

Club Enerji Program at Tata Power

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Abstract—The paper examines an environmental sustainability initiative (Club Enerji) by Tata Power, an energy company in India. Through it, the school children are sensitized to save energy. The company guides the club members, monitors energy savings on the monthly electricity bills and helps in developing a self-sustained community that can take the cause forward independently. The various attributes of initiatives are delineated in the study. Till February 2016, Club Enerji has reached 480 schools across India and saved more than 12.3 million units till date. The program model is industry agnostic and could be implemented in any industry that is keen to protect and promote environmental sustainability.

1. INTRODUCTION: ENERGY SECTOR IN INDIA

Energy is regarded as crucial for economic growth of any nation. Coal, oil, and natural gas are the three primary commercial energy sources in India. In 2003, India ranked fifth in the world concerning primary energy consumption. [1] Despite the overall increase in energy demand, the per capita energy consumption in India was still very low compared to other developing countries. Even in 2014, 600 million Indians do not have access to electricity and about 700 million Indians use biomass as their primary energy resource for cooking. [2]

Resource augmentation and growth in energy supply has not kept pace with increasing demand and; therefore, India continues to face severe energy shortages. With a targeted GDP growth rate of 8% during the Tenth Five-year Plan, the energy demand is expected to grow at 5.2%. [1] There is an urgent need to conserve energy and reduce the energy requirements.

2. ADVENT OF CLUB ENERJI AT TATA POWER

Mumbai, one of the most populous metropolitan cities of India, started facing the energy crisis in 2007. Due to the increased demand and consumption of energy, its effective management and conservation became the need of the hour. That time, a leading power producing company in India, Tata Power realized that power production of the city was very close to its demand and consumption.

The company perceived that the town could have load shedding anytime that would make the available power expensive. It was also apprehended that the power crisis could result in the complete public outrage and civil unrest issues.

However, it was found difficult to raise awareness among the residents of a metro city like Mumbai where people never experienced power shortage.

Mr. Prasad Menon, then Managing Director of Tata Power who was also then Chairman of sustainability division of Tata group ideated to initiate an energy conservation program to educate the children on climate change issues by promoting the efficient usage of energy. In May 2007, the pilot program of sensitizing 'energy conservation' started in 28 schools of Mumbai under the leadership of Ms. Shalini Singh, head of corporate communications at Tata Power. The brainstorming, research, planning, and benchmarking were done with Tata Power's sister concern, North Delhi Power Limited, that ran energy clubs in Delhi schools. Fig. 1 lists the logo and tagline of Club Enerji. [3][4]



Fig. 1: Club Enerji Logo and Tagline

3. TIMELINE OF THE INITIATIVE

In 2008, Tata Power scaled up TPEC to 48 schools of Mumbai and Belgaum, encouraged by the response. Subsequently, when Mr. Anil Sardana became MD of Tata Power in early 2011, he continued to lend leadership support to the initiative. He promoted the inclusion of resource conservation modules and the moral and civic values propagation modules in the program and widened the scope of Club Enerji.

In June 2009, Tata Power organized a session on ‘*Combating Climate Change*’ which marked the presence of senior leadership of Tata Power and several other eminent persons. Mr. Nachiket Mor, then head of ICICI Foundation, was also one of the delegates. He granted INR 5 million to scale the initiative nationally influenced by TPEC’s mission.

At that time, TPEC was solely focused on improving the quality of the outcomes and hence it was not ready for scaling. The big grant pushed the team to do something big, and the team accepted the challenge. TPEC went national from solely Mumbai-centric program with coverage of more than 250 schools in Mumbai, Belgaum, Delhi, Pune, Ahmedabad, Kolkata, Bengaluru, Jamshedpur, and Lonavla.

