



CAG

Citizen consumer and civic Action Group

ENERGY CLUB SESSIONS

**CHENNAI HIGH SCHOOL
GOYYATHOPE**



MARCH 2024

A report on Energy Club sessions at Chennai High School, Goyyathope

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Citizen consumer and civic Action Group (CAG) with authorisation from the Education Department of Greater Chennai Corporation has initiated a student-led Energy Club in Chennai High School (CHS), Goyyathope.

The plan was to conduct a total of 5 interactive sessions, with one session every week for the students of Standards 6, 7 and 8. The first four sessions took place on March 4, 11, 18, and 24, 2024. However, due to the advancement of final examinations on account of the Lok Sabha elections, the final session had to be put back, and was conducted on September 16, 2024. .

Researchers from CAG lead the club sessions, delivering lectures and presentations and conducting interactive games, quizzes and activities for the student members.

Session 1:

The first/inaugural session was conducted on March 4, 2024. The session began with an introduction, briefing the gathering of students of Standards 6 - 8 and their teachers, about the club, its objectives and work plan as follows:

Aim:

The energy club will nudge and support its members towards

- (i) A better understanding of the subject of electricity and the importance of conserving it.
- (ii) Initiating behavioral changes in the way energy is consumed in their households / school.
- (iii) Gaining exposure to sustainable energy goals and renewable energy sources.

Club structure and functioning:

Students of Standards 6-8 will be the chief members of the club. Their teachers and the CAG representatives will support them.

Initially, five sessions (one session a week) will be conducted by CAG representatives to make the students and teachers aware of energy conservation and energy efficiency,

guide them in improving their understanding of household energy consumption and adopt an energy-conscious lifestyle. After the completion of the five sessions, the club can be retained in a way that its members promote awareness and capacity building around energy conservation to their peers, family and community.

After the introduction, an interactive discussion on the following topics were conducted:

- Renewable and non-renewable sources of electricity;
- The process of electricity supply, transmission, distribution and consumption;
- Impacts of electricity production and consumption on global warming, climate change and the local environment;
- Role of students and young adults in mitigating the negative effects caused by power generation using the concept of energy conservation and energy efficiency
- Buying energy-efficient appliances by counting the stars on the [energy-star-labels](#) affixed on appliances;
- Using household appliances efficiently by following simple measures like unplugging or switching off appliances on the wall/socket to avoid [standby power loss](#), using [natural lights and ventilation](#) over artificial lighting, fans and ACs whenever possible and doing regular maintenance.

Students eagerly interacted and grasped the concepts as the discussion involved their favourite cartoon characters and fun filled energy awareness games.



Members of the Energy Club - CHS Goyathope.



An interaction about the club and its way forward.

Session 2:

The second session was about the efficient usage of common household appliances. It was conducted on March 11, 2024.

The session began with a demystification of the components of the electricity bills - the Tamil Nadu Generation and Distribution Corporation ([TANGEDCO](#)) white meter card and online bill. This was done to make the children aware of how to identify and keep track of their household's energy consumption. This was followed by a presentation on efficient usage focusing on four common household appliances - fan, television, refrigerator and light. The phenomenon of light pollution and its impact on the health and well-being of all lives was then elaborated. Finally, a quick brush-up quiz followed by a try-at-home activity was given to the children. As part of the activity, children were asked to

- Observe
 - The night sky from their terrace;
 - How artificial lighting is used in shops and houses, lights in their area during evenings and nights - whether used in excess and unplanned ways or otherwise.

- Discuss with their family and friends about whatever they learnt from the energy club.

This activity was to give a real-life exposure and understanding of the impacts of light pollution in their neighborhood.



Recap discussion

Session 3:

The third session, which primarily focused on impact stories and experience sharing by the club members, was conducted on March 18, 2024. During the first half of the session, there was a recap of the previous session and a feedback discussion on the try-at-home activity given to the members. The members happily shared their experiences of their interactions with their family and friends regarding electricity savings, standby loss, and identifying star labels. Many felt proud that they were the first to introduce these concepts to their friends and family. They also discussed observing light pollution in their neighborhood and acknowledged the sad truth. A video capturing the light pollution on the shores of Chennai was played to emphasize the importance of taking action to mitigate light pollution. Children agreed to avoid using artificial lights in unplanned and wasteful ways from now on.

Club members enjoyed using the IEC materials developed by CAG, such as the games on energy conservation.

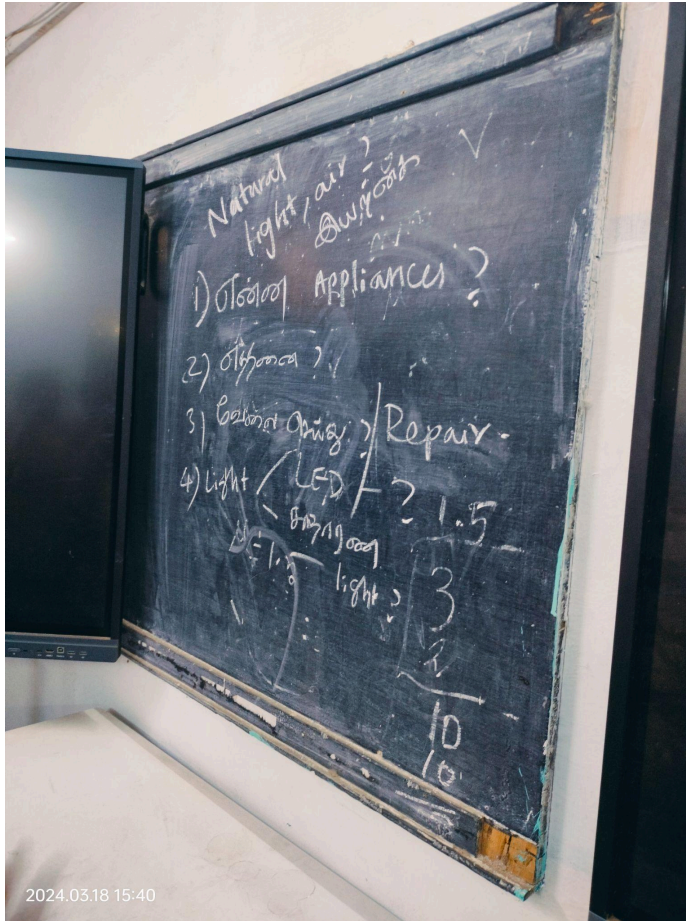


Children watching CAG's IEC video

During the final part of the session, the children were asked to observe the classroom and note down the following details:

