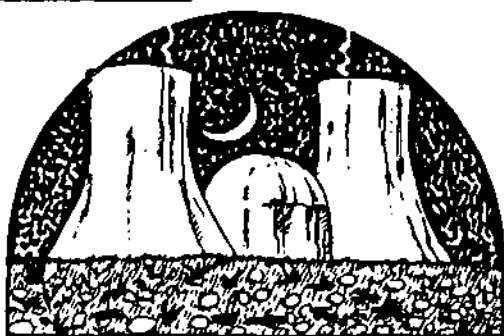
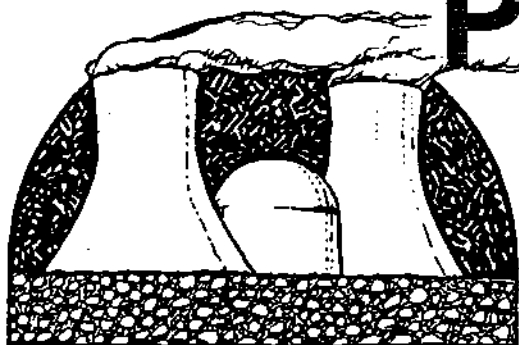


V CONFERÈNCIA CATALANA PER UN FUTUR SENSE NUCLEARS



■ ECOLOGISTES I
EMPRESSES ELÈCTRIQUES.



**Auditori del Centre Cultural
Plaça de Sant Jaume
Jaume I, 2 Barcelona
Dia 25 d'abril de 1991
a les 18,45 h.**



**Organització: Grup de Científics i Tècnics per un Futur No Nuclear. Apartat de Correus 10095 · 08080 Barcelona
Institut d'Investigacions sobre Ciència i Tecnologia.**

ENTITATS COL·LABORADORES:

■ ABSE - Associació Banca Social i Ecològica. ■ ADELLOCSAN - Associació per a la Defensa dels Llocs Sagrats Ancestrals. ■ ADENC - Associació per a la Defensa i Estudi de la Natura (Sabadell). ■ Alternativa Verda - Moviment Ecologista de Catalunya (Alt i Baix Llobregat, Barcelonès, Comarques Meridionals, Nord-Est i Terres de Ponent). ■ Animal Help. ■ Associació Naturalista de Girona - CEN. ■ Campanya "Viure sense nuclears". ■ CANC - Comitè Antinuclear de Catalunya. ■ CAPS - Centre d'Anàlisi i Programes Sanitaris. ■ CDDT - Coordinadora pel Desarmament i Desnuclearització Totals. ■ Centre d'Estudis Joan Bardina. ■ Col·lectiu Agudells (Sant Genís, Barcelona). ■ Col·lectiu Ecologista l'Alzina (Manresa). ■ Crida a la Solidaritat. ■ Ecotècnia S. Coop. per a l'autonomia tecnològica. ■ Fundació Roca i Galès. ■ GEPEC - Grup d'Estudi i Protecció dels Ecosistemes del Camp (Tarragona, Reus i Valls). ■ GEVEN - Grup Ecologista del Vendrell. ■ Grup de Natura l'Agià - Centre Excursionista de Tarragona. ■ IRAMA - Institut de Recerca Aplicada al Medi Ambient. ■ Justícia i Pau. ■ La Plans - Centre Rural d'Acolliment i Cultura (Artés). ■ PCC - Comissió d'Ecologia i Medi Ambient. ■ Societat Catalana d'Educació Ambiental.



Fundació "laCaixa"



Universitat Autònoma de Barcelona
Vice-rectors de Coordinació Institucional i Estudis



Generalitat de Catalunya
Departament d'Ensenyament
Direcció General d'Universitats

Conservation Law Foundation
of New England

*Collaborative Conservation
Projects*

*The Conservation Law Foundation
of New England is a private, non-profit
environmental law organization
dedicated to the preservation
and wise use of
New England's natural resources,
including its energy resources.*

What are the Collaborative Conservation Projects?

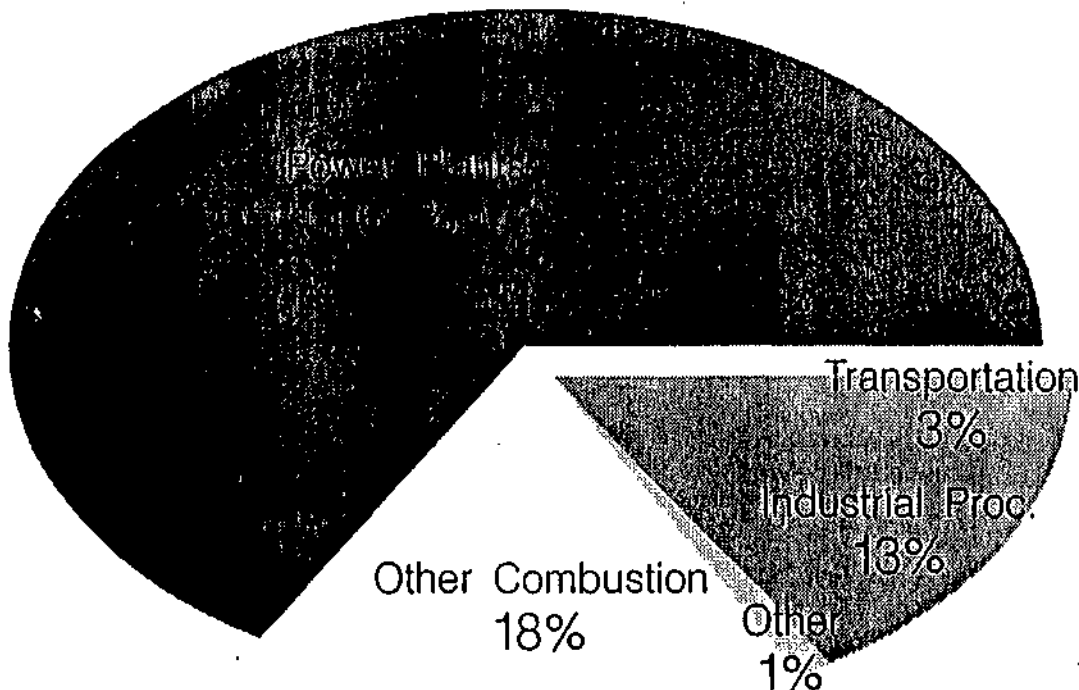
Since early 1988, CLF has been involved in developing, in conjunction with other intervenors in utility commission proceedings, full-scale energy conservation programs in concert with 12 of the region's electric utilities.

