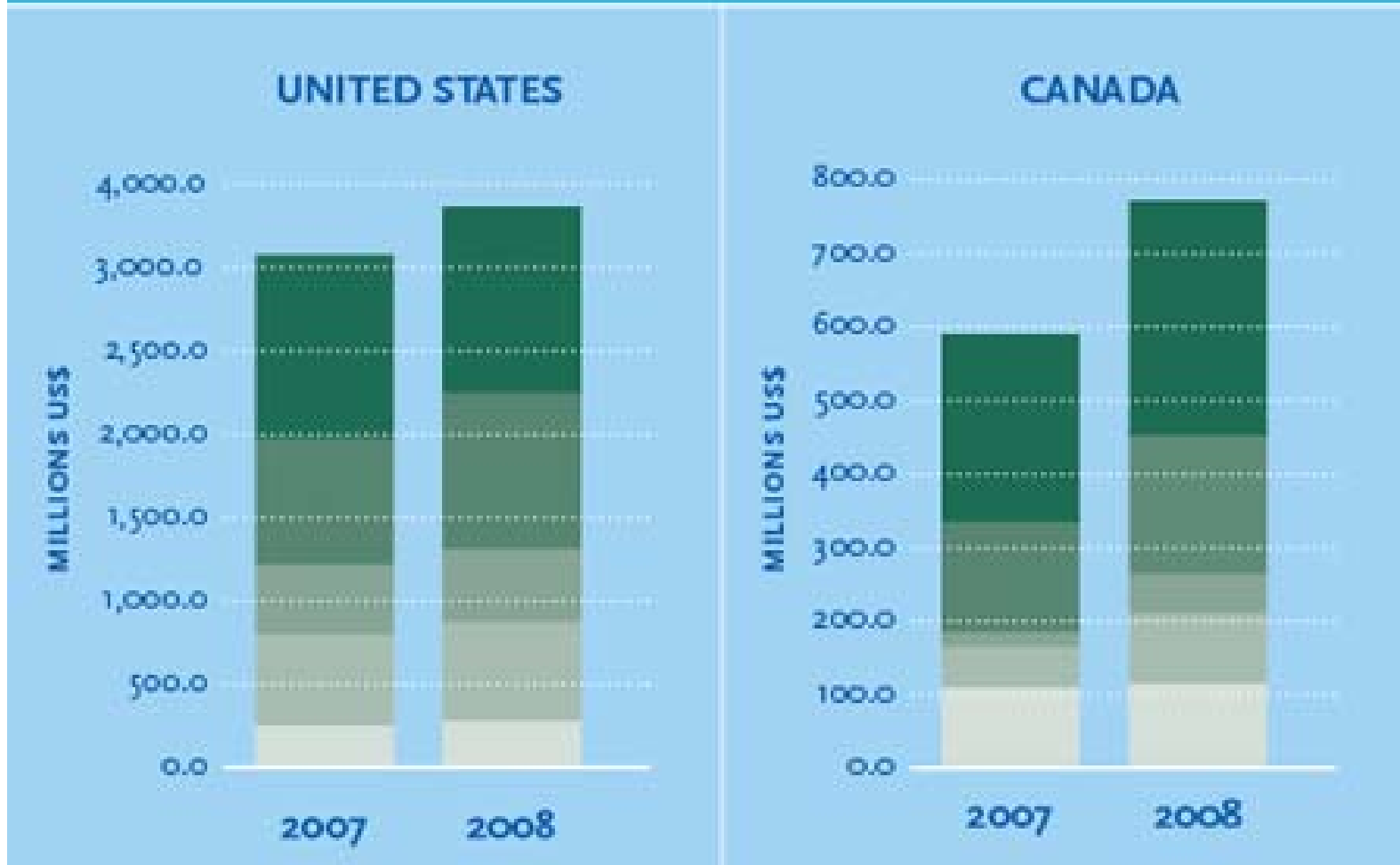
- Get some regional perspectives on the Changing Face of Market Transformation
 - Common issues facing all programs
 - Discuss some new program approaches

Today's Agenda and Approach

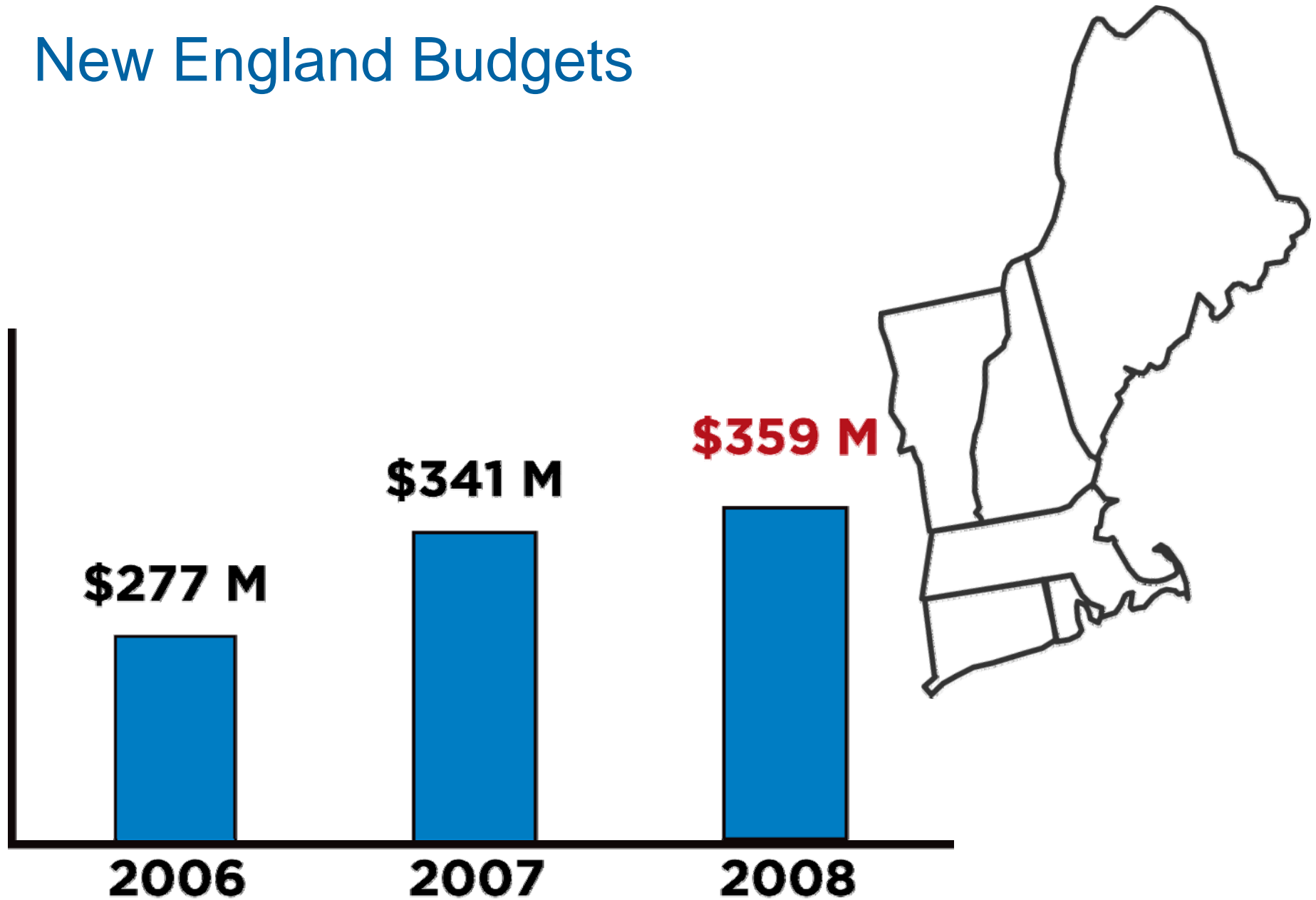
- Quick Picture of Regional Efficiency Efforts
- Hear 4 Regional perspectives on 3 policy areas impacting efficiency programs
- Delve into 4-6 key regional programs to consider their opportunity to change the face of Market Transformation - what will be needed?