- Types of appliances
- Total number of appliances
- The number of functioning appliances and the total number of faulty appliances
- Fan position - whether it was properly positioned for efficient air circulation or not
- Lights - Number of ordinary lights, number of Light Emitting Diode (LED) lights, and their positioning
- The condition of the room's ventilation

This was done as a lead step to make the members undertake a do-it-yourself energy audit of the classroom in the next session.



Classroom board utilised during the session.

Session 4:

The fourth session was conducted on March 25, 2024. As a continuation of the previous session's activity during which children individually noted down the details of the appliances and ventilation in the classroom, in this session, children were asked to carry out an energy audit - the process of survey and analysis of energy consumption in a house, school or any building to make that space more energy efficient by adopting necessary measures and technologies. After understanding what energy auditing is, the children explored the activity further. During the previous session, they had noted down the total number of appliances in the room, the number of working appliances and those that were of advanced energy-saving/energy-efficient types. Now, they calculated the overall energy consumption of fans and lights in the room. Then, they discussed best

practices and ways of minimizing energy consumption. They did this as a group activity during which each group discussed among themselves and then presented their suggestions to other club members. The suggestions were to:

- Replace the non-LED lights with [LEDs](#) when buying new ones.
- Replace the existing traditional fans with energy-efficient Brushless Direct Current ([BLDC](#)) type fans when buying new ones.
- Replace non-functioning fan regulators with step-type energy-saving regulators. Now, as there are no working regulators, people are not able to control the fans' speed. With regulators, fans can be used at desirable speeds which could potentially contribute to energy savings.
- Children were curious to see if the installed CCTV was working and how much electricity it would consume.



Children listening keenly to the speaker

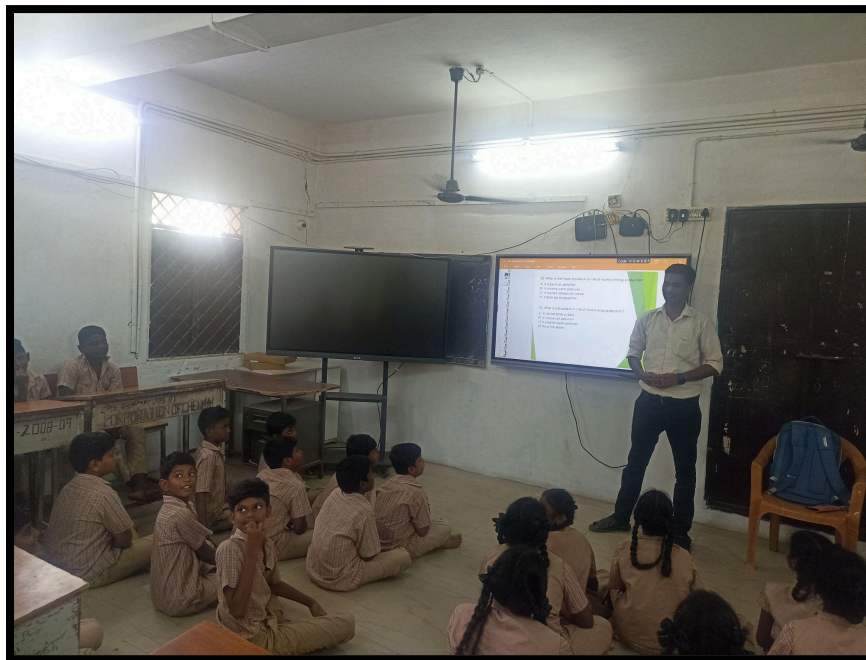
Session 5:

The fifth session was conducted on 16 September 2024. The session commenced with recalling discussions from previous sessions. The students shared their experiences of using the knowledge acquired recently, like switching off unused electrical utilities at

their premises, discussing energy audits with family and friends, raising awareness on the negative effects of excessive artificial light etc.

Further, in this session an elaborate discussion was conducted on 'Where does electricity come from?'. The topics covered here were: types of [power plants](#), environmental challenges caused by power plants and the importance of renewable energy. Moreover, an energy quiz and brainstorming session was conducted among students on the following topics,

- How to reduce pollution from power plants?
- How can individuals contribute to green energy transition.?
- Importance of solar energy.



Interaction with students about the importance of electricity

During the brainstorming session, the following suggestions were given by the students:

- Effective usage of electricity is important.
- Reuse and recycling concept must be implemented.
- Solar energy usage must be promoted widely.
- Sharing knowledge about energy conservation is vital.

Finally, the session concluded with a re-cap of concepts and information taught over the 5 sessions. Also, members of the energy club were encouraged to adopt and carry forward the ideas learned over the sessions to create a sustainable future.

Conclusion

CAG researchers held interactive sessions with students about energy conservation and efficiency as part of the Energy Club. Each session was informative and thought-provoking for the young minds regarding the importance of energy conservation. Furthermore, it is believed that implementing such energy conservation club activities through student-led groups in schools will benefit society positively.



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