Id: CLF 04

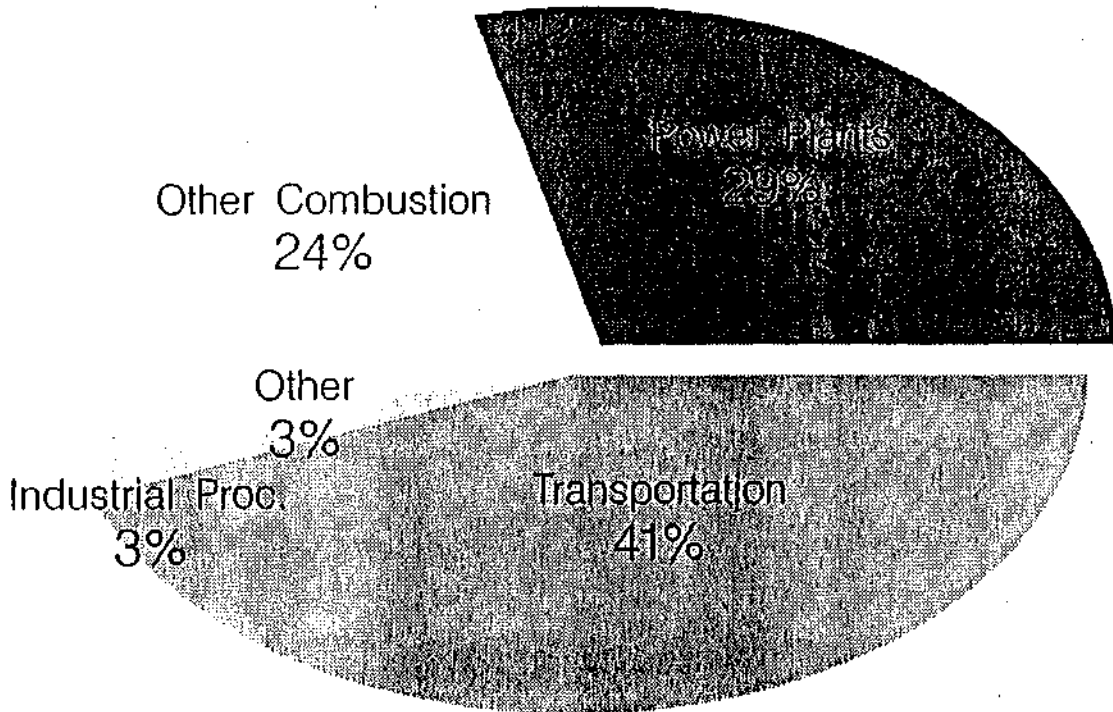
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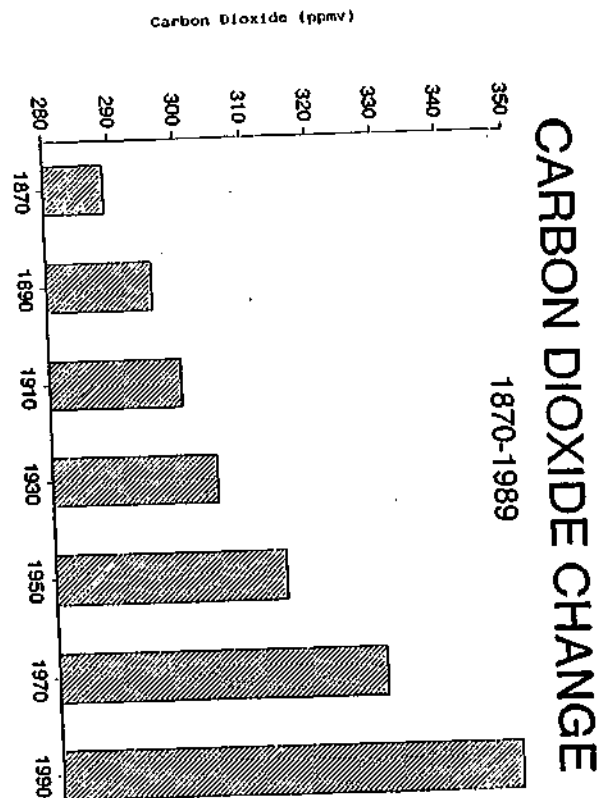
Sources of Sulphur Dioxide



