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REMARKS OF THE HONORABLE FRANK G. ZARB
ADMINISTRATOR, FEDERAL ENERGY ADMINISTRATION
BEFORE THE

LOAD MANAGEMENT CONFERENCE
SHOREHAM AMERICANA HOTEL
WASHINGTON, D.C.
WEDNESDAY, JUNE 11, 1975
9:00 A.M., EDT

EMBARGOED FOR RELEASE UNTIL:
WEDNESDAY, JUNE 11, 1975, 9:00 AM, EDT

Good morning. It is a pleasure to have the opportunity to open this unique conference which -- as the subtitle of the program indicates -- brings together a true range of diverse interests to study the way in which all those interests can be served by effective load management policies.

Managing electric utility loads in a manner which improves the effective utilization of generating capacity and encourages judicious use of electricity by all consuming sectors is one of the few areas of action open to us which truly has something for everyone.

Consumers can benefit both from personal decisions to defer energy consumption until off-peak hours, if incentives are provided, and from increased utility efficiency, moderating requirements for increased rates.

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Utilities can benefit from load shifts which allow more balanced plant utilization, minimizing the need for construction of new generating capacity.

Environmental and consumer groups can take heart from successful load management which permits deferral of new installations, while still providing adequate electric power to supply overall needs.

And, perhaps most of all, the country as a whole can benefit from actions which reduce the need for peaking power, which is typically provided using oil-and-gas-fired peak load generators, in turn reducing consumption of scarce natural gas and costly oil.

Our options on the supply side are all constrained by various factors, all of which will take time to solve. But we can look to load management as a demand management option which can have enormous cost benefits to utilities and consumers alike, and which can begin to take effect soon, and to which there is little of the opposition which has delayed other actions.

We need to improve the efficiency of utilization of all forms of energy, and sensible load management policies can be designed to make great strides in efficiency of electric generation, with minimal investment.



Electric power utilization provides the only major opportunity for energy conservation involving a relatively uncomplicated change in consumption patterns, causing little or no inconvenience to consumers -- and perhaps even saving them money, and at the same time, protecting and enhancing utility financial integrity. All these aims can be accomplished through load management.

Most of you here today are all too familiar with the myriad of problems which face electric utilities today.

Rapidly increasing fuel costs have made the traditional regulatory lag-in approval of rate increases, which was troublesome but not seriously damaging in the past, a critically important factor affecting utility revenues, rates of return, and profits.

Declining sales, partially as a result of consumer conservation efforts, have exacerbated the revenue pinch for utilities, and this in turn has damaged their ability to finance new and replacement generation facilities.

Where utilities have tried to convert to coal or build new coal-fired units, frequently environmental constraints and coal supply problems have frustrated their efforts.

And where nuclear plants are either under construction or planned, lengthy delays in siting, construction, and licensing have stretched lead times to as much as ten years.



The wholesale revisions in future demand projections which have had to be made over the past year have brought fresh problems in calculating present and future system reliability, productivity, and reserve margins.

The utilities, of course, are not alone in agonizing over the new energy realities which have emerged in the past eighteen months.

Consumers have suffered genuine hardships as a result of the energy crisis, and they continue to resent the fact that energy is costing them more -- much more -- than it ever has in the past.

Consumers are disillusioned with the benefits of conservation: they have in many cases cut back on consumption admirably, but still been faced with higher utility bills. And the widespread attitude that conservation has been a direct cause of higher bills has -- unfortunately -- acted as a disincentive to further conservation.

It is understandable that consumers have a very difficult time comprehending the economics which have led utilities to apply for rate increases based on declining sales. The public is frustrated and angered by fuel adjustment clauses and automatic cost pass-throughs, and it sees declining rate schedules for those who consume more as grossly inequitable.



There is no one solution, and certainly no easy solutions, to all these problems. But load management can be a major step in the right direction.

And, significantly, load management is one of the few energy policy areas where there is a general consensus among industry, government, and public interest spokesmen that energy and energy facilities can be used more effectively and in ways that can benefit all concerned.

To succeed in our efforts to achieve the broadest possible use of load management techniques, we will have to have an economic environment which makes it cost-effective for utilities to institute such practices.

And -- perhaps most importantly -- we will have to have excellent communication between regulatory commissions, utilities and consumers on the benefits which can accrue to everyone from load management.

FEA is squarely on record as to the rate designs we feel will create the environment which will make load management economically attractive to utilities and consumers.

And the conference we are beginning here today is an example of FEA's commitment to facilitating the communication and interchange of ideas and thoughts which can make load management a reality.

In 1974, an average of less than half of installed electric power generating capacity was utilized. To meet peak loads, more than twice the capacity necessary to meet average load had to be available to meet peak demand.



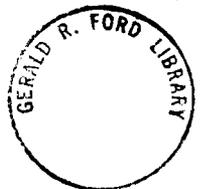
This nation simply cannot afford to continue building 100 percent excess capacity just to handle peak loads.

During the past year, conservation kept the growth of total electric demand near zero. But, despite the absence of total demand growth, peak demand rose. And, as all of you know, it is peak demand which dictates total generating capacity.

Until very recently, the historical growth pattern had shown total electricity demand rising at slightly less than 7 percent each year, while peak demand increased somewhat more than 7 percent a year. The major reason for that growth was the decline in the real price of electricity. Had consumer electricity costs risen at the rate of the Consumer Price Index, demand growth would have been more in the neighborhood of 4 percent.

