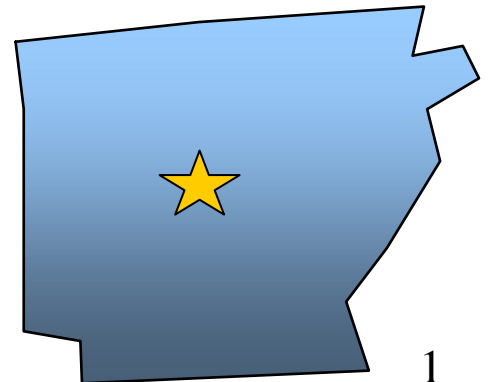




Capturing The Benefits of Energy Efficiency

Miles Keogh
Director, Grants & Research
NARUC

Little Rock, Arkansas
February 21, 2006





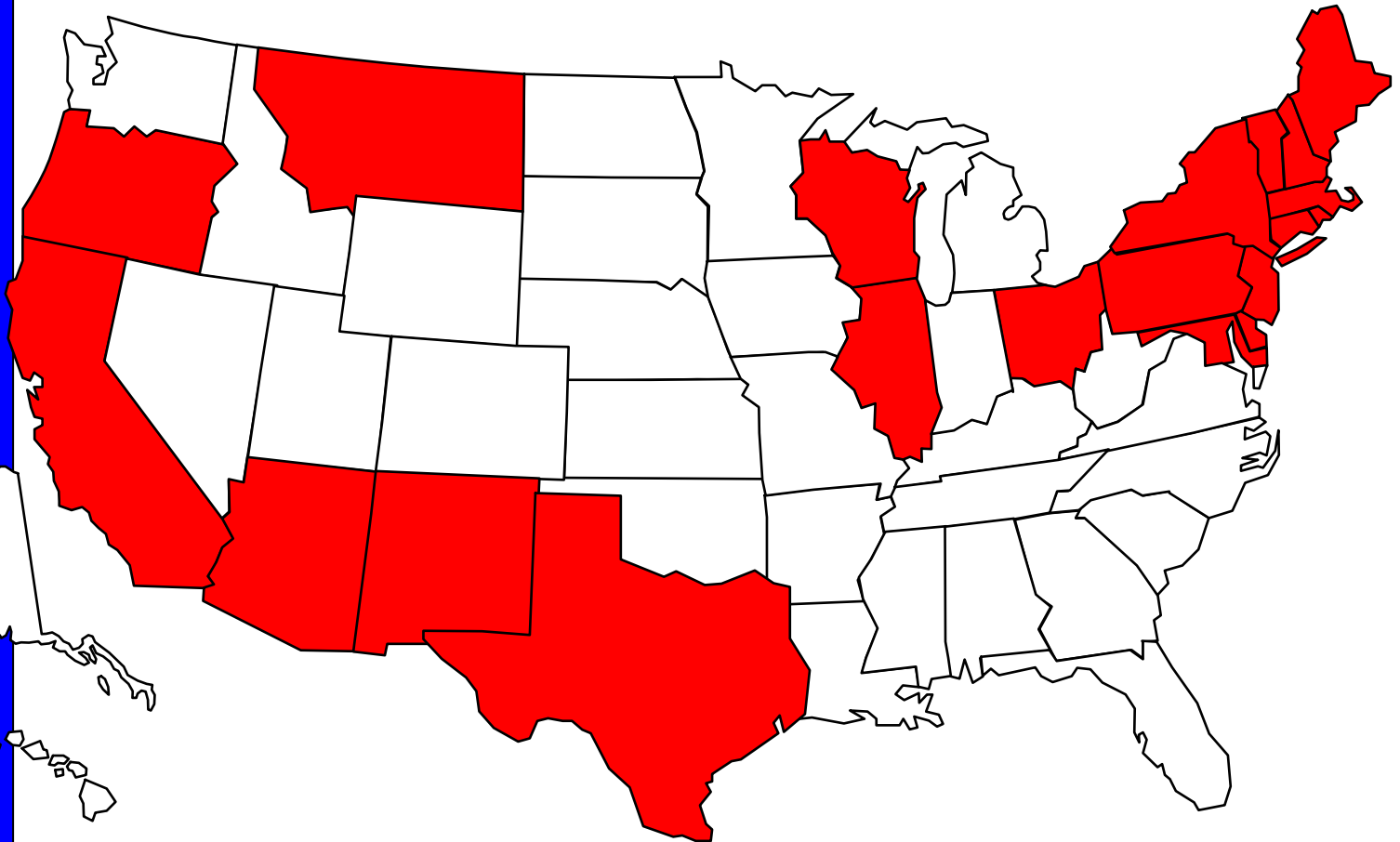
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Why EE?