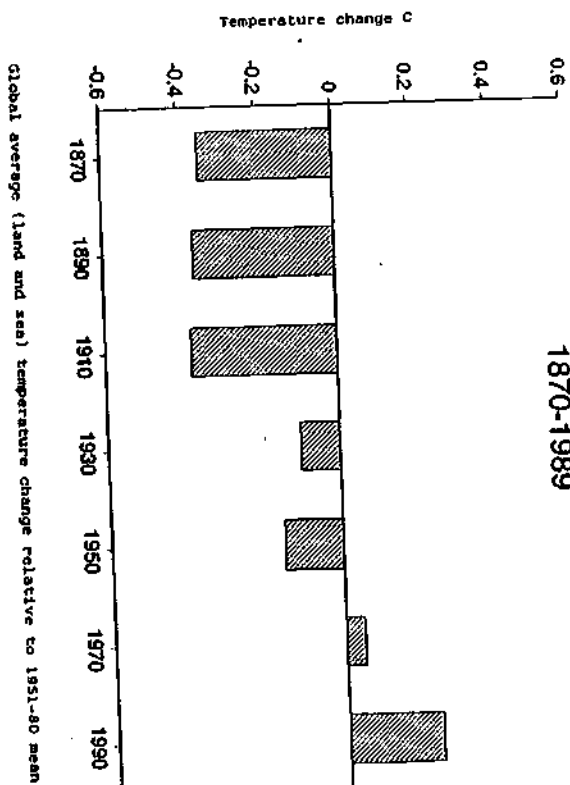
Sources of Nitrogen Oxides



CLF



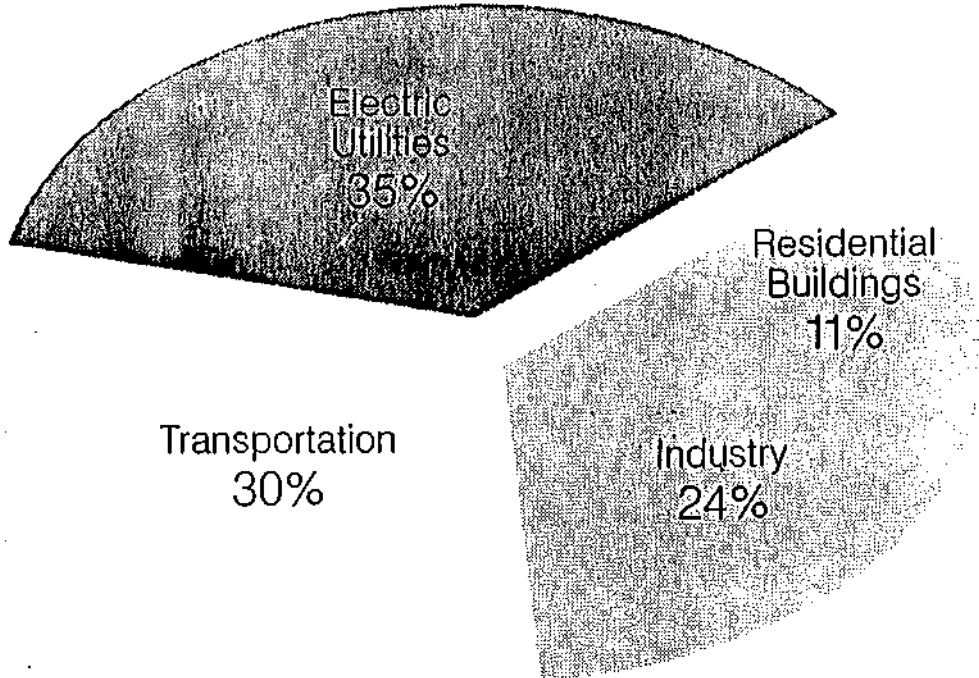
GLOBAL TEMPERATURE CHANGE 1870-1989



Intergovernmental Panel on Climate Change (IPCC). Policymakers Summary of the Scientific Assessment of Climate Change. 2nd draft. 12 March 1990.

