

Our Past Success
in Energy Conservation
and
Our Future Program Designs

Gainesville City Commission
Energy Conservation Workshop
April 19, 2004



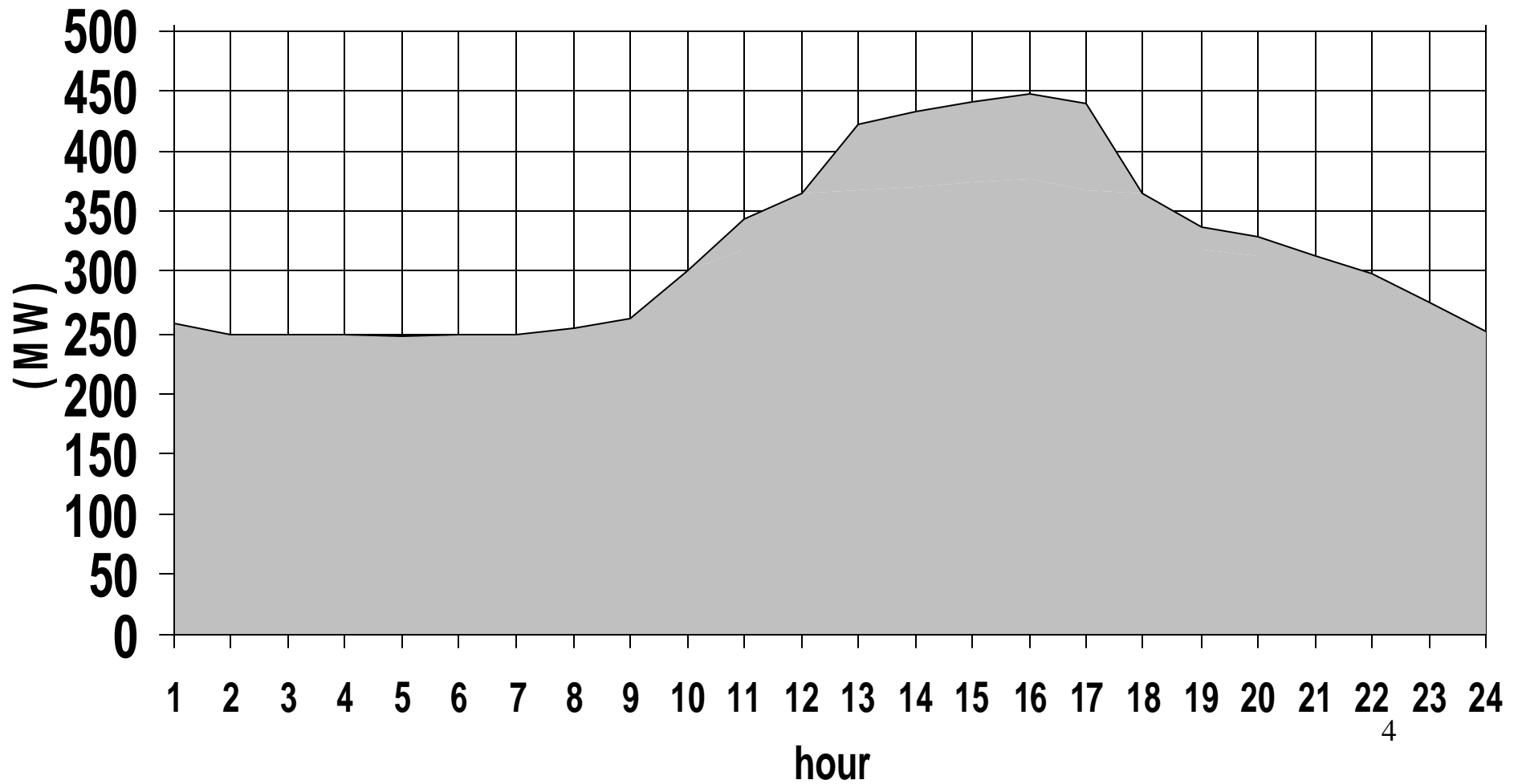
How Do We Consider Cost Effectiveness?

- **All Rate Payers' Test (RIM)**
 - Encourages conservation without cross-subsidy between customers
 - Everyone benefits with affordable rates
- **Additional Conservation Efforts**
 - Energy surveys and customer consultation
 - Address difficult to reach customers (renters and low-income households)
 - Encourage renewable energy use (solar water heating and photovoltaics)