- It's everywhere
- It's big
- It's cheap
- It's quick
- It's clean
- It delivers
- It's stable
- There's no such thing as "NIMLS"



System Benefit Charges: Who's doing it?



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A Modest Proposal:

Efficiency is Not a Social Program – it's a Resource

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What Makes EE Work?

- **Integrated Resource Planning:** Integrate energy efficiency into resource procurement
- **Decoupling:** Remove utility disincentives to invest in efficiency
- **Incentives:** Create financial incentives to encourage IOU investment in efficiency
- **EM&V:** Develop robust procedures for Evaluation, Measurement, and Verification
- **Marketing** and Statewide Outreach/Consumer Education

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Decoupling

- **Decoupling is a rate design that separates the recovery of fixed costs in whole or in part from volumetric sales**
- **Can be used to create incentives for conservation and energy efficiency**
- **Must be designed carefully to avoid shifting weather risks to customers and to avoid penalization of customer classes**



Integrated Resource Planning

- In non-restructured states, regulators require utilities to file plans for delivering cost-effective electricity services to customers.
- IRP sees “resources”: EE is a resource, power plants are a resource.
- However, even in regions not yet open to competition, utilities are managing risks in ways that make them reluctant to invest heavily in efficiency measures.



Portfolio Management

an emerging regulatory tool:

...Assembling a diversified mix of short-and long-term resource commitments and other risk management tools, order to sustain the economical and reliable electricity services that a healthy economy requires.

--National Commission on Energy Policy, 2003

Guidance paper forthcoming from
NARUC, Summer 2006

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California: The 800 lb Gorilla

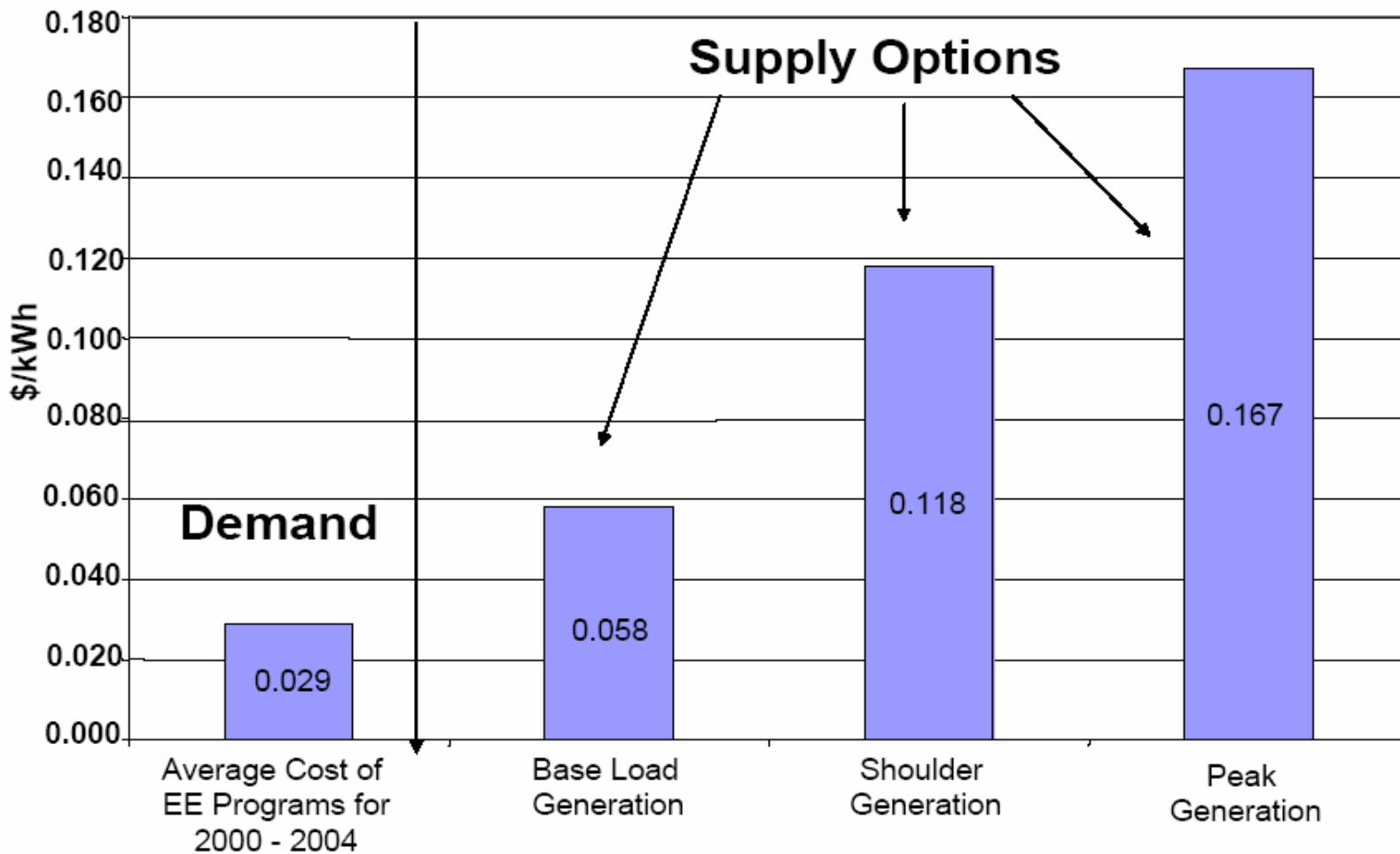
- Efficiency and conservation messaging played a **crucial** role in mitigating the effects of the energy crisis in 2001
 - **Cut demand by nearly 5000 megawatts off peak**
- Efficiency programs over last decade have provided **net benefits** of appx. **\$3.4 billion** to California's economy