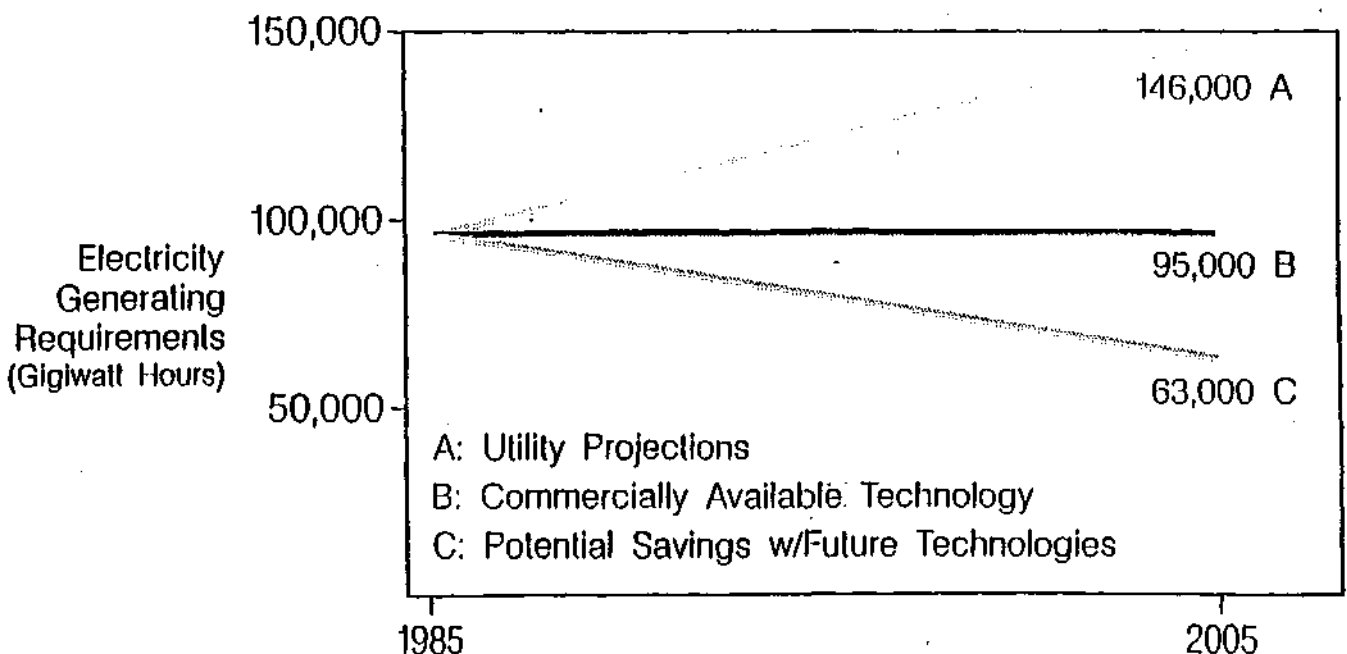
Sources of CO₂

Percent of U.S. Emissions in 1987



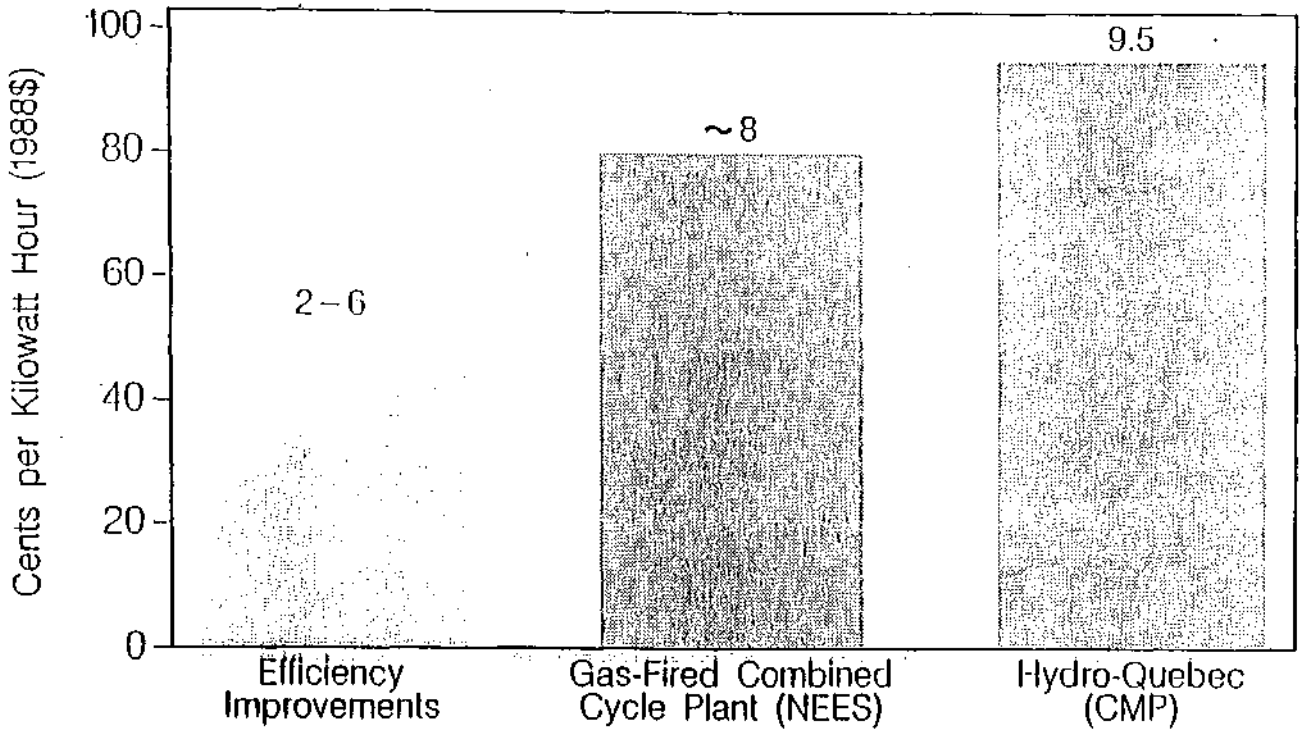
CLF

Technical Energy Savings Potential



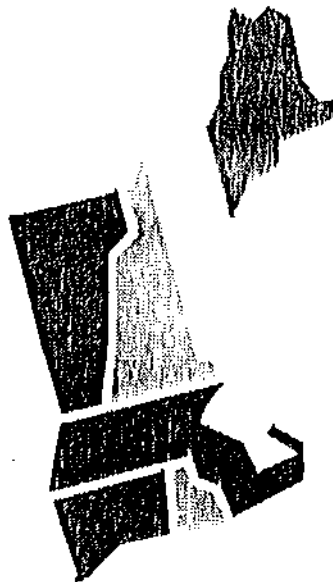
CLF

Electricity Production Costs*



* Additional costs of line losses and reserve requirements not included for generation options CLF

The Collaborative Conservation Projects



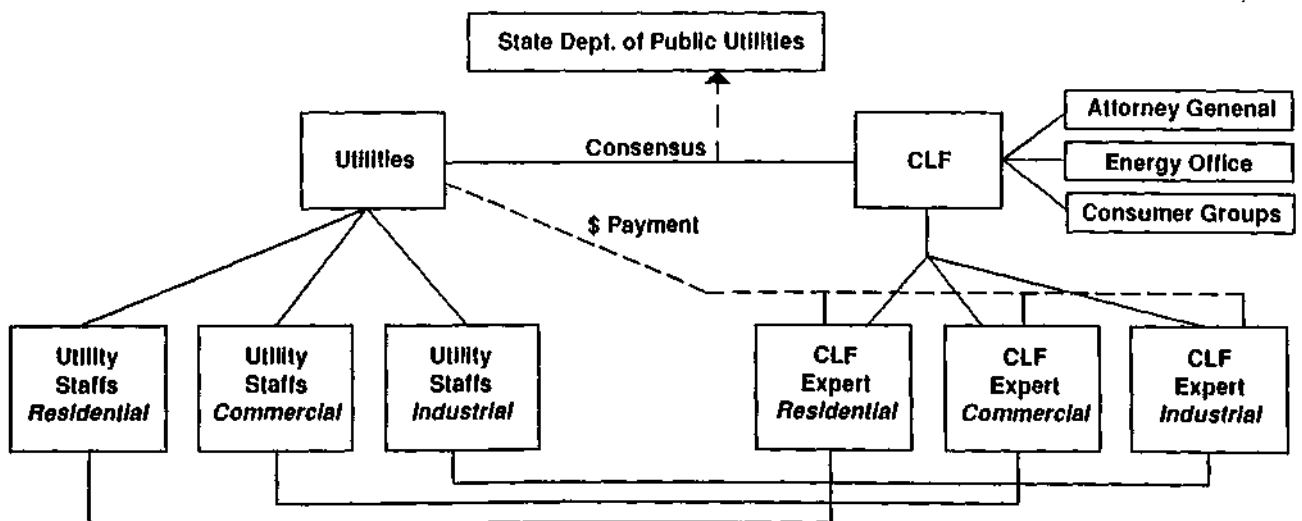
- Collaborative process in place
- Results of CLF work being applied through New England Electric

CLF

Why Collaboration?