Budgets Reach \$4.5 Billion in 2008

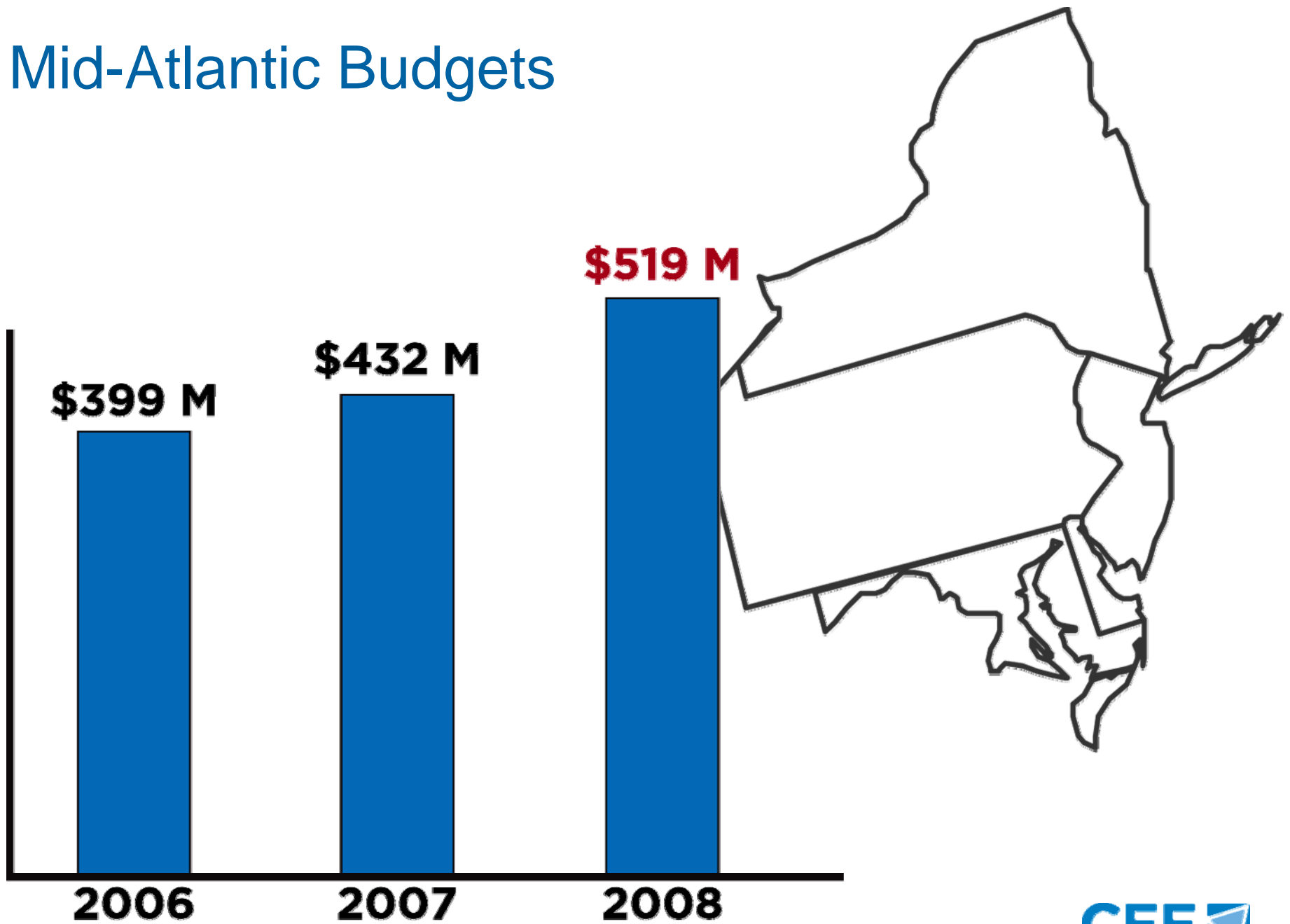
2007-2008 COMBINED BUDGETS



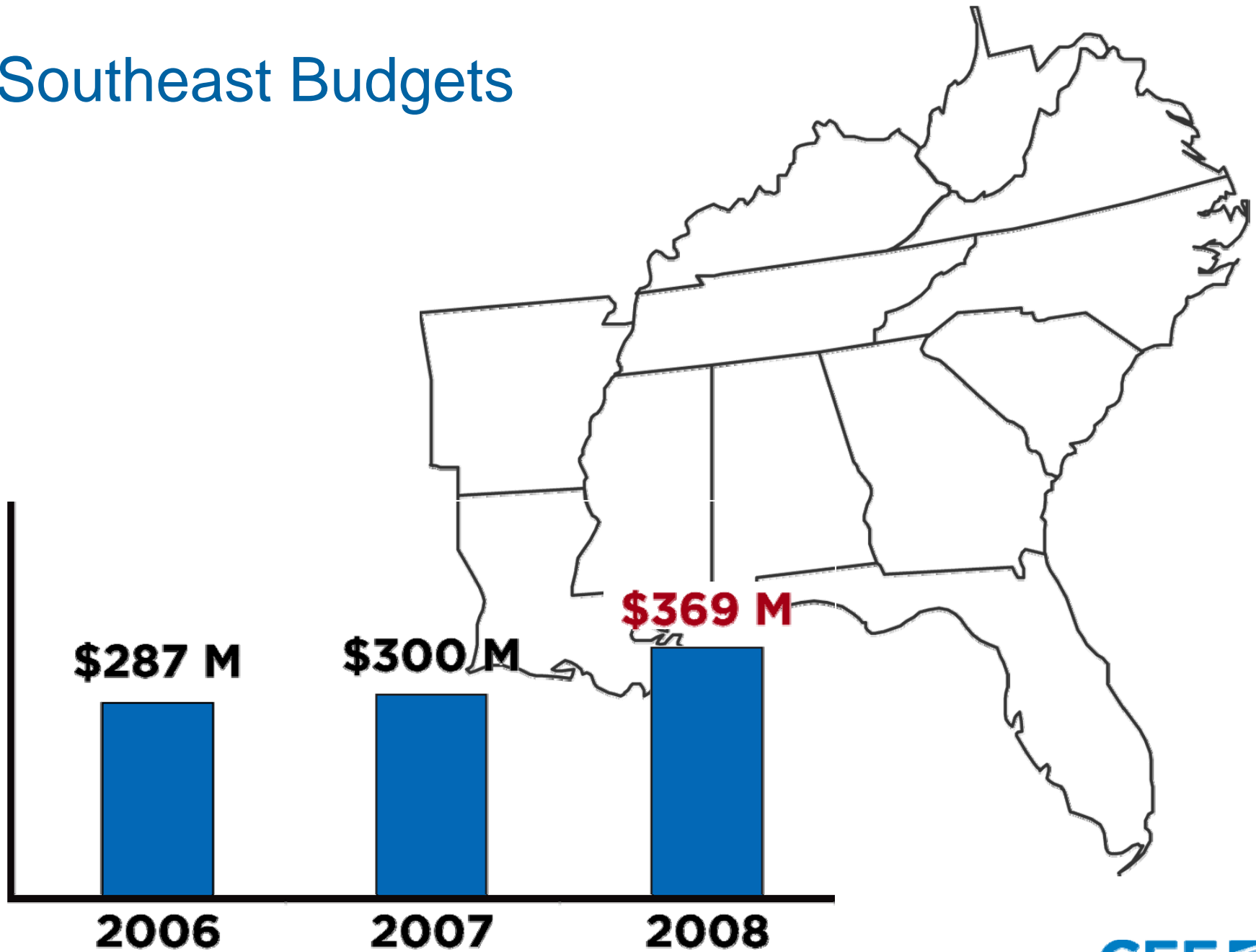
New England Budgets



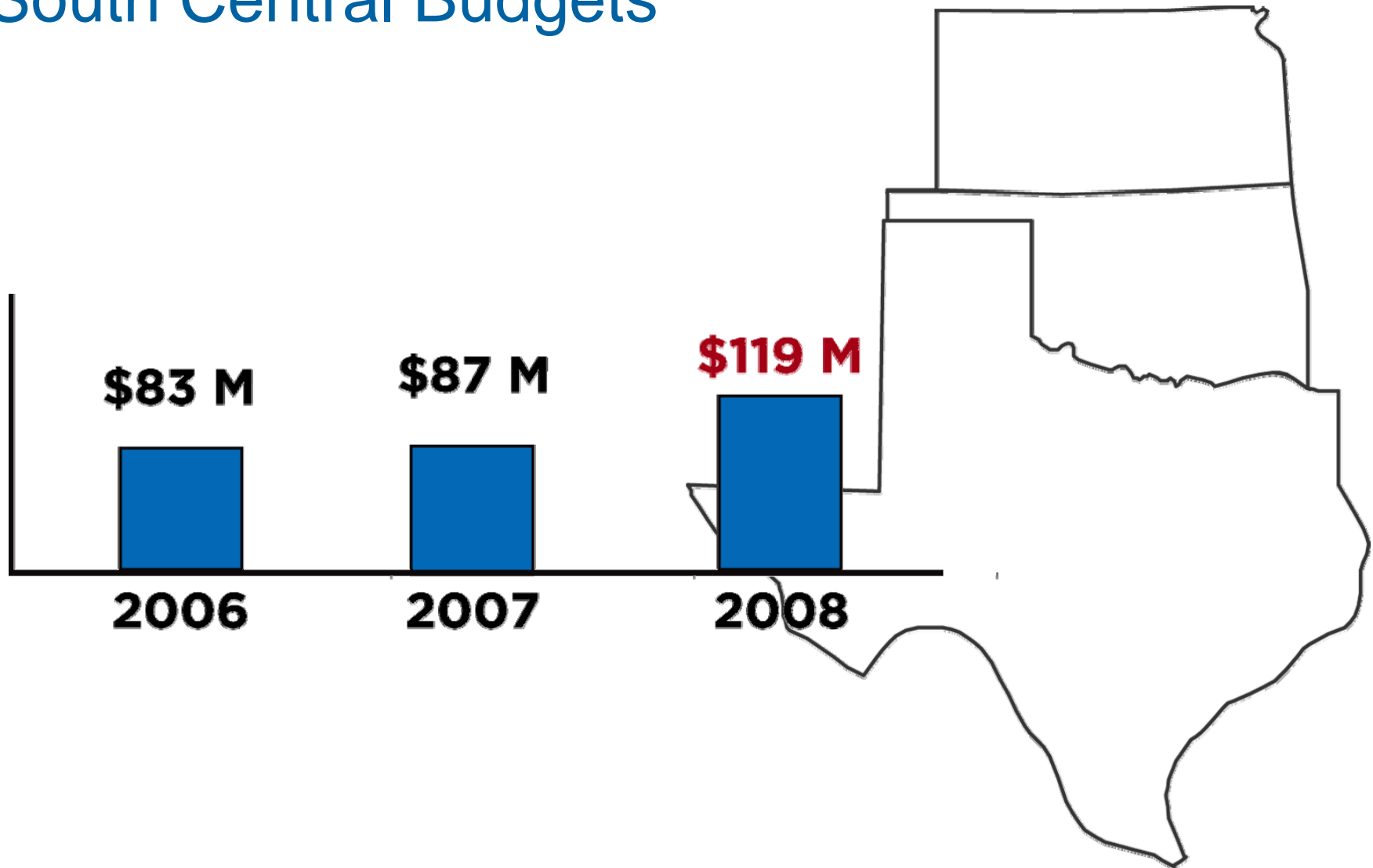
Mid-Atlantic Budgets



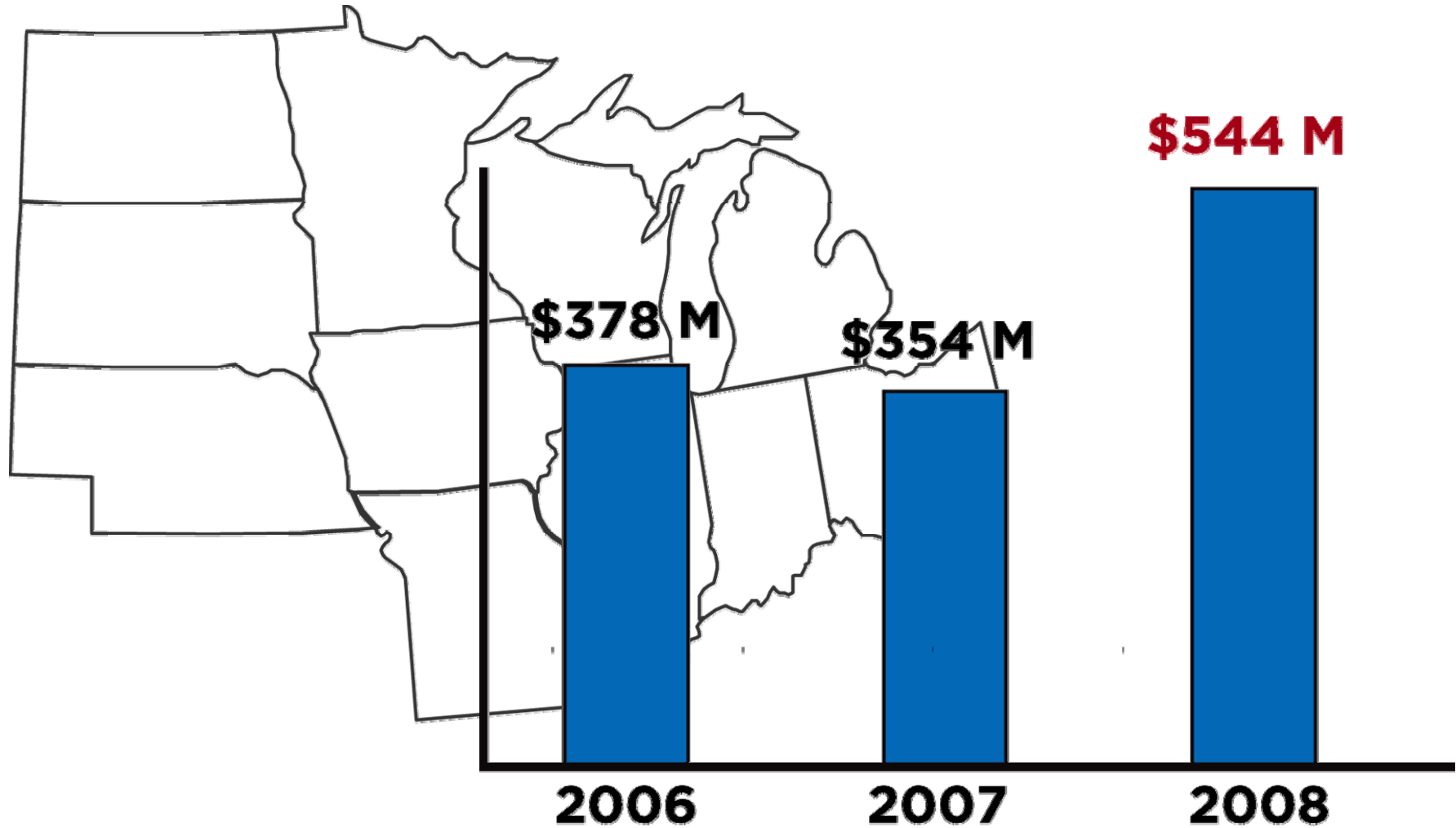