Table 1: Yearly analysis of the initiative

Year	2007	2008	2009	2010	2011	2012	2013	2014
Schools	12	28	252	285	400	425	450	480
Total Sensitisation	6,000	38,339	1,005,249	1,178,061	3,700,000	5,200,000	7,000,000	8,300,000
Energy Champions	7	350	13,550	26,895	66,150	95,351	124,438	140,888
Units Saved	200	17,500	1,080,685	2,417,952	6,20,000	8,700,000	11,200,000	12,300,000
Energy Ambassadors	30	1,894	31,094	39,356	98,647	1,40,676	1,75,000	193,086
TPEC Model	Classical Model (Power)	Classical Model (Power)	Classical Model (Power) and Power Kids League	Classical Model (Power), Power Kids League, NESS, mini TPEC	Classical Model (Power), Power Kids League, NESS, mini TPCE	RCM (Fuel Conservation), Power Kids League, NESS, mini TPCE	RCM (Water Management), Power Kids League, NESS, mini TPCE	RCM (Waste Management), Power Kids League, NESS, mini TPCE

(Source: Tata Power)

As the program matured, TPEC team realize power saving is only one of the agenda in the entire spectrum of energy conservation. A strong need was noticed to broad base the portfolio of Club Enerji to natural resource conservation as well. Hence, in 2012, the club rolled out the ‘resource conservation’ program for the schools that were associated with TPCE for two years or more. Over the times, schools have also developed their multiple mandates within that agenda of resource conservation to save the environment. However, the Club Enerji continues to ensure that children do not lose sight on continuing to conserve energy and various other themes that follow. [5]

4. FOUR-PRONGED IMPLEMENTATION PROCESS

The Club Enerji follows a four-pronged approach for the implementation of its objectives. The organization guides the members throughout and helps in developing a self-sustained community, Mini Clubs. After teaching, children are asked to practice energy conservation tips and submit their bills at the start of the program. Further, the club proactively monitors savings on the monthly bills of the students for 3-4 months. The bills are validated for saving after taking seasonal variations into account. Following is the elucidation of the phases. [3][6]

4.1. Phase One- Educate

In this phase, the club sensitizes school children of grades 4th to 8th about the energy conservation. If a school is willing, then the program is extended till class 10th. Similar awareness sessions have also been carried out for youth in colleges, teachers and parents.

4.2. Phase Two- Enhance

The stage focuses on the advanced training sessions for the students and mentors. The children are enrolled in the ‘power kids league’. It comprises of a series of workshops promotes students to interact and learn from professionals, participate in various activities and learn about the technical aspects related to energy. During these workshops, the students take up energy projects like conducting energy audits at home and work on them throughout the year under the guidance of the club.

4.3. Phase Three- Engage

In the third year of engagement, members are skilled to propagate the message of energy conservation to their immediate sphere of influence. In this phase, 3-4 school teams with demonstrated commitment to energy conservation are identified to form a peer group (Mini Clubs) to carry out the sensitization process in other schools. Tata Power provides the expertise, information, and tools necessary for the campaign. The members of mini clubs perform street plays, conduct rallies and celebrate energy conservation events.

4.4. Phase Four- Empower

In the fourth year of engagement, the club educates children not only about energy conservation but exposing them to the bigger picture by educating them on ‘resource conservation.’ The program stands on the pillars of Fuel Conservation, Afforestation, Waste Management, Energy Conservation, etc.

5. TYPES OF SCHOOLS TARGETED

Mostly affluent schools in various metro cities of India are the principal target schools for the Club Enerji initiative. Over the years, the initiative has been deliberately geographically expanded to metro cities, as they are high power consumption cities in India. The team consciously took the decision to focus students of affluent schools rather than that of government schools as the former often lacks the sensitivity to energy conservation.

6. ENGAGEMENT EVENTS AND PROPERTIES

Some of the events to promote the objectives of Club Enerji:

6.1. Every Watt Counts

It is an annual essay competition that is conducted for school children in various cities across the country.

