



Republika ng Pilipinas
PAMBANSANG PANGASIWAAN NG PATUBIG
(NATIONAL IRRIGATION ADMINISTRATION)
Lungsod ng Quezon

MC # 38 s, 2004

TO : DEPUTY ADMINISTRATOR,
ASSISTANT ADMINISTRATORS,
DEPARTMENT MANAGERS,
REGIONAL IRRIGATION MANAGERS,
OPERATIONS / PROJECT MANAGERS,
PROVINCIAL IRRIGATION OFFICERS,
IRRIGATION SUPERINTENDENTS,
AND ALL OTHERS CONCERNED

SUBJECT : ENERGY CONSERVATION PROGRAM ON ELECTRICAL POWER

In line with AO 103 directing the continued adoption of austerity measures in the government and to ensure energy conservation (enercon) as a way of life within the bureaucracy and the NIA, you are hereby directed to promulgate and implement, among others, the following measures to reduce expenses on electrical consumption by 10%:

I. CREATION OF AN ENERCON COMMITTEE

The enercon committee shall be composed of the following

CENTRAL OFFICE	REGIONAL/INTEGRATED SYSTEM/ PROJECT OFFICE
1. Enercon Officer who shall lead enercon program	1. Enercon Officer who shall lead enercon program
2. Building Administrator	2. Administrative Officer
3. Two(2) Technical Personnel, preferably one (1) Mechanical Engineer and one(1) Electrical Engineer	3. One(1) Technical Personnel, preferably Mechanical Engineer or Electrical Engineer
4. Budget Officer	4. Finance Officer
5. Property Officer	5. Property/Supply Officer
6. Enercon Marshalls from the different offices who shall monitor lighting and power facilities	6. Enercon Marshalls from the different offices who shall monitor lighting and power facilities
NOTE: Implementing arm shall be the BFMD.	Implementing arm shall be the Administrative Division.

The committee shall be responsible for the effective implementation and monitoring of the enercon program.

II. CONDUCT OF AN ENERGY AUDIT

The Department of Energy and/or Energy Services Companies (ESCOs) can be tapped to provide technical assistance in the conduct of energy audit services, i.e., determine the actual electrical loads for air-conditioning units, electrical equipment, lamps or bulbs and the like. In

case there is no ESCO in your area, you may request the Central Office thru the ENERCON Committee for assistance.

III. IMPLEMENTATION OF THE FOLLOWING STRATEGIES/MEASURES:

A. RENEGOTIATION OF CONTRACTED DEMAND AND CORRECT SIZING OF TRANSFORMERS FROM THE POWER UTILITY IN YOUR AREA

If the actual power demand as a result of the energy audit is less than the contracted power demand when first applied, renegotiation of contracted power demand will result into a substantial savings.

B. IMPROVEMENT OF POWER FACTOR

With the technical assistance from the power utility, improving the power factor (PF) to at least 98% will not only reduce induction losses from air-conditioning units, motors, transformers and ballasts of fluorescent lamps but also reduce/eliminate penalty in the form of Power Factor Adjustment(PFA). MERALCO for example gives discount to billings with power factor higher than 85% but also imposes penalty for power factor below 85%, i.e., a PF of 75% will mean a penalty of about 6% but a PF of 98% will mean a discount of about 4%. This could be translated into a savings of about 10%. Cost for the capacitor bank to be procured could initially be charged to the rebates or savings that could be generated from the power factor improvement.

C. AIR-CONDITIONING UNITS (ABOUT 60% OF THE TOTAL KW-HR CONSUMPTION)

1. Reduce operating hours of air-conditioning units from 9:00AM to 3:30PM except for the office of the Top Management Officials, Department/Project Managers (CO-based), Regional/Operations/Project Managers, Irrigation Superintendents and Provincial Irrigation Officers.
2. All air-con units shall be switched on to fan between 12:00NN to 1:00PM
3. Minimize infiltration (warm air leaking in) and exfiltration (cool air leaking out) by reporting cracks and defective/deteriorated louvers, windows and doors to BFMD-CO or Administrative Officer in the field offices for repairs and/or installation of automatic door locks;
4. Apply tint on the glass window directly hit by sunlight because it reflects light or place plants near the glass window to absorb the heat coming from sunlight.
5. Water concrete walls hit by sunlight whenever practicable/feasible.
6. Set thermostat at higher temperature, i.e., not lower than 78°F whenever possible.
7. Isolate areas that are not needed like restrooms, bodega, and the like. Use electric fan for the purpose.
8. Keep all doors and windows closed when the air-conditioning unit is working;
9. Clean coils and filters of air-conditioning units at least once a month.
10. Check oil/grease if there are squeaking/abnormal sound.
11. Check suction and discharge pressure regularly using a log sheet. Normal pressure should be 55-65psi for suction at about 40°F and 225-240 psi for discharge at about 110°F.
12. Hot air absorbed by the ceiling should be removed by using exhaust fan or insulation.
13. Install the compressor and condenser outside with no wall intervention. For every degree of temperature higher, consumption is about 3% more.
14. Cover all ceiling holes and air duct openings.
15. Install power delay gadget to protect electrical equipment from sudden surge of electric current.

D. LIGHTS (ABOUT 20% OF THE TOTAL KW-HR CONSUMPTION)

1. Reduce operating hours by the following measures, except for the offices aforementioned in C1:
 - a) Turn on emergency lights at 6:30AM.
 - b) Turn on the normal power at 7:00AM.
 - c) Shut off the normal lights from 12:00NN to 1:00PM.
 - d) Turn off the lights at 5:30PM.
 - e) Turn off all unnecessary lights.
 - f) Use natural lighting (daylight) to maximum advantage, whenever possible;
2. Reduce wattage by using single bulb fluorescent lamp, preferably 36 watts (slim) with reflector and/or energy saving bulbs, as applicable.
3. Paint the rooms with light color, preferably white
4. Unplug all electrical equipment and appliances before leaving the office.
5. Do not leave perishable foods in the refrigerator as all power will be eventually shut off.
6. Use of electric stoves is strictly prohibited.
7. Sectionalize switch. If possible, lamps or bulbs near the window should have separate switch.

E. ELECTRICAL EQUIPMENT/DEVICES (ABOUT 20% OF THE TOTAL KW-HR CONSUMPTION)

1. Balancing of electrical loads.
2. Cleaning of all circuit breakers and retightening of terminal lugs.
3. Separation of lighting and power circuits of rooms of top and middle management from that of the rank-and-file by installing centralize switch for the latter per floor.
4. Turn off computers not in use or better pull the male plug of the computer's power supply from the convenience outlets as they contribute to what is called the "ghost" losses.
5. Defrost refrigerators regularly. Frost acts as an insulation blanket which causes the motor to work overtime, resulting in increase power consumption.

All offices shall come out with an Energy Conservation Program On Electrical Power to be submitted to the Office of the Assistant Administrator for Administrative Services not later than October 31, 2004, including CY 2003 and January-September 2004 electrical consumption. Thereafter, a monthly electricity consumption report shall be submitted every 15th day of the following month to start in November, 2004 using the attached form marked ANNEX A.

Non-compliance hereof constitutes violation of reasonable office rules and regulations and shall be dealt with in accordance with Civil Service Law, rules and regulations under Section 52, Rule IV (Penalties).

All previous issuances inconsistent with this Memorandum Circular are hereby revoked.

For strict compliance.


JESUS EMMANUEL M. PARAS
Administrator

October 8, 2004