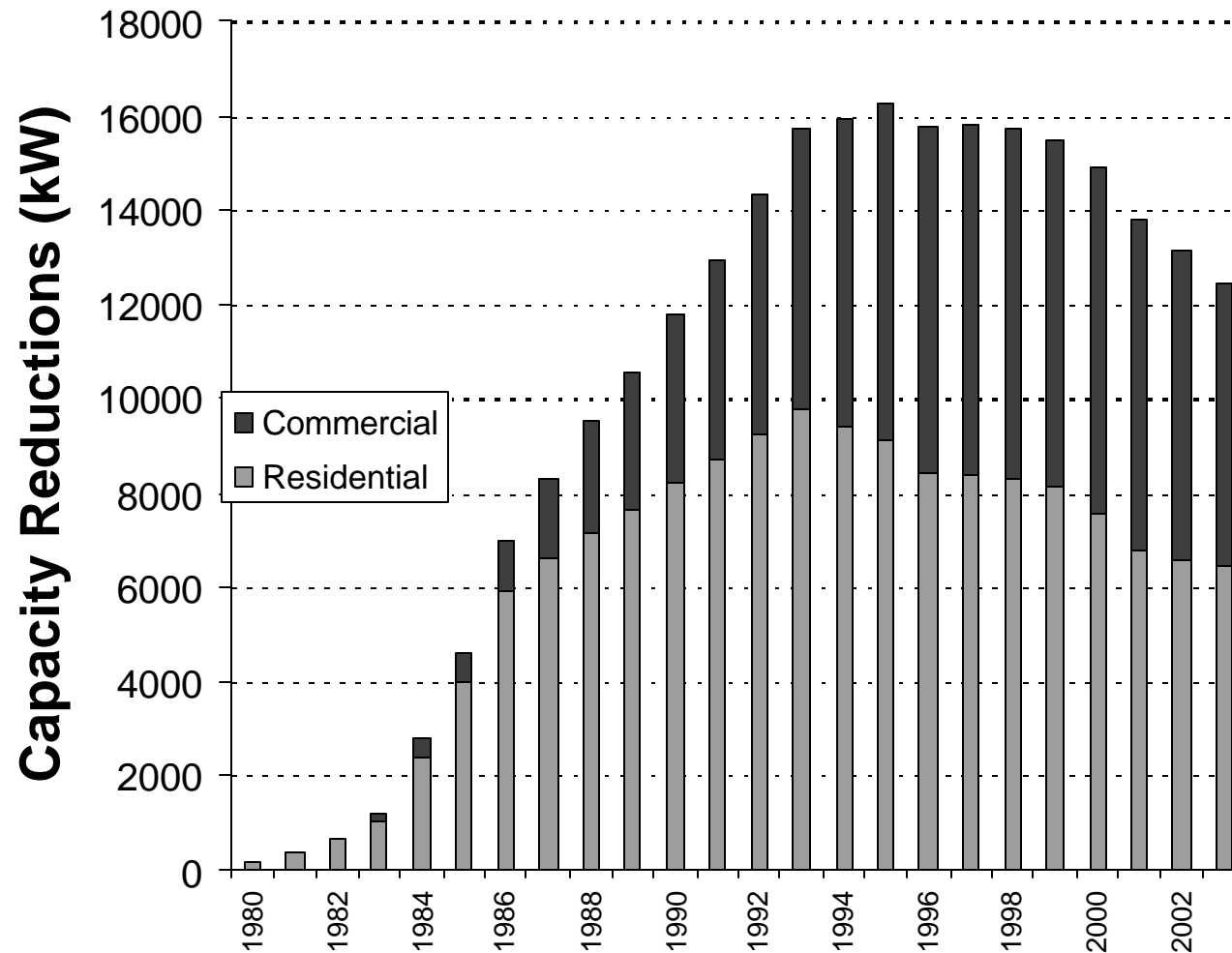
Evaluating Cost Effectiveness

- **Free Riders**
 - Customers who install conservation measures without incentives
- **Rebound Effect (Kazoom)**
 - Customers use high-efficiency AC more because it costs less
- **Diversity & Coincidence with Peak**
 - Not all customers demand power at the same time or at our system peak

Example of Daily Summer Load



Our Conservation Programs Summer Power Savings (cumulative kW)