Southeast Budgets



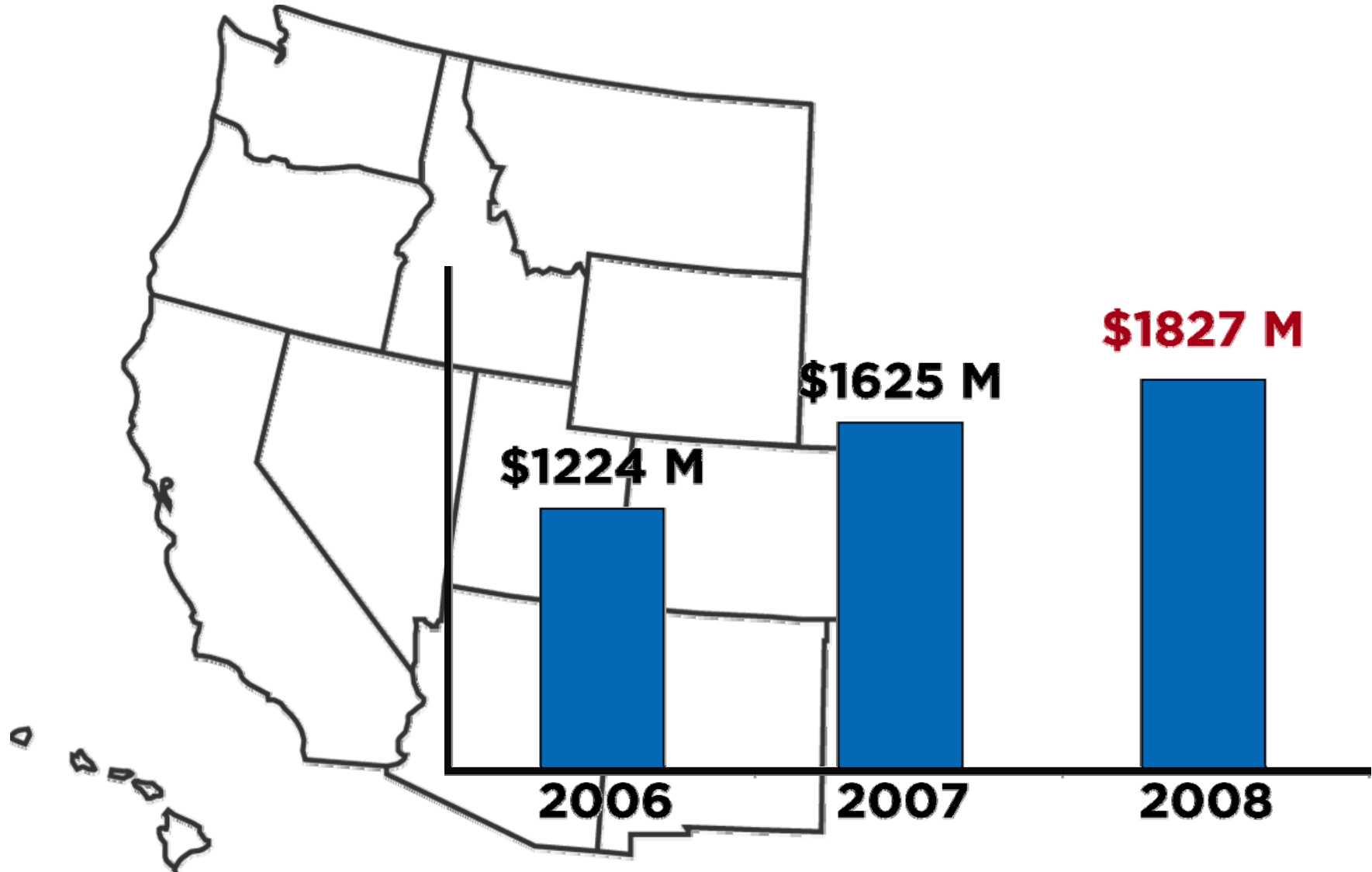
South Central Budgets



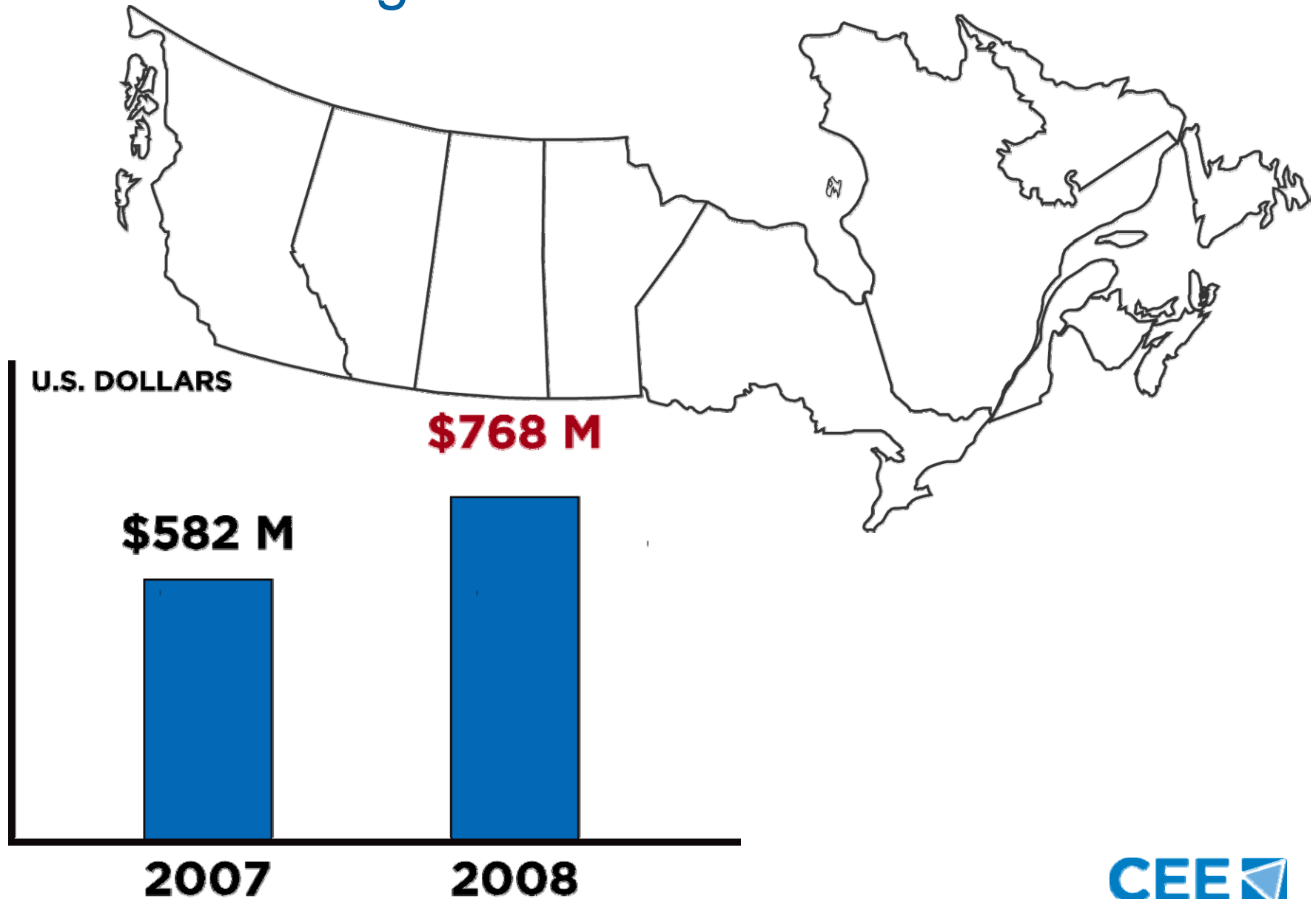
Midwest Budgets



West Budgets

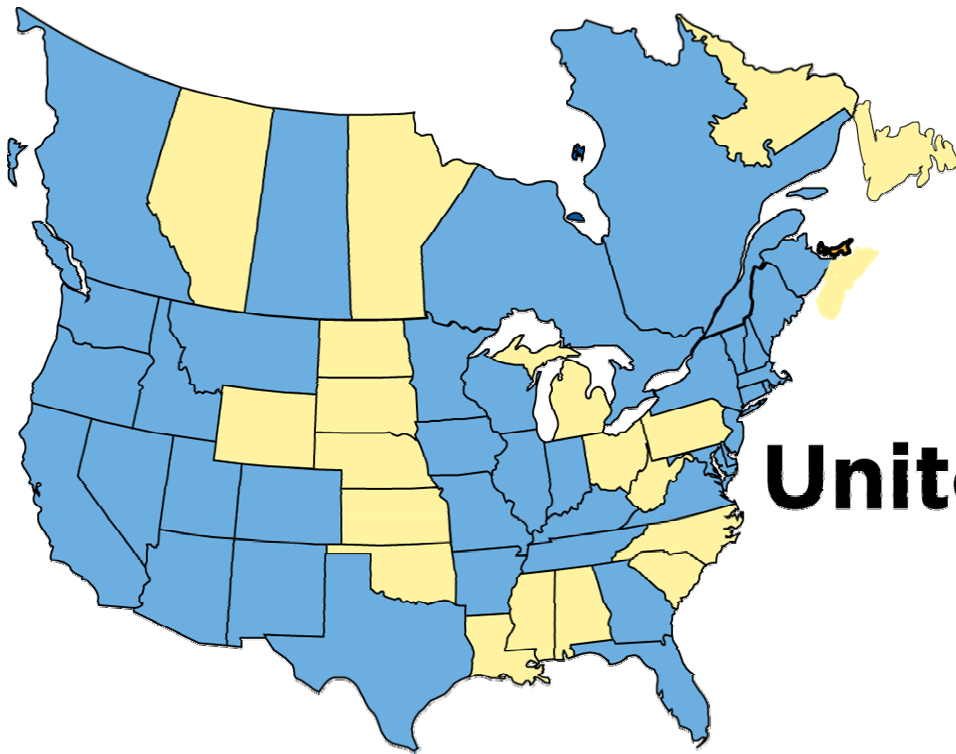


Canadian Budgets



CEE Member 2007 Program Impacts