6.2. Activity Calendar

Activity Calendar is a year-long calendar that lists all the main activities to be conducted in the Club Enerji in a year. It takes 5-10 days to formulate the schedule but the collecting feedback is a continuous process that goes on throughout the year.

6.3. National Energy Savvy School competition (NESS)

All the schools, which have Club Enerji, are eligible to participate in NESS. Schools are also monitored on their energy consumption and reduction of electricity bills. Tata Power awards the top 10 most energy efficient schools.

6.4. Energy Q and Spark of life

Energy Q is a national quiz competition organized for school children across different locations. Spark of life is an annual poster competition where students from various schools participate and create posters on the matters related to conservation.

6.5. Energy Carnival

Children showcase their ideas and solutions through projects, demonstrations, and working models.

6.6. Website and Mascot

The website (clubenerji.com) serves as an interactive tool where club members participate, discuss and share their ideas on energy conservation.

6.7. Energy Xchange and Watts up with Energy

Energy X-Change is a quarterly newsletter that gives a snapshot of all the various events taking place at the Club. 'Watts up with Energy' is an exciting and engaging book for children designed to demystify the world of Energy.

6.8. Power Kids League Workshop

It is a series of workshops designed to train the 'energy champions' further. Lessons on energy conservation are combined with sessions on personality development and public speaking.

6.9. Principal and Mentors Meet

'Principals and Mentors meet' is organized every year to felicitate and recognize the contribution of all the schools, school teachers, and principals. The school teachers & principals interact with the senior leadership team of Tata Power; share their feedback in the program and ideas for to improve the program.

7. ROLE OF VARIOUS STAKEHOLDERS

7.1. People capabilities and competencies

The program requires the following competencies:

- Strong ground execution focus and resources,
- Approval of school and school principals,
- Trained educators with prior teaching experience,
- Education and content experts to develop the Club Enerji modules, Statisticians for data management,
- Information Technology, Energy efficiency, and other subject matter experts.

7.2. Role of Information Technology (IT)

The IT platforms were used to popularize the Club Enerji initiative. initiatives taken by the energy champions were uploaded on the Club Enerji website and promoted through social media. Pop-ups were used as an active medium to broadcast information.

7.2. Reach out Agencies

Tata Power frames strategy, plans, and monitors and promotes it well. The ground execution of Club Enerji is supported by other partners to help the team to reach out to schools and appointing mentors. At Tata Power's operational sites employees are encouraged to volunteer as CSR representatives.

7.3. Energy Club Mentors and Educators

The experienced and trained people in the domain of energy and resource conservation are termed as 'educators'. They undertake the task of teaching the school children and are a primary touch point for school teachers and principal. The schools teachers associated with Club Enerji schools carry forward the baton of energy and resource conservation and are termed as 'mentors'. The educators are selected based on their previous educational experience and teaching skills.

7.4. Role of Leadership/ Top Management

The senior leadership team of Tata Power plays a critical role in brand building and popularizing the Club Enerji movement in the organization, amongst stakeholders and the community as a whole. The top leadership participates in most of the interaction forums including the reward & recognition of students, schools and during the principal meet. They proactively promote the Club Enerji during media interactions for a higher reach and awareness of the program.

8. ASSESMENT OF CLUB ENERJI

Tata Power has developed a robust feedback system to assess the performance of the initiative. The feedback is collected throughout the year from students and mentors after every session, incorporated into the yearly plan.

Following are some of the critical parameters through which the performance is tracked:

- Yearly targets: Number of million units saved and Number of citizens sensitized
- The Number of energy ambassadors enrolled in a year.
- Pre and Post assessments of electricity bills submitted by students.
- The Number of schools associated with the initiative in a year.
- Reduction in carbon footprint.

The data is tracked and reviewed weekly by the Club Enerji team.