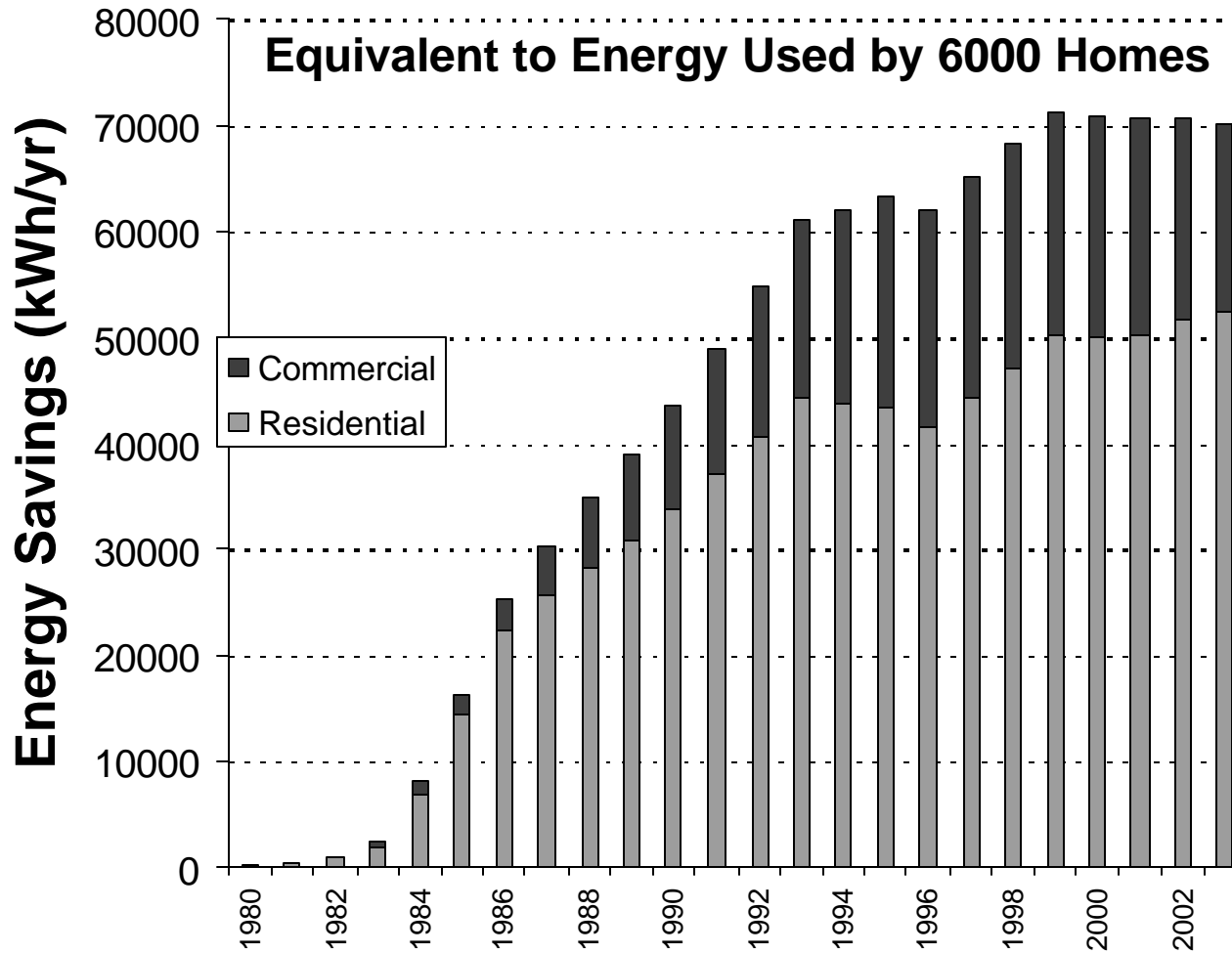


Conservation Effect Vintaging

- Most Energy Conservation Measures Have A Limited Lifespan
- Effects Of Conservation Are Removed When Expected Lifespan Reached
- Load Forecast Incorporates Vintaging
- Accurate Forecasting Is Our Goal

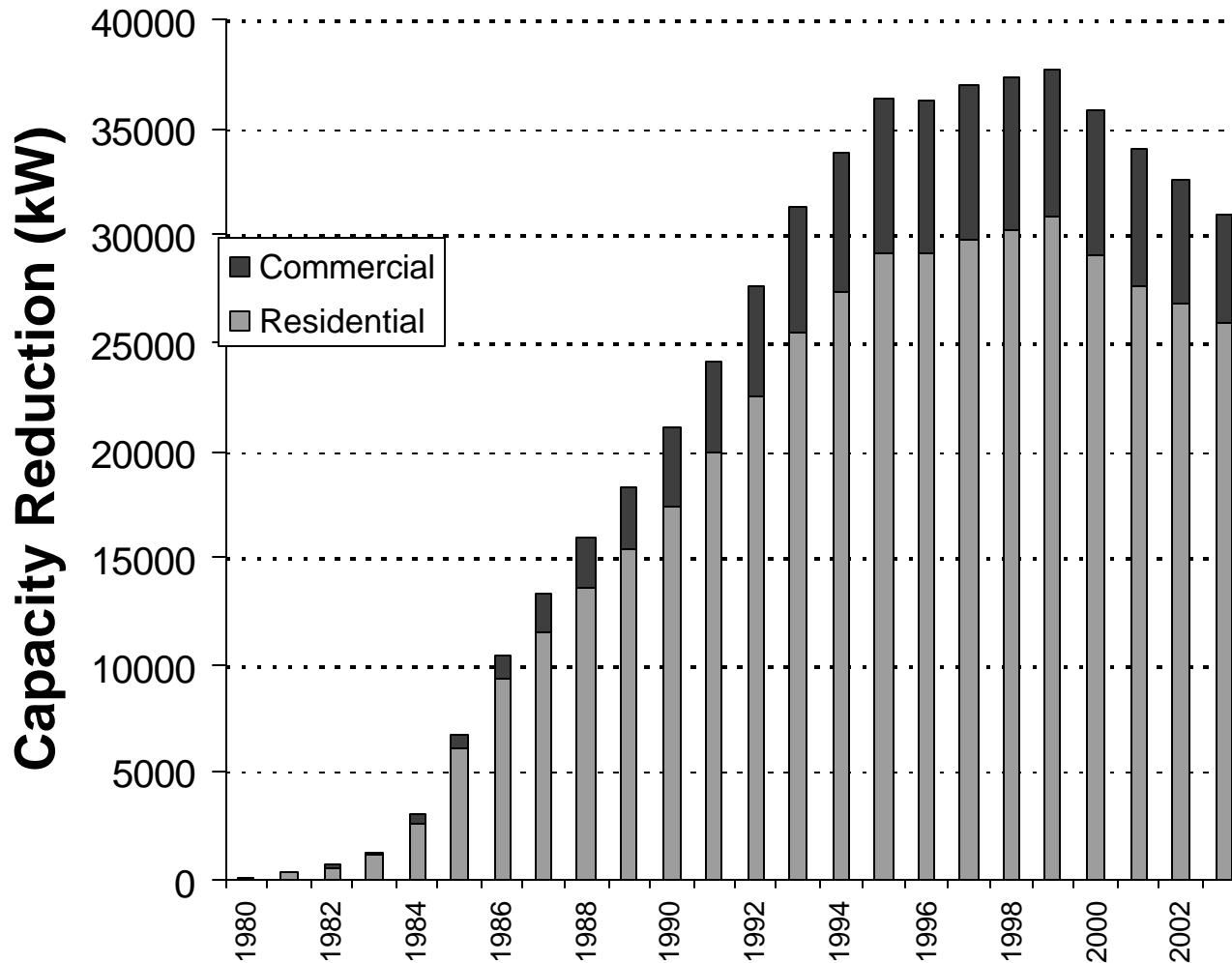
Our Conservation Programs

Energy Savings (cumulative MWh/yr)