Million Metric Tons CO₂

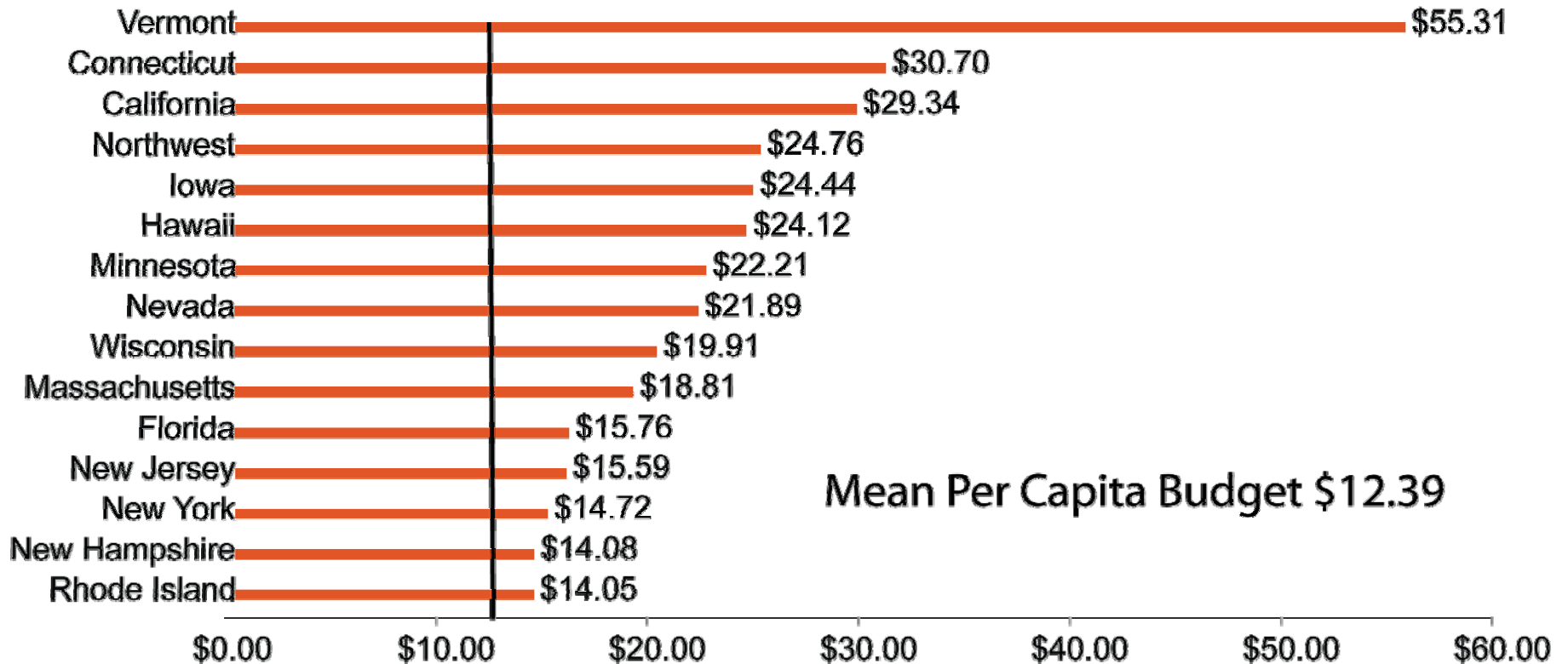


Canada 1.2

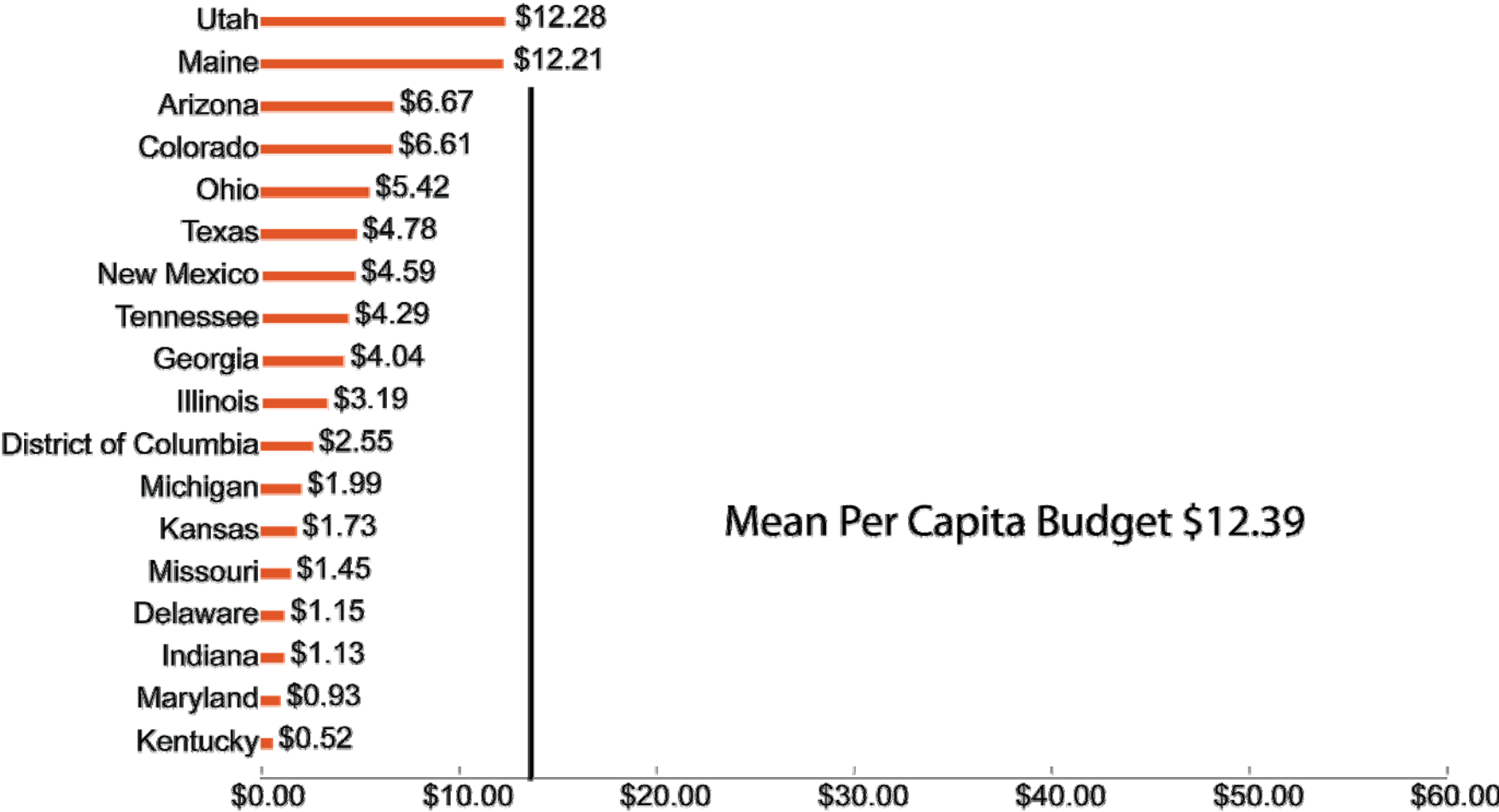
United States 40.0

Total 41.2

Mean Per Capita Budgets Increase from \$10.79 in 2007



2009 Increases Expected in Many States



Savings Objectives or Targets

Northwest

Northwest Power and Conservation Council objectives are:

- **4300 aMW** at less than \$50/MWh from 2010–2030
- **5500 aMW** at less than \$100/MWh

Northeast

National Grid is aiming for:

- **17.1 M therms**
- **441.1 annual kWh**

California

California PUC 2009–11 goals are:

- **7,515 GWh**
 - **1,545 MW demand**
- SCE 2009–11 goals are
- **3,529 MWh**
 - **741 MW demand**

Midwest/Southwest

- **Minnesota—1.5% reduction in G&E starting in 2010**
- **Colorado—5% below 2006 by 2018**
- **New Mexico—5% below 2005 by 2014**