- The question "How much conservation is practically available?" is the central issue in the debate over the need for new power plants.
- On their own, utilities were not maximizing the availability or delivery of cost-effective conservation measures.
- Regulatory proceedings were an inefficient way to review and improve conservation programs.
- Collaboration outside the hearing room seemed the best way to test, to all parties' satisfaction, the practical limits of conservation.

Collaborative Process



- Utilities Pay CLF Experts, NOT CLF
- Staff-to-Staff Negotiations
- Consensus Programs Presented to DPU
- Disagreements Resolved by Testimony, Expedited Hearings before DPU

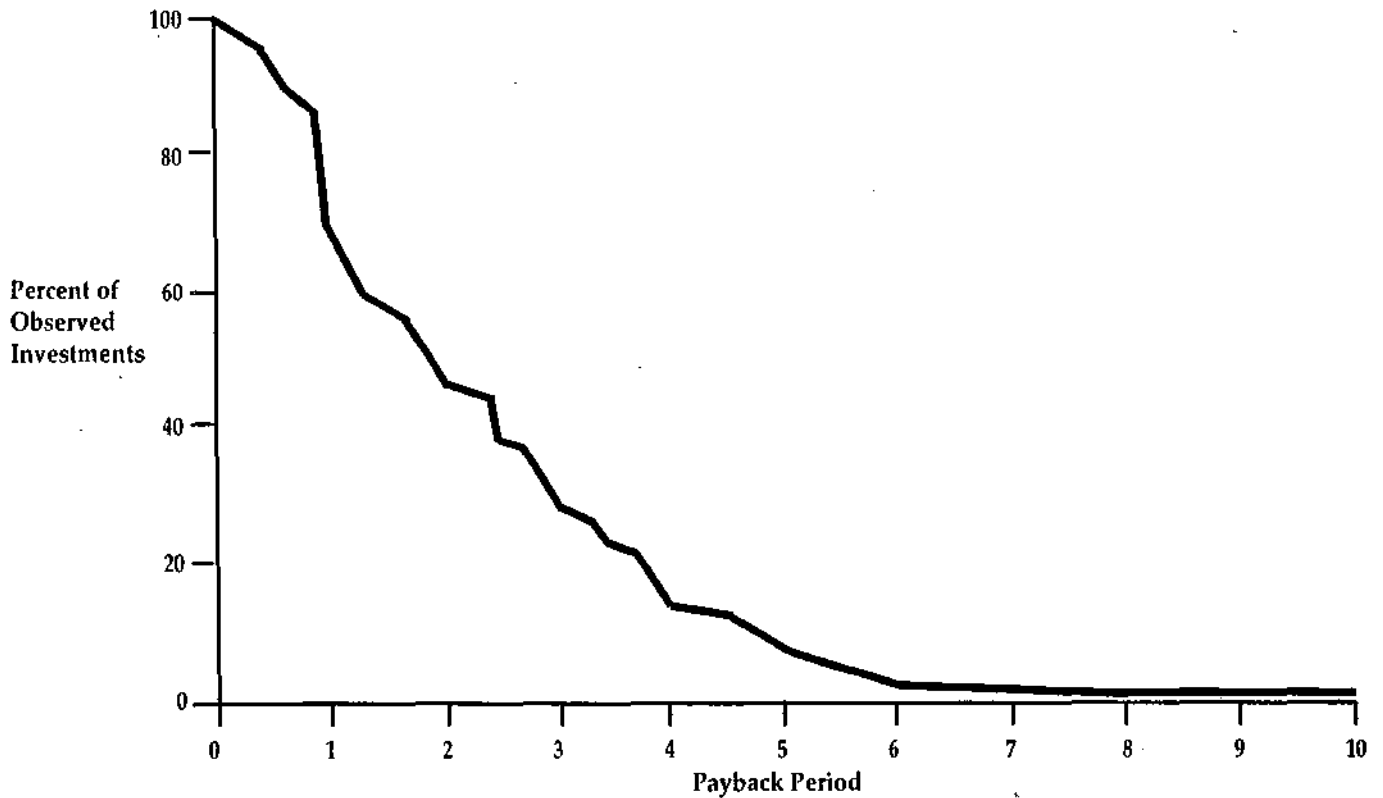
Principles of the Collaborative Conservation Programs

- **Comprehensiveness:** All sectors of the economy are targeted, and each site receives all cost-effective efficiency measures.
- **Aggressiveness:** Conservation programs are rapidly deployed, to achieve savings quickly so as to forestall more expensive power plants as early as possible.
- **Direct Utility Investment:** The utility pays a significant portion or all of the cost of the energy efficiency measures.
- **Persistence of Savings:** Conservation measures are monitored and maintained to ensure that they operate effectively.
- **Measurement:** State-of-the-art measurement verifies that predicted savings were achieved.
- **Utility Profits:** The programs include incentive ratemaking treatment so that conservation investment is profitable to utilities.

MARKET BARRIERS

- Information/Risk
- Differential Paybacks
(utility vs. customer)
- Split Incentives