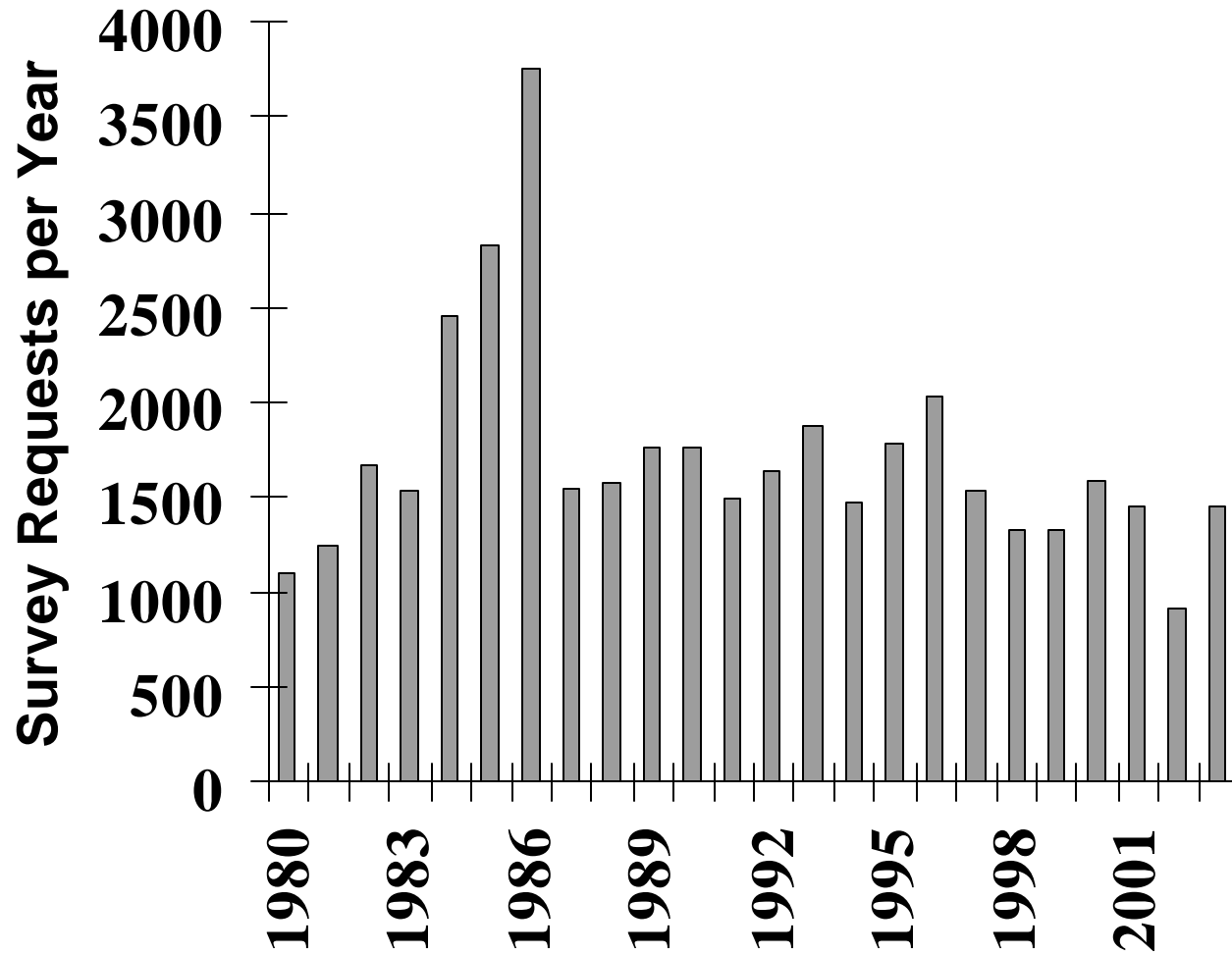


Our Conservation Programs

Winter Power Savings (cumulative kW)