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Choices for California

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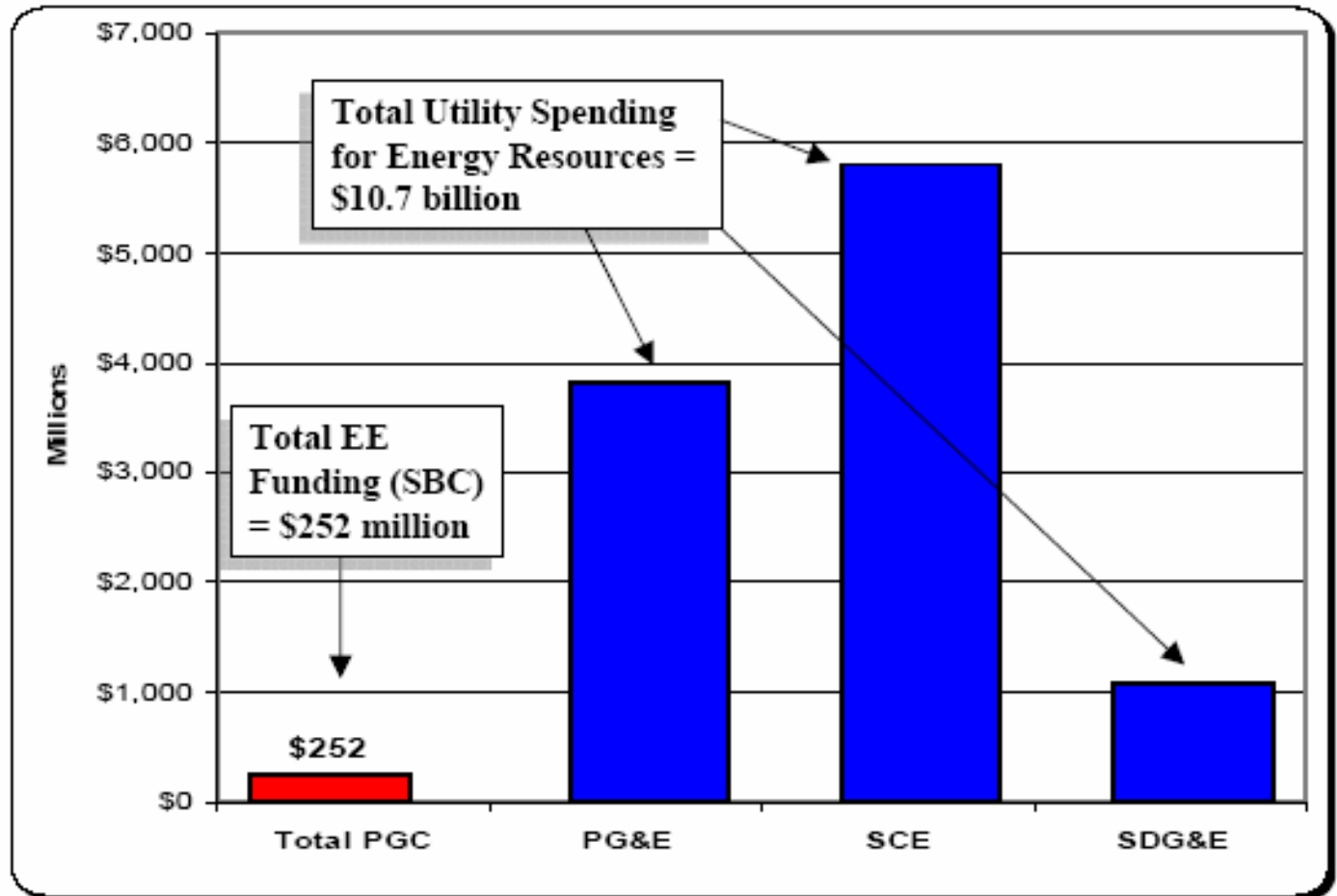


