



MINUTES OF THE 3rd EMC MEETING ON SEPTEMBER 04, 2024
AT 9:00 AM HELD @ NBERIC AREC OFFICE

Attendees:

- Engr. Angeline Agustin
- Engr. John Ian A. Asuncion
- Engr. Rafael Domingo
- Engr. Irish Morales
- Engr. Darrel Pasalo
- Engr. Psalm David Pastor
- Engr. Ian Romas
- Engr. Thomas Ubiña

Agenda:

- I. Review of DOE Interagency Circular on Energy Conservation
- II. Policy on Air Conditioning (AC) Units' Operation
- III. Recommendations for Energy Efficiency Improvements
- IV. Other Matters

Key Discussions:

I. DOE Interagency Circular of Energy Conservation:

- The committee discussed the need for training for energy auditors.
- Engr. Ubiña emphasized the seriousness of the government’s focus on energy conservation and urged the committee to take the issue seriously. He highlighted that the data gathered from audits conducted last year and this year would be crucial. The committee needs to carefully prepare reports that will be essential for reducing the university's energy consumption by late this year or early next year.
- The committee discussed the need to find and attend appropriate training for auditors to align with the DOE's energy conservation mandates.

II. Discussion on the Memo Regarding Air Conditioning Units

- The data from previous audits was discussed, highlighting the importance of using these findings to reduce the university's energy consumption.
- The concern raised by Dr. Julius Manzano about the memo requiring air conditioning (AC) units to be turned on at 9:00 AM and off between 12:00–1:00 PM was discussed.
 - The policy cannot be retracted, but changes could be made.
 - The current policy allows for a **6-hour operation of AC units**, which is clear.
 - During the 12:00–1:00 noon break, if possible, the AC units should be set to fan mode.

Technical Considerations:

- A study revealed that turning off non-inverter AC units during the noon break (12:00–1:00) results in lower energy consumption (approximately 1 kW-hr for a 2 HP unit) compared to continuous operation.
- For inverter AC units, claims suggest that keeping them steady provides more energy savings. This presents an opportunity for further research and a basis for decision-making on the policy.



Proposed Modifications:

- The current 6-hour operation for AC units was discussed. The possibility of running ACs in fan mode from 12-1 PM was proposed, especially for non-inverter ACs, as turning them off may consume less energy.
- Engr. Ubiña proposed amendments to the current policy to make it more flexible. Extending AC operation during summer months from 6 to 8 hours, with adjustments based on room temperature and heat index. The head of each unit will have the authority to adjust the AC schedule adjustments.
- It was suggested by Engr. Romas that the 9 AM start time for AC operations could be adjusted based on the room's orientation, especially for east-facing rooms.
- Engr. Ubiña emphasized the need to maintain the 24°C thermostat setting but noted the challenges posed by undersized AC units in some rooms.

III. Energy Efficiency Recommendations:

- Engr. Ubiña suggested presenting the proposed policy amendments to ADCO for approval.
- The possibility of designating a single room for VSL faculty to work in during semestral breaks, to minimize AC usage, was raised by Engr. Romas.
- Engr. Ubiña strongly recommended establishing a common lunch area for employees where AC units in their offices are turned off, except for designated offices that has no noon breaks.

Transformer Issues

- The committee noted high energy losses from oversized transformers. It was recommended to replace old transformers with appropriately sized ones.

Decision-Making and Research

- The committee agreed that it is crucial to base policy recommendations on strong evidence and research. All decisions and requests for changes regarding energy conservation measures must be signed by the committee members to ensure accountability.
- Engr. Ubiña recommended that members engage with the circulars and research thoroughly before making policy recommendations.

IV. Other Matters

Future Meetings Schedule

- It was agreed that future meetings of the committee will be held every Wednesday.

Energy Audit Data

- The audit data from last year and this year will be crucial in recommending improvements and reducing the university's energy consumption. The committee aims to finalize the audit report by November 2024, with implementation before 2025.

Audit of Inverter vs. Non-Inverter AC Units

- Engr. Domingo was tasked with summarizing data on inverter and non-inverter AC units and identifying rooms with undersized ACs.

Training and Budget Oversight

- Engr. Agustin was asked to find training courses on energy auditing and management.
- Engr. Morales will oversee the budget for training and procurement of necessary tools, such as thermal sensors and airflow meters.

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Recommendations Summary:

1. AC Unit Policy Adjustments:

- Extend AC operation hours during summer from 6 to 8 hours, with flexibility based on room temperature and heat index.
- During the 12:00–1:00 PM break, non-inverter AC units should be turned off or set to fan mode to save energy.
- Adjust the 9:00 AM start time for AC operations based on room orientation (e.g., east-facing rooms may need earlier start times).
- Maintain the 24°C thermostat setting, but address issues with undersized AC units.

2. Energy Efficiency Initiatives:

- Replace oversized transformers with appropriately sized units to reduce energy losses.
- Designate a common work area for faculty during semestral breaks to minimize AC usage in individual offices.
- Establish a common lunch area for employees, ensuring AC units in offices are turned off during the break.

3. Training and Research:

- Provide training for energy auditors to align with DOE energy conservation mandates.
- Conduct research on the energy consumption of inverter vs. non-inverter AC units, particularly during noon breaks, to guide policy decisions.

Action Items:

- Engr. Domingo to provide a summary of air conditioning units.
- Engr. Agustin to identify and initiate energy audit training.
- Engr. Morales to manage the budget for energy conservation efforts.
- Committee to finalize the audit report by November 2024.

Adjournment

There being no further business, the meeting was adjourned at 10:15 AM.

Prepared by:

Engr. John Ian A. Asuncion
EMC Secretary

Attested by:

Engr. Thomas Ubiña
Chair, EMC