Residential Energy Survey Requests

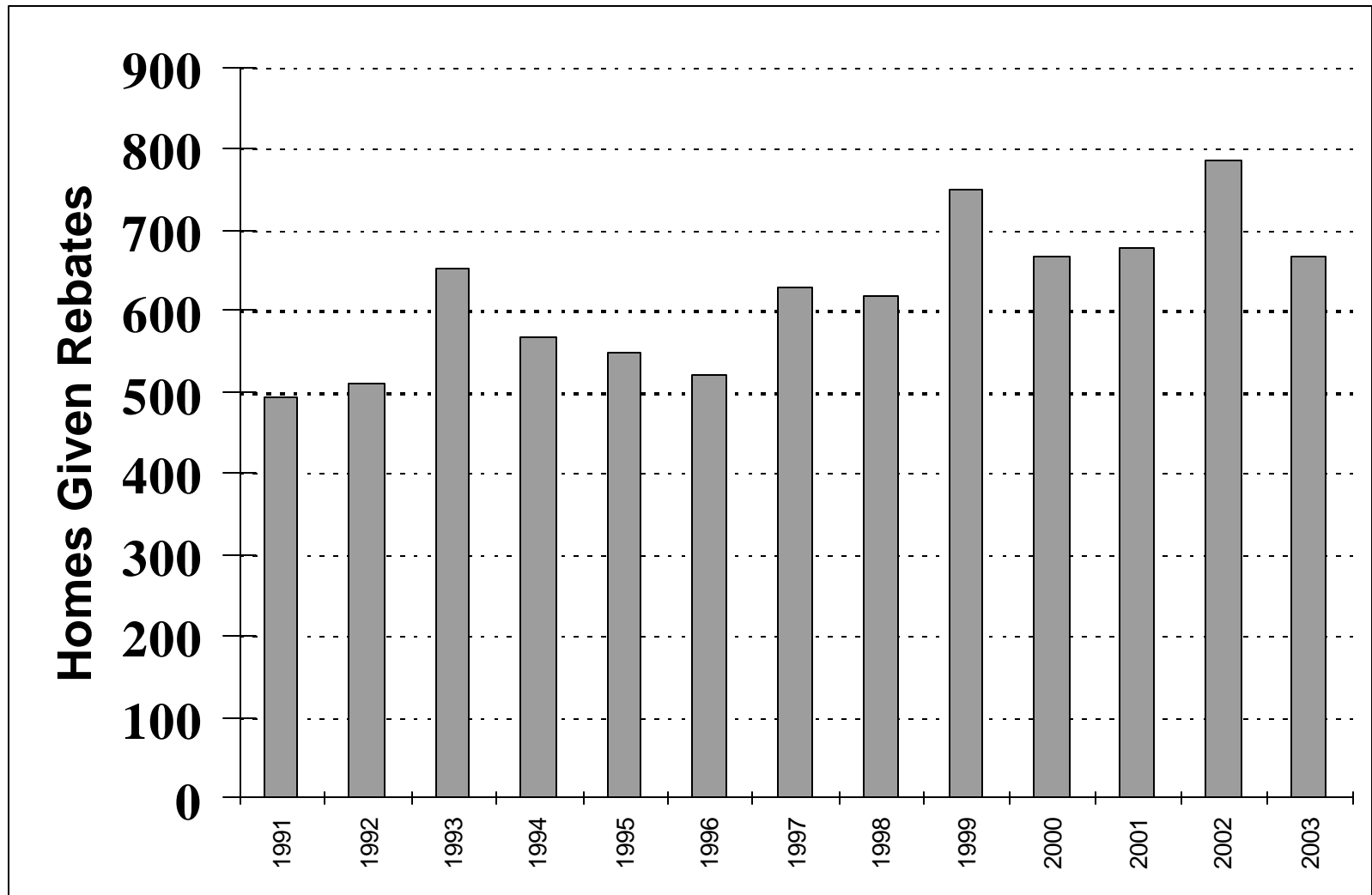


Our Current Residential Energy Conservation Programs

- Conservation Surveys
- Self-Audit Materials
- New Construction Consultation
- Green Builder Program
- Customer Consultation
- Low-Income Weatherization
- Solar Water Heating Rebates
- Solar Electric Interconnection and Buyback
- Gas Water Heating Rebate
- Gas Heating Rebate
- Gas Range Rebate
- Gas Dryer Rebate
- Gas New Construction Rebate

Natural Gas Rebates

New Single-Family Construction



Natural Gas Programs Save Energy and Reduce Power

- **Natural Gas Appliances Reduce Overall Energy Use**

- Source energy efficiency:

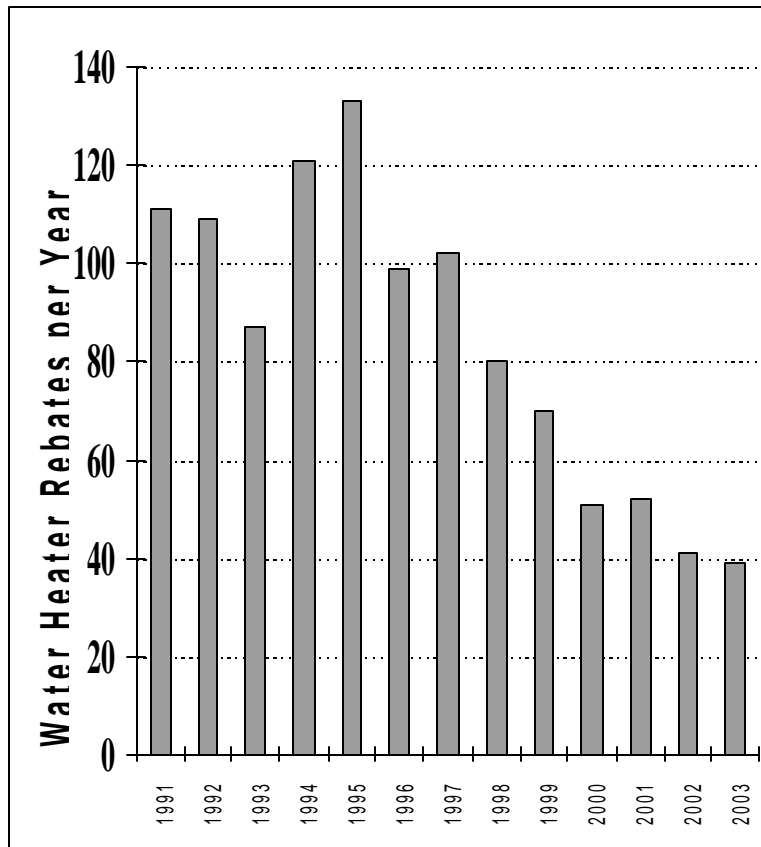
- Natural gas water heater ~50%

- Electric water heater ~30%

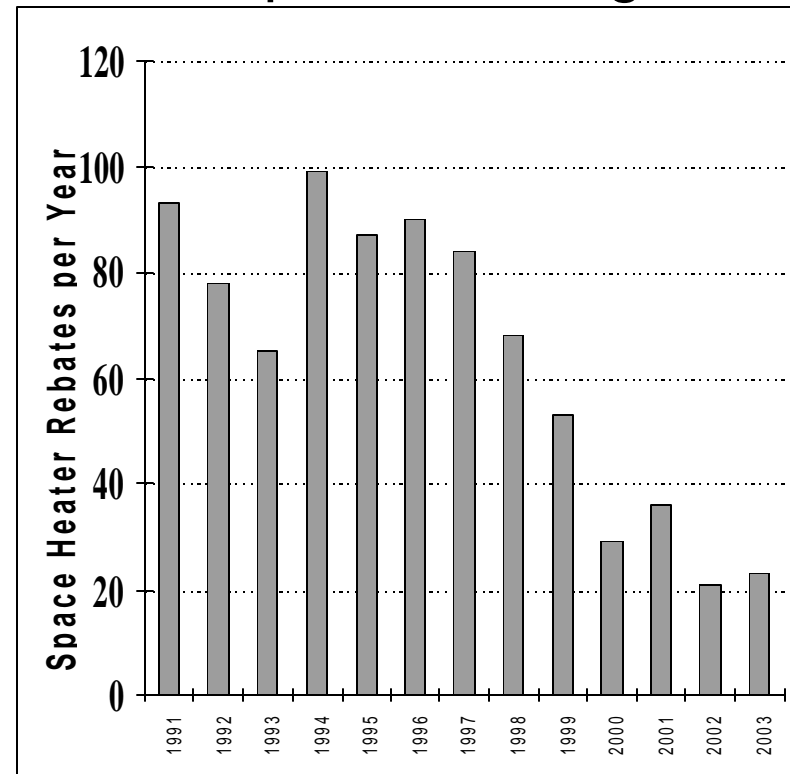
- **Natural Gas Appliances Reduce Electric Power Demand**

Natural Gas Rebates for Retrofits

Water Heating



Space Heating

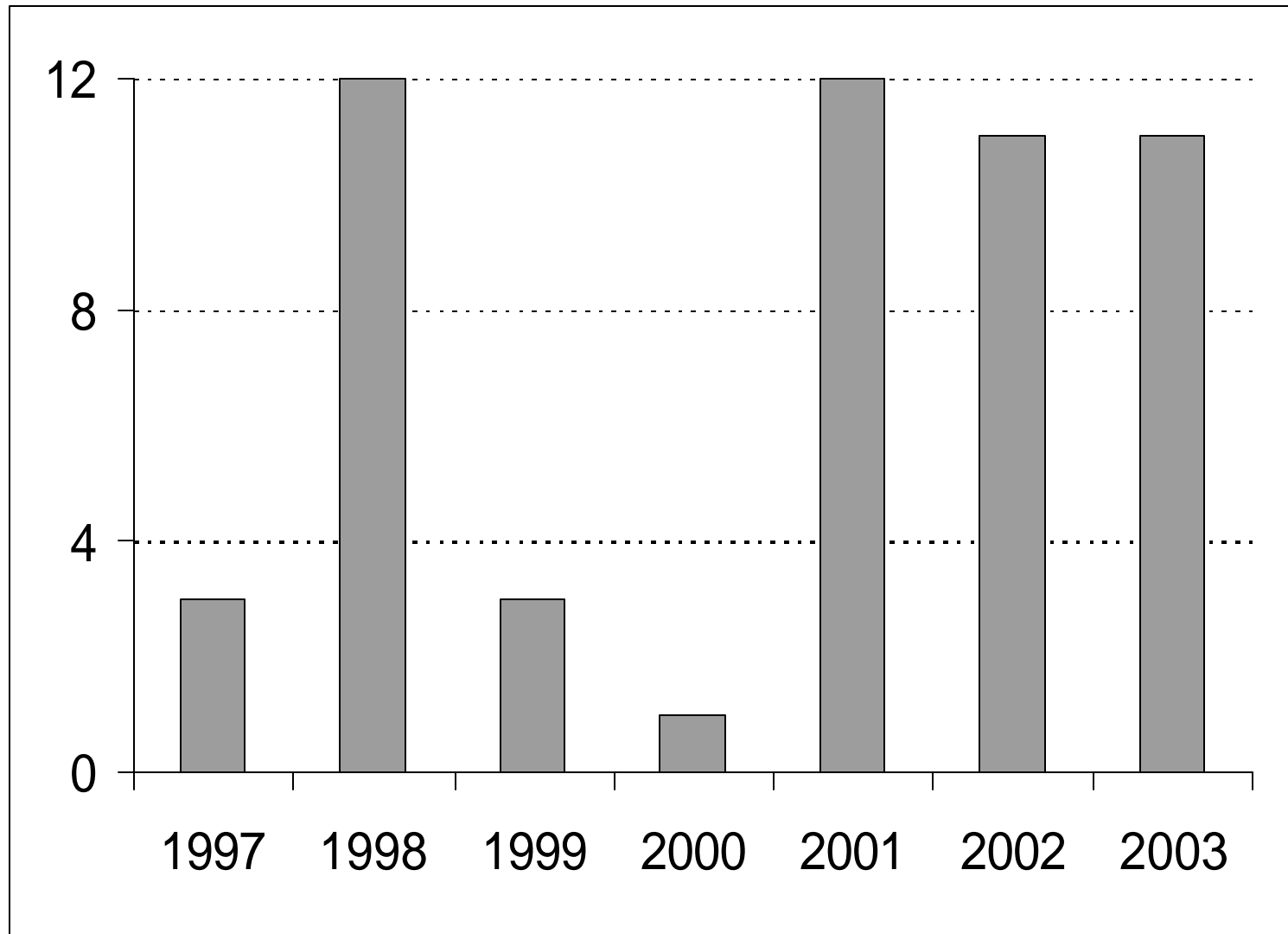


Encouraging Renewable Energy Use

- **Solar Water Rebates Reduce The Initial Cost; The Largest Barrier**
- **Participating in Front Porch Florida Initiative for Low-Income Homes**
- **Photovoltaic Interconnection and Buyback Agreement**