2009 Budgets

Northwest

NEEA: \$25 million

Utilities: \$300 million

Northeast

National Grid is budgeting

•Gas \$70 million

•Electric \$195 million

California

**SCE, PG&E, SDG&E,
SCG seek \$3.7 billion
for 09-11**

Midwest/Southwest

Xcel Energy is budgeting

Minnesota \$110 million

Colorado \$58 million

New Mexico \$14 million

Key State Policy Trends

Northwest

WA—I-937 and all cost-effective efficiency

OR—Public benefits clause increased to 3% revenues

ID and MT—strong support, no binding directives

BPA—high levels of EE

California

- **EE first resource**

- **Revising utility incentives**

“more transparent, streamlined, less controversial”

- **Shift to long-term program design**

Northeast

- **RGGI**

- **NY State EEPS, 15/15**

- **NYC PlaNYC 30/30**

- **MA and RI mandate least cost procurement**

Midwest/Southwest

Xcel Energy

- **Switch from spending to savings goals**

- **Reviewing performance incentive mechanism**

Program Roles in Stimulus Spending

Northwest

To be determined

Northeast

Plan: Capitalize on stimulus funding

Challenge: Size and complexity at odds with limited time frame

Risk: Credibility of future energy efficiency initiatives depends on competent and effective implementation

California IOU Joint Comments

- **Work in conjunction with existing IOU programs**
- **Adjust programs to support stimulus**
- **Grow workforce through existing education and training programs**
- **Stimulus programs directly effect existing IOU programs**

Midwest/Southwest

Not known at this time

New Federal Policies - Program Implications

Northwest

Not clear at the moment

Northeast

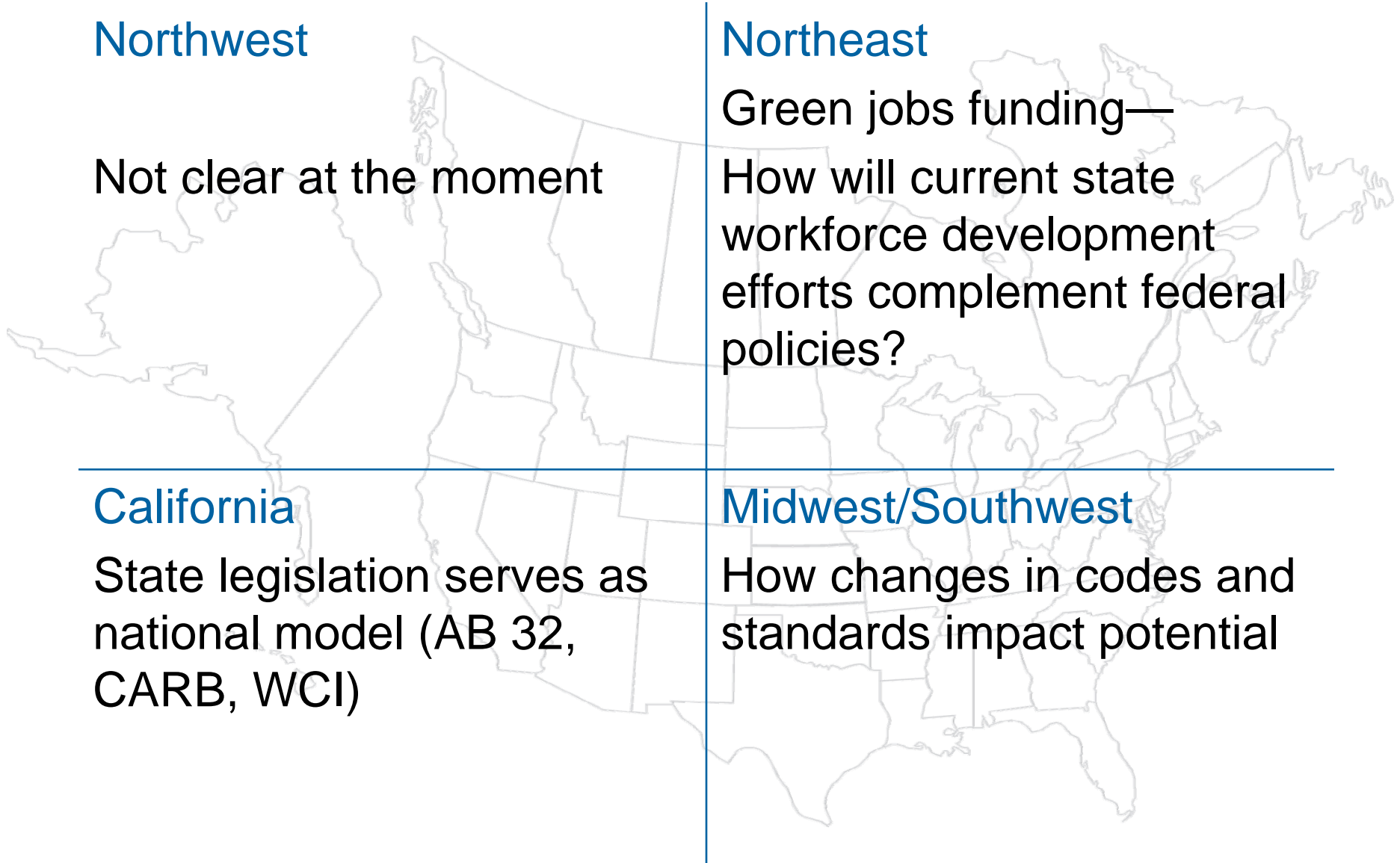
Green jobs funding—
How will current state
workforce development
efforts complement federal
policies?

California

State legislation serves as
national model (AB 32,
CARB, WCI)

Midwest/Southwest

How changes in codes and
standards impact potential



End Use Priorities

Northwest

Ductless heat pumps (residential electric)
Commercial computer power supply
Home electronics
Commercial HVAC
Motors
LEDs and SSL

Northeast

National Grid

- All Sectors—audits, heating, water heating, controls, AC, windows, lighting, thermostats, insulation,
- Residential—appliances, ENERGY STAR homes
- C&I—solar hot water, custom, fryers, steamers

California

Lighting
HVAC
Industrial and single phase motors
Food storage and residential refrigeration
Process
Water heating

Midwest/Southwest

Lighting
HVAC
Motors and drives
Recommissioning
Process
Water heating
Refrigeration
Insulation

New Program Approaches

Northwest

Ductless heat pumps

80+ office computer initiative

Home electronics

Green motors

Northeast

Zero energy homes

Data Centers

Wastewater treatment

On bill financing

LEED Standards

Retro-commissioning

Advanced buildings

California

Residential-Commercial HVAC to insure equipment performance

Energy Leader Model for the Future—Builds on institutional partnership programs

Midwest/Southwest

Planning and analysis tools by business segment

Behavior change pilot

On-Bill Financing (OBF) at National Grid – 2 Successful Programs

C&I Small Business and C&I Medium Business and Municipalities- Electric (MA only)