California's investment in EE

- 2001: The crisis highlights the value of EE
- 2005: CA starts the single largest efficiency and conservation campaign in US history
- CPUC set EE targets to ~5000 MW peak demand and ~23,000 GWh by 2013
- California electric and natural gas utilities will invest just under \$2 billion in 2006-2008 in efficiency to help Californians reduce their energy bills



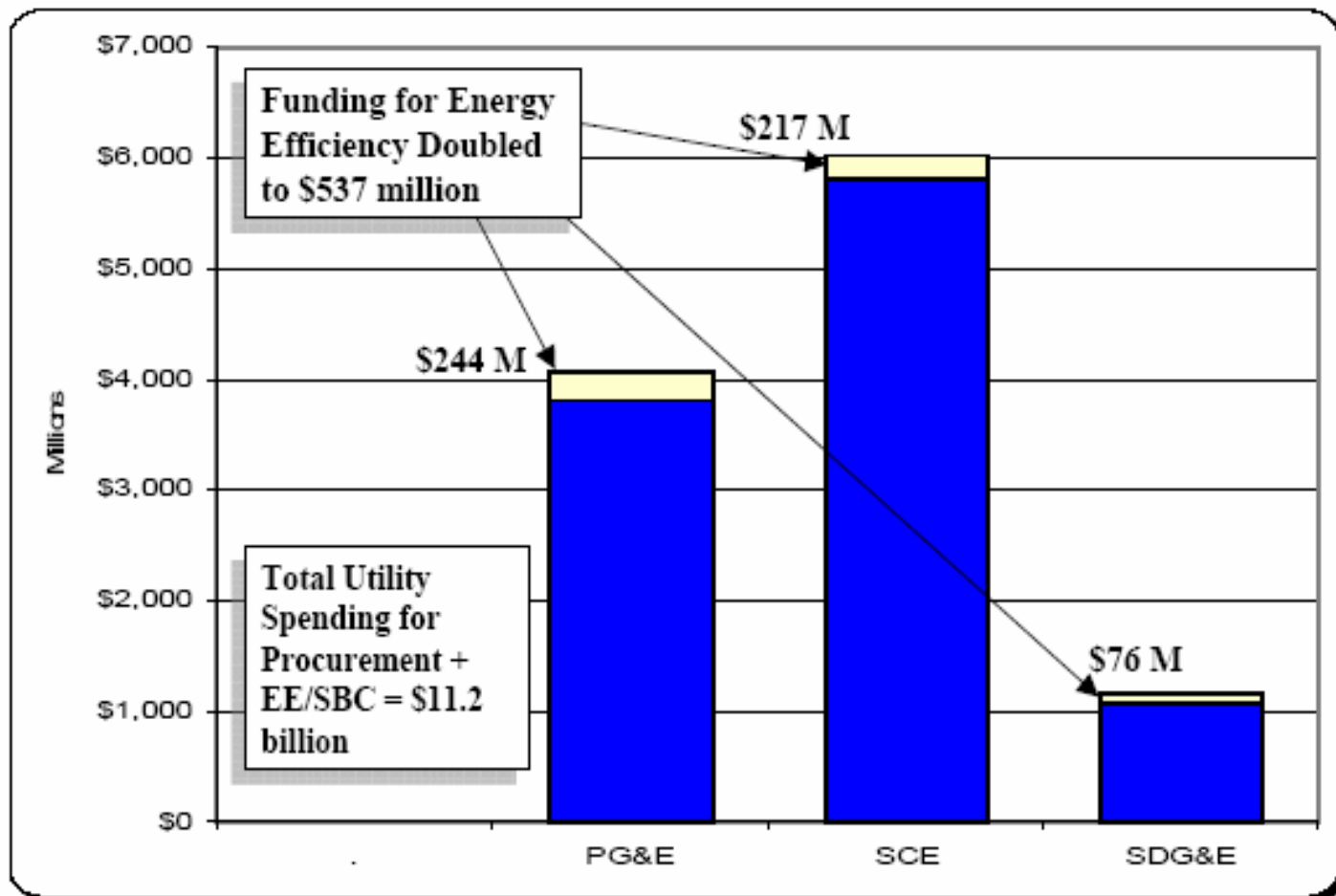
SBC vs Procurement, 2005



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SBC with Procurement

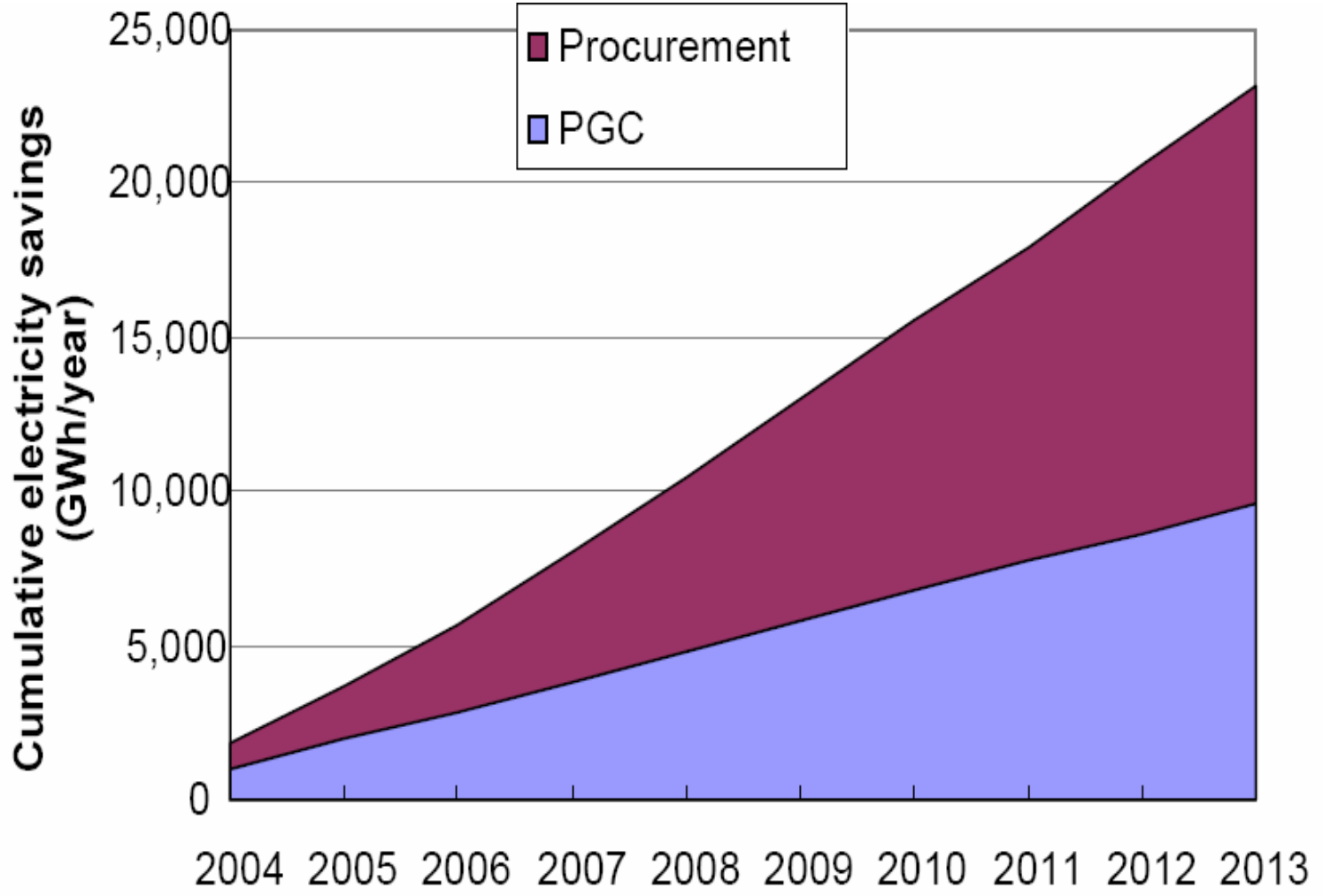


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So Happy Together





Results?

- **Net resource benefits** (value of savings benefits minus program and customer out-of-pocket costs) from programs implemented during 2006-2008 are estimated **\$2.7 billion**, representing a 2 to 1 return on the efficiency investment
- **Avoid building three large (500 MW) power plants** because of this campaign
- Equivalent to taking 650,000 cars off the road



Next for California –

“A Comprehensive Procurement Incentives Framework”

- Financial incentives for the utilities are the final step - Without incentives, efficiency will not be treated as a true resource
- Goal is to create an incentive framework that aligns interests of ratepayers, shareholders and management to achieve a proper balance in utility procurement