Solar Water Heating Rebates

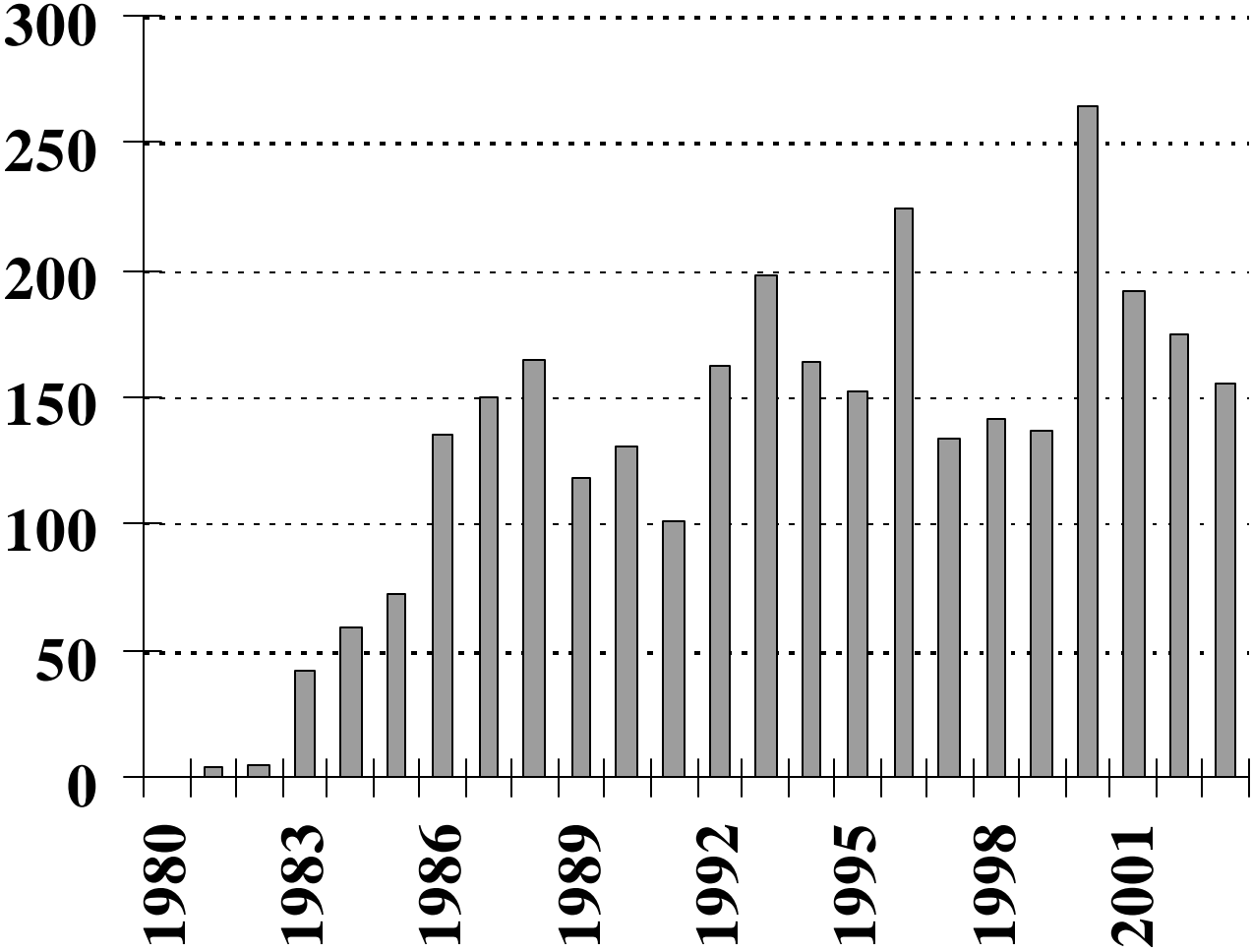


Our Current Commercial Energy Conservation Programs

- Conservation Surveys
- Commercial Lighting Service
- Solar Water Heating Rebates
- Solar Electric Interconnection and Buyback
- Gas Air Conditioning Rebate
- Gas Dehumidification Rebate
- Gas Water Heating Rebate
- Infra-Red Scanning Service