- National Grid pays 40 - 70% of the project costs, customer 60 - 30%
- Customer repayment terms are for 1–24 months and appears as a line item on the customer's electric bill
- 15% discount for repayment in 1 month
- 0% interest

Major Challenges of OBF

Aligning utility support behind the program

Billing and IT system challenges

High rate of bankruptcies and foreclosures

Turnover in customers and customer property

Maintain a low bad debt ratio

OBF—Lessons Learned at National Grid

1. **OBF financing increases the “close rates”**– the ratio of projects signed to proposals offered. It also reduces the average time between proposal offering and contract execution, as it directly impacts the rate of projects signed at the time of proposal presentation
2. Billing on the regular monthly electric bill appears to result in **lower arrearages and defaults** than if the customer contributions to energy-efficiency projects are billed separately
3. Offering a **zero-percent loan** as opposed to charging interest decreases the complexity of the financing transaction
4. **Tie program financing to customer, not the meter**
 - This is the policy because the customer is signing the contract with the Company and agreeing to make payments for the investment and tying to the meter would require the Company taking out a lien on the property (e.g. warehouse) so that the contractual obligation is carried forward to the next owner.

Source: Knox, Kim, “Getting Into the Game of On Bill Financing, Results from an E Source Roundtable Discussion.” *E Source*. Focus Report, EDRP-F-26.

Energy Leader Partnership Model for the Future

- Goal: Establish a disciplined, concentrated approach to create consistency in program offerings and improve clarity and ease of participation in Local Government Partnership Programs
- Supports the CLTEESP by partnering with cities, counties, and other local government organizations that have a vision for sustainability and a desire to provide energy efficiency leadership and solutions to their communities.
- SCE's new Energy Leader Partnerships will save over 97 GWh in energy savings and 19 MW in demand reduction over the next three years.
- The Energy Leader Partnership Model will streamline the end-to-end process of installing energy efficient applications:
 - Partners will be placed into one of four levels (Valued, Silver, Gold, Platinum) with tiered commitment and incentive levels
 - Partnerships will leverage existing program offerings as well as new programs to be authorized in SCE's 2009-11 program application
 - The new model will provide enhanced coordination with demand response programs
 - Partnerships will support integration of low income EE programs into partnership programs



MN: Feedback/ Behavior Change Pilot Program

■ Objectives:

- Quantify energy savings attributed to energy usage feedback information to residential customers.
- Measure persistence of energy savings behaviors over 3 years.
- Test effectiveness of information delivery approaches (paper, electronic, or continuous “on the counter” display).



Scope of Testing

- **35,000 XE gas/elec customers with Positive Energy's reporting system**
- **Provide monthly/bimonthly/quarterly written feedback reports**
- **Compared with last year:**
 - **Compared to 100 peer group homes**
 - **Compared with best of peer group**
 - **Additional feedback – daily on-line**

Scope of Testing, con't.

- **450 In-Home Meter display devices—electric**
 - The Energy Detective (TED)
- **Installed in power panel—signal via internal wiring to outlets; display plugs into outlets**
- **Instant reading, some history stored**
- **Data logging is an option**

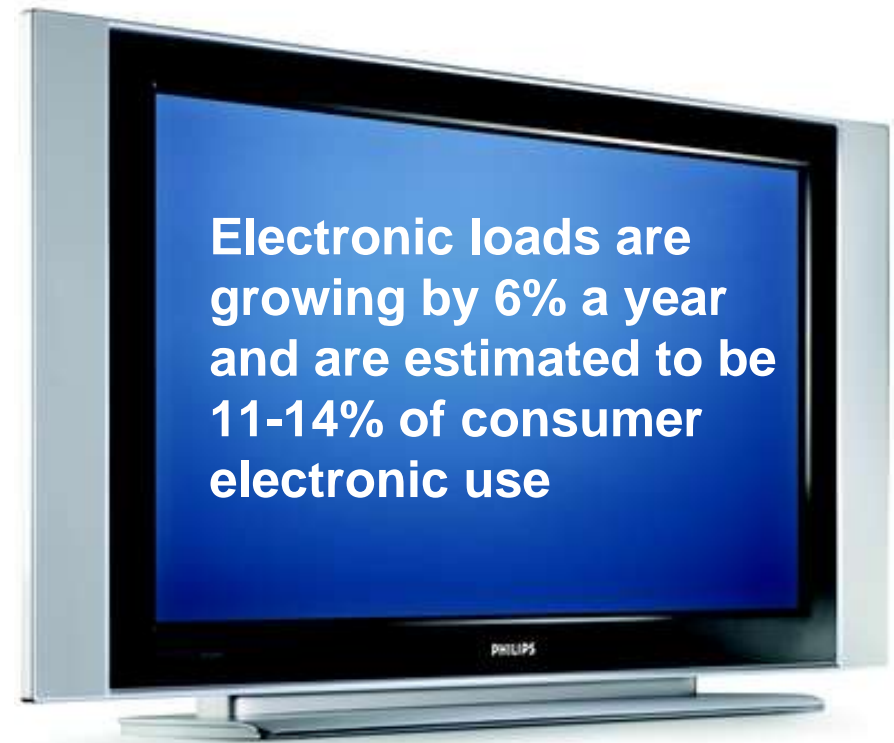
- **80,000 in Control Group**
- **Estimating 2% savings from paper research results**



Regional Upstream Consumer Electronics Initiative

- Big Goal: To achieve savings with TVs, Computers and Computer Monitors in 2009 (# TBD)
- 11 NW utilities contributing ~\$2.6M to pilot, including BPA on behalf of 130 utilities
- Influence manufacturers to improve ENERGY STAR Tier 1 Flat Screens by 30%
- Ensure “big box” retailers stock them
- Also targeting computers and monitors

Launch date: Late April/Early March



Electronic loads are growing by 6% a year and are estimated to be 11-14% of consumer electronic use

Northwest Ductless Heat Pump Market Transformation Pilot

Pilot Goals

- Measure energy savings
- Non-energy benefits
- Identify/confirm market barriers
- Prepare infrastructure and market for future initiatives
- Support evaluation efforts
- Demonstrate the use of inverter-driven technology

Progress to date

- ✓ 60 utilities have signed on
- ✓ 700 contractors trained/oriented
- ✓ 258 installations plus 54 more preapproved



Residential / Light Commercial HVAC Program

- California Long Term Energy Efficiency Strategic Plan (CLTEESP)
Goal: “Reshape residential and small commercial HVAC to ensure optimal equipment performance”
- SCE has redesigned its 2009-11 HVAC program to align with CLTEESP goals and strategies. In achieving a projected 126 GWh in energy savings and 89 MW of demand reduction, the program will help advance California’s efforts to reach the following goals:
 - Consistent and effective compliance, enforcement, and verification of applicable building and appliance standards
 - Quality HVAC installation and maintenance become industry and market norm
 - Building industry design and construction practices that fully integrate building performance to reduce cooling and heating loads
 - New climate-appropriate HVAC technologies are developed with accelerated market penetration

