

APPENDIX "A"

THE FEDERAL GOVERNMENT'S
IN-HOUSE ENERGY CONSERVATION PROGRAM

I—INTRODUCTION

This report constitutes a statement on the federal government's past, present and future programs to conserve energy within its own operations. While acknowledging the efforts to date, it concentrates on the major new measures which are being announced today as Phase 1 of the five phase Federal Energy Conservation Program.

The document consists of programs devised and agreed upon by the Departments of Energy, Mines and Resources; Public Works; Supply and Services; and The Treasury Board. It represents a resolve by the government to eliminate energy waste and to improve the efficiency of energy utilization in the activities of all federal departments and agencies.

Such a program will not only save significant amounts of energy but it will demonstrate the government's seriousness about energy conservation and will provide examples of conservation practice that can be adopted by individuals, other governments, business and institutions.

These measures have been communicated to all federal agencies and will soon be put before the appropriate federal employee organizations for their consideration and support.

II—BUILDINGS

In November 1973 the Department of Public Works issued guidelines designed to conserve energy in the operation of federal buildings. They basically set out the following criteria:

Maximum Temperature	—working hours—70°F. —silent hours—65°F.
Ventilation Rate CFM/sp. ft.	—working hours—0.1 —silent hours—none
Lighting	—occupied space—no change —unoccupied space—none

and backed them up with specific instructions for different types of buildings and different areas in those buildings.

The Department of Public Works currently has a continuing program for maximizing the energy efficiency of all of its heating plants.

Be they relatively small furnaces or large central steam plants, their combustion is being analyzed and adjustments made to achieve and maintain the highest possible fuel efficiency.

The original November 1973 guidelines were designed to achieve an average of about 18% reduction in energy requirements.

With this program the department has achieved an average energy savings of 12% at its Ottawa steam generating plants. The actual saving was up to 40% in some buildings.

These guidelines were very helpful but, as recognized at the time, they did have four basic shortcomings:

First, since the guidelines were designed for the winter period, they did not take into account the cooling of government buildings during the summer months in regard to both the minimum temperature permitted and the potential reduction of heat loads through more efficient lighting and the control of solar radiation.

Secondly, these were general guidelines issued without reference to the particular characteristics of each building. Individual analysis would be required to determine the precise guidelines for each building that would be most energy efficient at various times of the year.

Thirdly, they were objectives that were to be pursued within constraints imposed by the current building structure and equipment without making significant alterations. For example in some of the newer office buildings there were few if any light switches so that if anyone was working in the building or on a given floor all the lights would have to be on.

Fourthly, there was little provision for monitoring the degree of compliance to these guidelines.

With these problems in mind the Department of Public Works has launched the following programs with the consultation and support of the Department of Energy, Mines and Resources.

1. REVISED AND RE-ISSUED OPERATING GUIDELINES

The Department of Public Works is promulgating revised guidelines for the operation of general office and similar space in Federal buildings which include the following:

Maximum Heating Temperature	—working hours—70°F. —silent hours—65°F.
Minimum cooling temperature	—working hours—77°F. —silent hours—85°F.
Ventilation Rate (except for purposes of cooling with outside air) CFM/sq. ft.	—working hours—0.1 —silent hours—none
Lighting—occupied space	—50 to 75 foot candles at work stations —30 to 50 foot candles in work areas —10 foot candles in non- working areas
—unoccupied space	—none except that necessary for safety and security
—exterior lighting	—none except that necessary for safety and security

Detailed measures for achieving these revised guidelines are in the process of being issued. The objective is to design and operate thermal and lighting systems in a manner that provides both efficient use of energy and a satisfactory working environment. With the addition of cooling and further lighting guidelines and more aggres-