Businesses' Willingness to Invest in Energy Efficiency



SOURCE: *Energy User News*

-
- EDUCATION/AUDITS
 - REBATES
 - DIRECT INVESTMENT

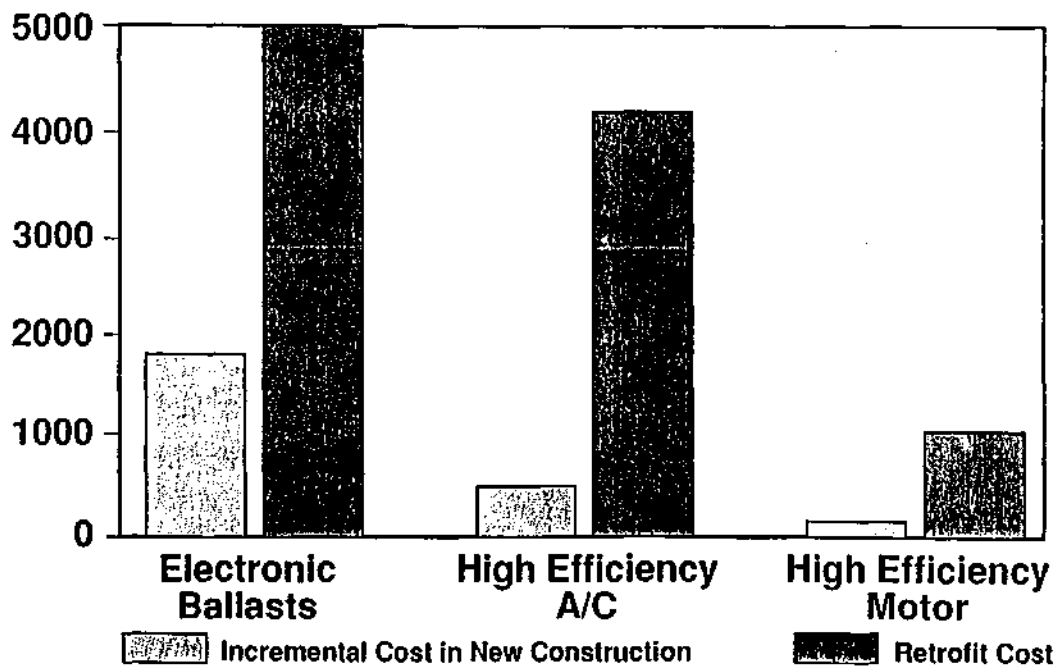
TECHNICAL ANALYSIS

+ DIRECT INSTALLATION

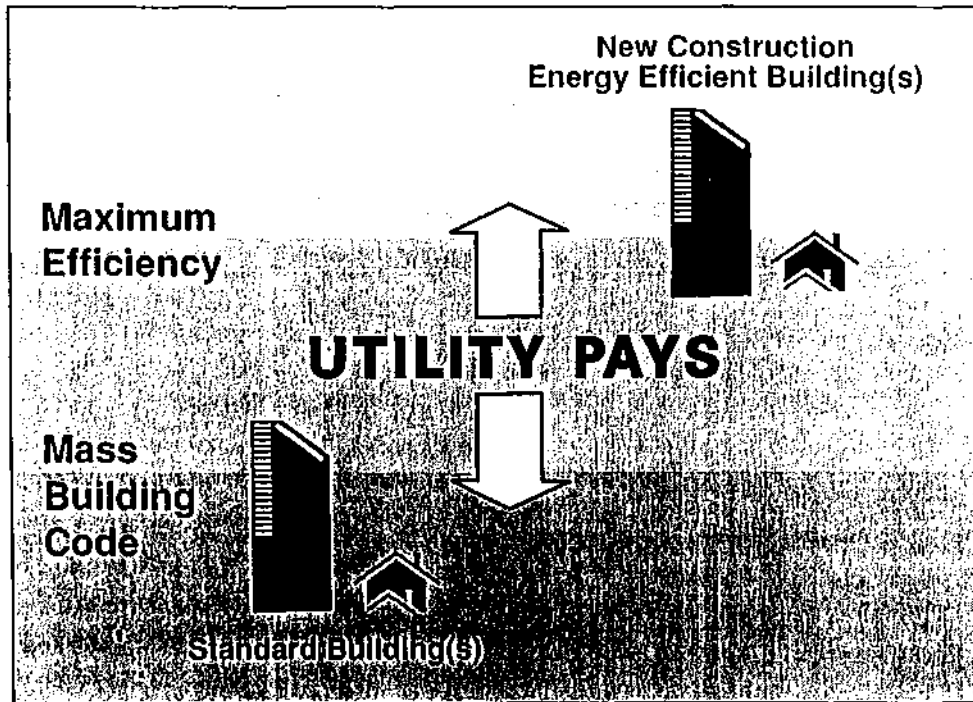
+ FULL PAYMENT

= DIRECT INVESTMENT

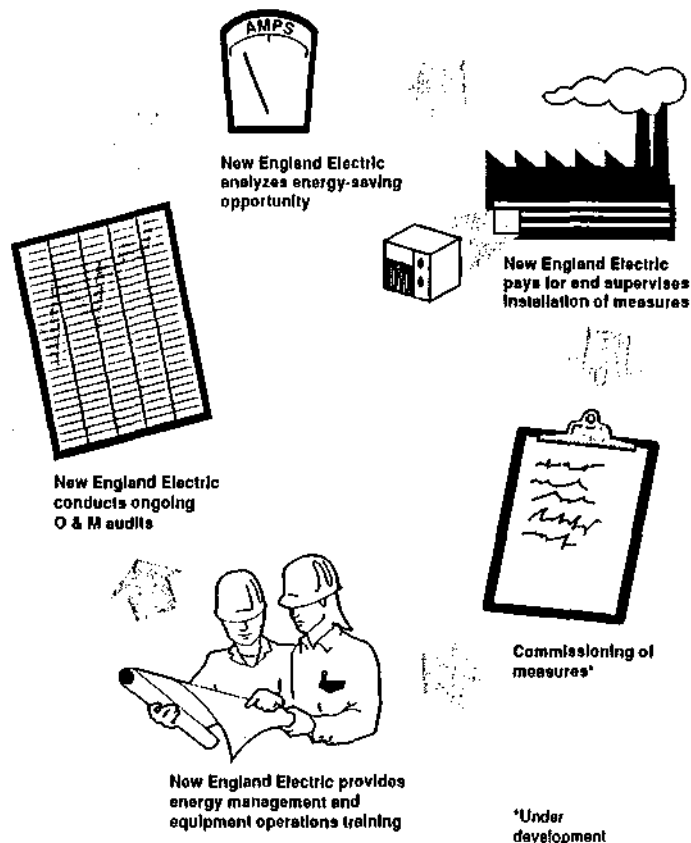
**Cost of Energy Efficiency Measures
New Construction vs. Retrofit**