The aim of load management is to reverse this historical trend, while lessening the rate of growth for both total demand and peak demand. Balancing the two is a key objective, and accomplishing this goal would result in fewer resources being used to provide the same service. Naturally, this would decrease consumer costs by reducing the need for plant expansion.

While our analysis of all the aspects of load management is not yet complete, our preliminary findings indicate that several specific objectives can realistically be met by 1985:



- we can improve load factor from the present 62 percent to 69 percent;
- we can improve capacity factor from the present 49 percent to 57 percent;
- we can encourage expansion of base load capacity -- primarily nuclear and coal capacity -- from 45 percent to 55 percent of total generation;
- we can increase end-use efficiency by about 10 percent through conservation actions;
- we can reduce the use of imported oil for electric power generation by as much as 1.3 million barrels per day

Through load management and related conservation programs, the Nation can attain these objectives at a manageable annual growth rate of about five percent -- plus or minus one-half-percent -- for electric sales, or kilowatt hour usage, and four percent -- again plus or minus one-half percent for peak demand.

This will establish a stable foundation for relatively low-cost nuclear and coal generation to meet the country's electrical needs beyond 1985.



Our aim is not to simply curtail total usage of electricity -- this would seriously impair utility profits and their overall financial health.

Rather, our aim is increased efficiency for use for electric power, as for all energy.

Our shared approach to accomplish this aim must be to improve the productivity of existing coal-fired generating plants, to improve the reliability of those plants, and to institute effective management of utility loads.

Load management is, in fact, the only option available that could also significantly decrease the electric utility industry's capital requirements for plant expansion between now and 1985.

Our projections show that effective load management could reduce the need for new installed capacity by about a third between now and 1985. And that represents a potential capital savings, including cost of capital, of at least 49 billion dollars over the next decade.

A number of possible load management techniques are available to us, and I expect that the speakers you will hear over the next two days will deal extensively with many of them.



Typically, many of the techniques involve a combination of rate incentives and regulatory policies.

Among the many required components of a successful load management program are peak-load pricing, load-control systems, consumer education, and end-use conservation.

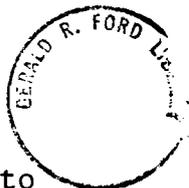
The last two, of course, have been and continue to be integral parts of the overall FEA conservation program. They are already being used extensively -- and effectively -- to increase public awareness of both the necessity for energy conservation and the most effective methods to conserve.

However, there are extensive technological, economic, and installation problems which limit the immediate effectiveness of direct load-control devices as a method of managing loads and moving them from peak to off-peak times.

As with other aspects of the Administration's overall energy program, the use of economic incentives to encourage better use of energy makes peak-load pricing policies an essential ingredient in any combination of load management strategies.

The critical need now is to design and develop peak-load pricing formulas which reflect the relative costs of peak and off-peak generation, while meeting the important criterion of maintaining aggregate revenue requirements for utilities.

Electric utilities have cut back sharply on plans for new generating capacity over the past two years, both as a result of changing demand projections and an inability to finance new projects.



Sensible load management can enable utilities to utilize existing capacity more efficiently. At the same time, it will protect their ability to finance necessary capacity additions for future growth and for the replacement of older, less efficient units.

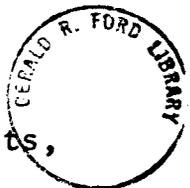
Several load management techniques have been in use in European countries for many years. While the problems and load characteristics of utilities in this country differ considerably from those in Europe and elsewhere, we are studying the practices of other countries carefully to learn how much of their experience can be applied to our situation.

In this country, several utilities are now testing direct load control devices under actual operating conditions, and their experience will serve as a guide to the future application of controls.

In addition, FEA recently agreed to fund seven pilot projects, totaling more than 1.5 million dollars, to help state and local governments promote greater efficiency in electric power usage.

These demonstration projects will test the feasibility of non-traditional rate schedules, load-control functions, and utility-sponsored conservation programs.

We anticipate funding additional projects of this type during the 1976 fiscal year to test innovative rate concepts, load management strategies, and more consumer conservation alternatives.



The track record of these initial programs will be invaluable to us in resolving the economic, technical, and institutional problems encountered by utilities in various areas of the country.

Roger Sant and Doug Bauer of FEA's Office of Conservation and Environment will conclude tomorrow's program with presentations on the need for a coordinated national effort in support of load management.

They will be asking utilities to implement specific conservation and load management actions. I will be following closely the success of these regionally-diversified efforts.

I place a very high degree of importance on utility load management as an integral part of our efforts to conserve energy and to achieve the goal of more efficient electric power generation.

A single example of effective load management stands out in my mind as an indication of what we can expect from a concentrated national effort.

The Smithsonian Institution here in Washington found last year that by following FEA's lighting and thermal guidelines, it was able to achieve a 22 percent saving in total energy consumption.

An impressive performance, but when the Smithsonian installed an on-site load management process computer it was able to realize an additional 17 percent reduction in energy consumption. And the computer paid for itself in four months.



This is only one example of the sort of innovative action that can help us meet our national objectives for more efficient energy use.

There are benefits for all which can result from successful and effective load management.

We might have been able to ignore the inefficiencies inherent in utilizing less than half our generating capacity when energy was taken for granted, but we can no longer afford that luxury.

Energy conservation has become a household term for American consumers. I am hopeful that load management will become just as familiar a phrase -- and just as conscientious a practice -- for all of those engaged in the business of generating and supplying electric power to the American public.

I am looking forward to the results of this conference, But, far more importantly, I am looking forward to the implementation of action plans resulting from this meeting, and that is what I will be following most closely.

I thank all of you for being here today.