Commercial Energy Survey Requests



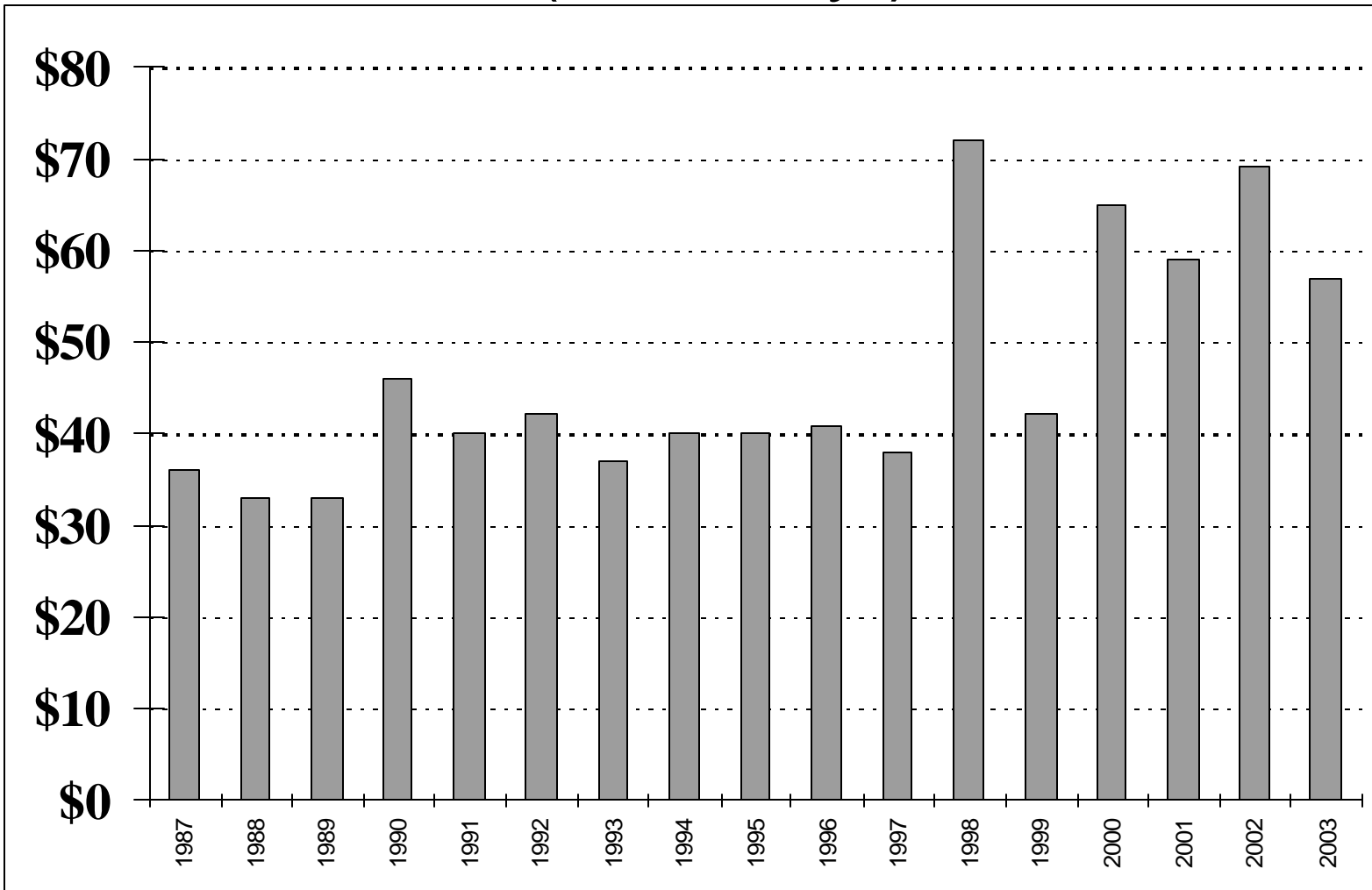
Commercial Lighting Service

- **Approximately 50%
Of Energy Used in
Commercial Buildings
is for Lighting**



- **Shared Savings Program**
 - We provide lighting equipment and simple installation services
 - Customer repays GRU from savings
 - Customer can have neutral cash flow during repayment period

Commercial Lighting Service Contract Activity (\$x1000/yr)



Energy Conservation Education

- **Energy Conservation Curriculum**
 - working with Alachua County Schools
- **Developed Conservation TV Ads**
 - in response to workshop suggestions
- **Solar Energy Curriculum**
 - Solar in Schools Program for Alachua Co
- **Energy Conservation Publications**
 - for Homeowners, Renters and Businesses
- **Information On Our Website:**

www.gru.com

Additional Conservation Programs We Are Currently Developing

Duct Leakage Repair Pilot and Incentives

- The Monster in the Attic
- Identify Customers Who May Benefit
- Identify Qualified Evaluation Contractors
- Identify Qualified Repair Contractors
- Determine Potential for Savings
- Determine Local Repair Costs
- Determine Maximum Incentive

Additional Conservation Programs We Are Currently Developing

Reducing Air Conditioning Needs

- High Efficiency Central AC Sizing
- High Efficiency Room AC
- AC Maintenance
- Heat Pipe Enhanced AC
- Heat Recovery Units for Hot Water
- Mobile Home Roof Coatings

Additional Conservation Programs We Are Currently Developing

Helping Commercial Customers

- Targeted Custom Incentives
 - Provide incentive for package of measures
 - Address the facility as a whole
 - Partner with customer and third-party integrators
- Thermal Energy Storage Systems
 - Reduce Peak Power Demand
 - Cost Effective for all ratepayers
- More Potential For Lighting Improvements

Additional Conservation Programs We Are Currently Developing

More Help For Hard to Reach Customers

- Weatherization for low-income households
- Solar water heaters for low-income households
- Green building evaluations for apartments
- Counseling for payment-troubled customers

Innovative Demand Response Initiatives

- **Request for Proposals For Innovative Demand Side Management Programs**
 - We issued to energy service companies, agencies and individuals
- **We Will Pay For Measurable, Verifiable And Cost-Effective Energy and Power Conservation**
- **Due Date For Proposals:
April 30, 2004**

Next Steps to Implementing Additional Conservation Programs

- Evaluate Cost-Effectiveness Of New Proposals, Proposed and Existing Energy Conservation And Power Demand Reduction Programs
- Optimize Demand-Side Management Portfolio (2 MW current project impact)
- More Resources Needed To Increase Energy Conservation Activities