New Commercial Construction

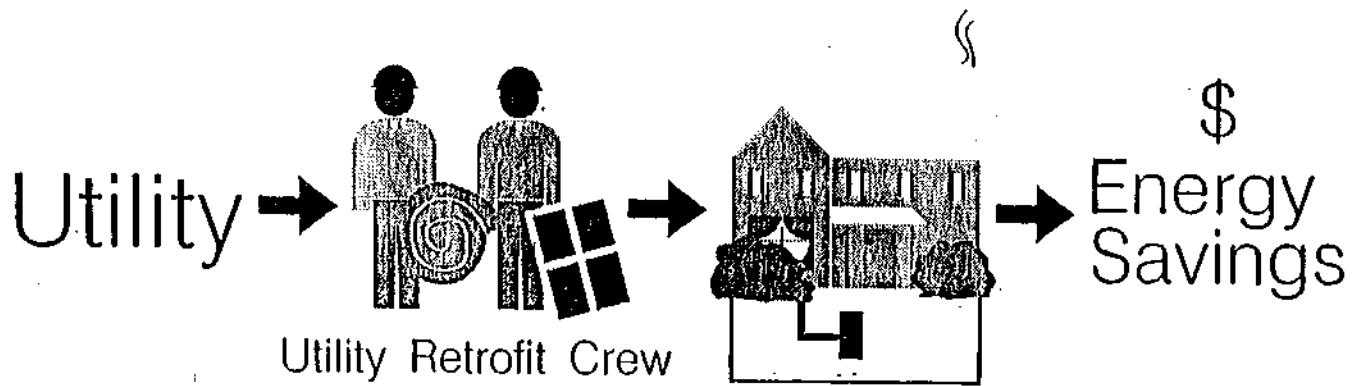


Energy Initiative



*Under development

Residential Retrofit



CLF

Size of the Programs

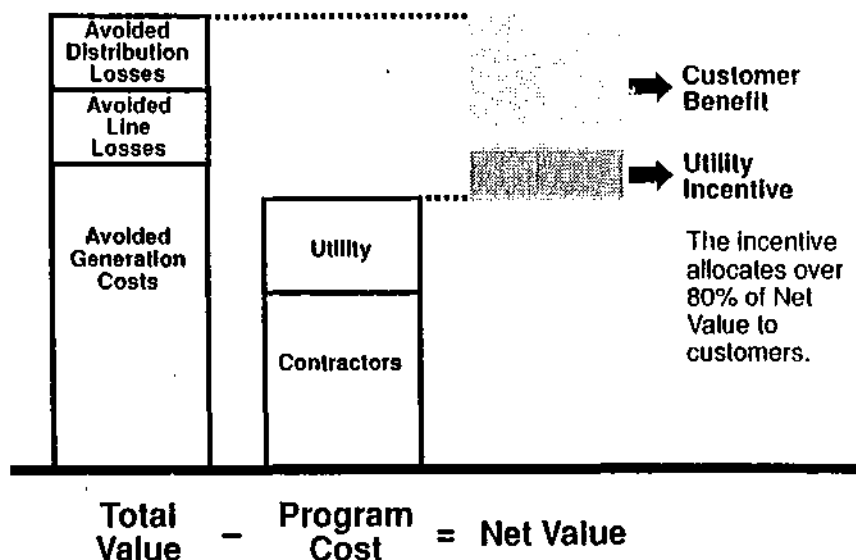
- *Between 1990 and 1994, New England utilities are committed to spend between one and two billion dollars on the Collaborative Conservation Programs.*
- *Well over 60% of these dollars will be spent on local labor and materials.*
- *The programs are expected to displace, at minimum, the need for several medium-sized coal plants at half to two-thirds the cost of such plants.*

Incentive Ratemaking Treatment

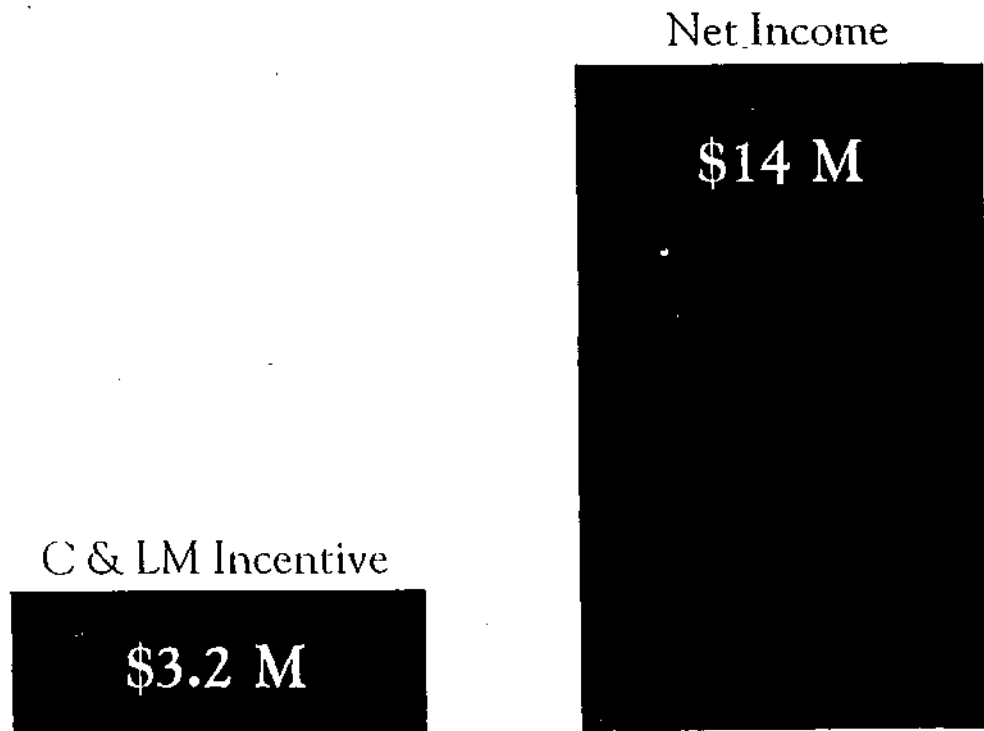
In three New England states (Massachusetts, New Hampshire, Rhode Island), the utilities are entitled to receive through rates:

- *The cost of the conservation programs*
- *Sales revenues lost because of the conservation*
- *A share of the long-run savings created through the programs*

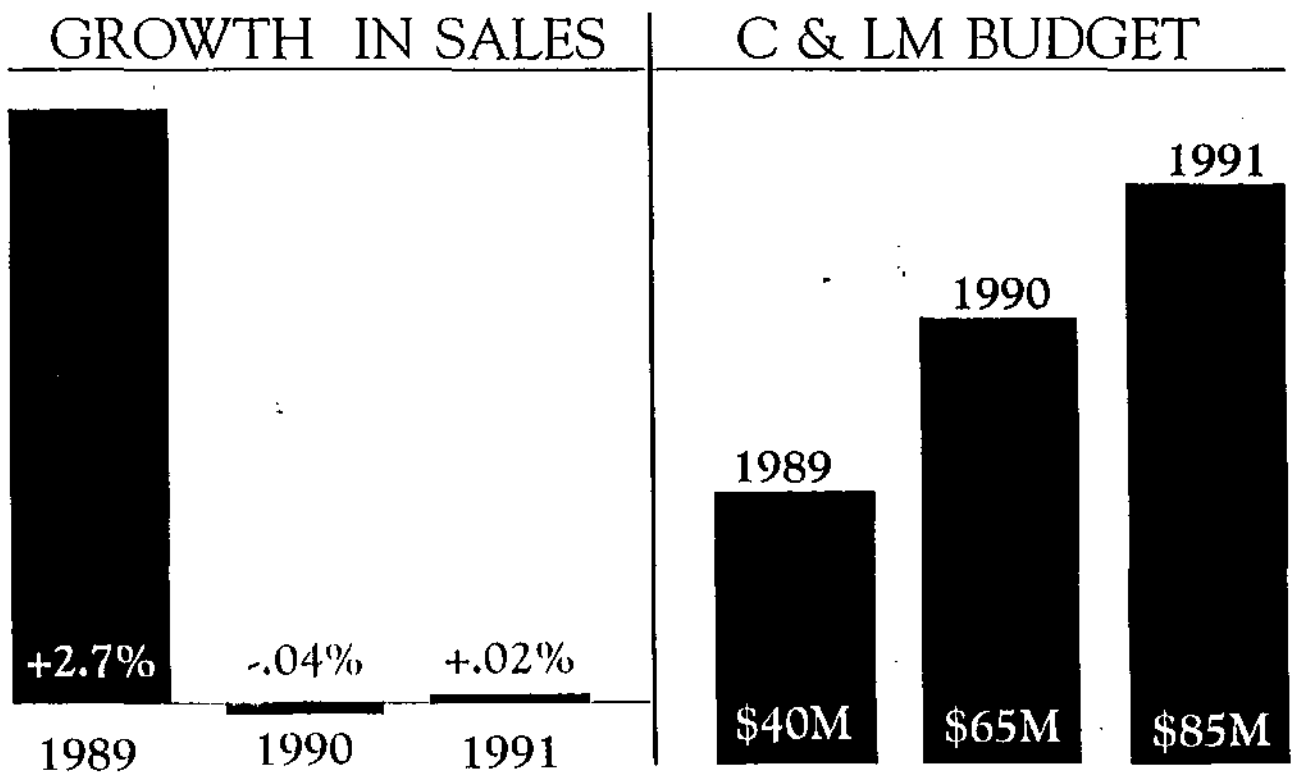
The Incentive Structure is based on the difference between the value of the conservation and the cost of the conservation.



MASS. ELECTRIC, 1990



NEES



Environmental and Oil Security Benefits

Each high-efficiency lightbulb installed in the program will avoid:

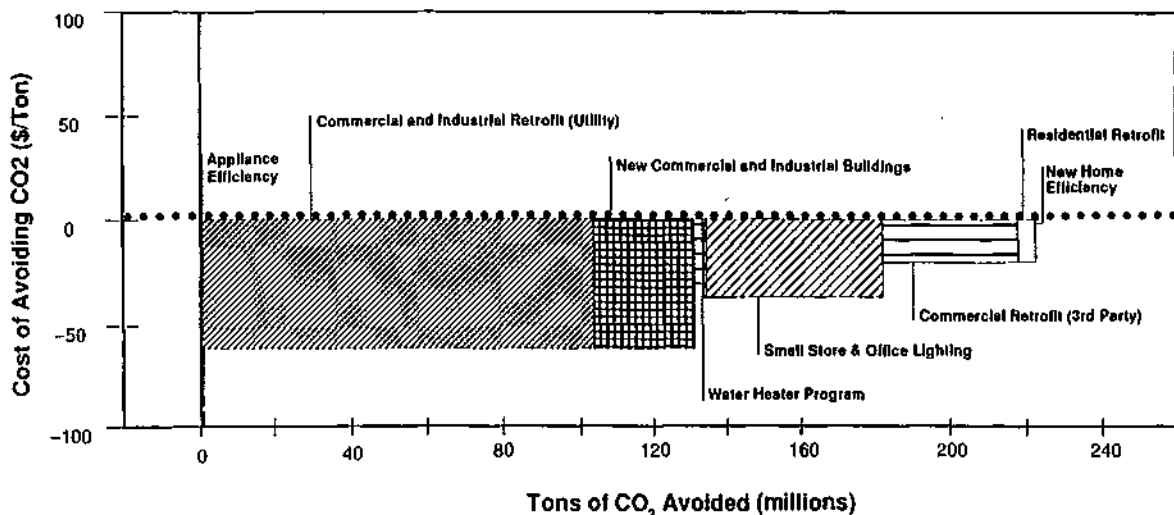
- *Burning 524 pounds of coal*
- *Burning nearly a barrel of oil*
- *One-half ton of carbon emissions*

Conservation Law Foundation

Cost of Avoiding CO₂ through Energy Efficiency and Tree Planting

(A National Strategy)

(Lifetime Impacts of 1990 Expenditures)



Total US CO₂ Emissions Annually = 5 Billion Tons

Source: Scaled up from Massachusetts Electric data.