- Two related policy considerations:
 - **Further institutionalize the loading order of preferred resources in the state’s Energy Action Plan.**
 - **Reduce emissions of greenhouse gases from the state’s consumption of electricity and natural gas**



Evaluation, Monitoring, Verification

- Robust protocols for EM&V are the last step
- EM&V is crucial for reliability to allow utilities to come up with realistic savings goals
- Better EM&V will make efficiency increasingly seen as a viable resource alongside generation and transmission for import



- **Efficiency is a resource, not just a public good**
- **Capture benefits by removing disincentives,**
- **Creating procurement framework,**
- **Getting the incentives right,**
- **Monitoring and verifying programs.**

QUESTIONS





Extra Slides!

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IRP in the Northwest

- **NWPP Council has the longest running “Integrated Resource Planning Process” in the US, considers**
 - Regional resource adequacy
 - Resource cost-effectiveness
 - Conservation/Efficiency goals



IRP in New Mexico

- Efficient Use of Energy Act, signed April 2005
- Requires NM Commission to direct public utilities to evaluate and implement cost-effective programs that reduce energy demand and consumption.
- Requires public utilities supplying electric or gas service to periodically file an integrated resource plan with the Commission.



IRP for Gas in NM

- **The projected total annual energy savings from these programs is 354,002 therms / year, a total savings of more than \$300,000/year for participating customers.**
- **PNM believes all customers will realize some benefits through reduced demand on the PNM gas system and lower air emissions.**
- **PNM calculates the programs will cost approximately \$2.2 million per year, a \$0.0075 per therm charge to all gas residential customer's bill to pay for the program.**
- **The average monthly residential bill would see an added 44-cent rider.**



Pay-As-You-Save (PAYS)

Target market – NH Towns and cities

Services – Audit, recommended measures

Financial incentives –

Prescriptive rebates,

Financing on customer bill for the balance based on energy savings (no up-front cost or debt obligation)

History –

Two-year pilot ordered by PUC - extended to 2007
105 projects totaling \$962,860

Example: Town of Stratford, N.H. street lighting \$13,050 to change and relocate 58 fixtures.

Annual savings of almost \$6,300; payback of just over two years

http://www.paysamerica.org/Pilot_Programs/pilot_programs.html





Decoupled Rates

- **Return for increased delivery of electricity services, not for electricity sales**
- **Fixed recovery for infrastructure like power plants, transmission**