9. BENEFITS

The Club Enerji initiative has helped Tata Power to flatten the load factor and shift consumption to non-peak hours. Besides, the children have not only absorbed the knowledge imparted through this program but have also taken it many miles ahead and made it a national movement through self-sustained efforts.[7][8] The program has resulted in a tangible saving of energy as shown in Table 1.

Table 2: Impact of Club Enerji (Till Feb 2016)

Unit Saved	12.3 Million
Reduction in CO2 emissions	12,300 tones
Total Sensation numbers	8.3 million
Number of energy champions	140,888
Number of energy ambassadors	193,086
Number of mini clubs	1250

(Source: Tata Power)

This saving is equivalent to saving 12,300 tons of CO2 and is enough to light up 5,783 houses for a year. The benefits to the main stakeholders of the initiative can be categorized as follow:

9.1. Benefits to Environment

The initiative has been able to record the reduction in the usage of fossil fuels that intends to protect the environment. The curbing of energy wastage also helps in installing new generating units.

9.2. Benefits to Schools

Schools associated with Club Enerji have been able to record tremendous savings in their electricity bills due to the awareness created by the students through the initiative. The initiative has also received good feedback from the parents who believe the program is shaping their children into good leaders by instilling leadership qualities with right values and attitude and making them a responsible citizen by inculcating the values of energy and resource conservation in them. The trends of number of mini clubs over the years are depicted in Fig. 2.

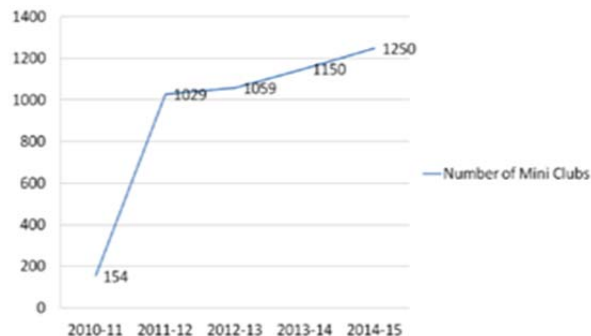


Fig. 2: Number of Mini Clubs over years
(Source: Tata Power)

The number of cities and schools covered by the Club Enerji initiative since the inception is shown in Fig 3.

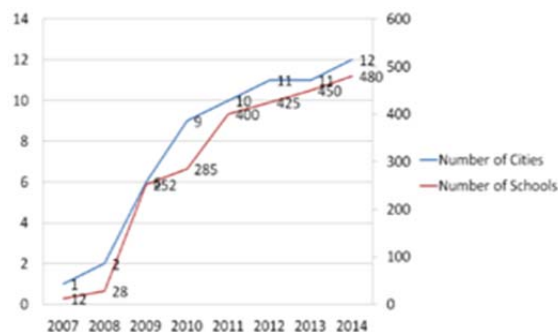


Fig. 3: Number of cities and school covered by Club Enerji
(Source: Tata Power)

9.3. Benefits to Company

The promotion of responsible usage of energy by its consumers is helping Tata Power to achieve its sustainability agenda. The initiative is also one of the strong contributors in raising the positive share of voice for Tata Power. The initiative has got phenomenal coverage by the print, social and electronic media. The trends for news clippings and press release are shown in Fig. 4. The website page hit patterns are illustrated in Fig. 5.

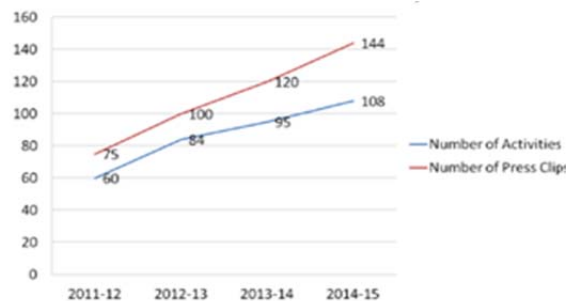


Fig. 4: Number of activities and press clips over the years
(Source: Tata Power)

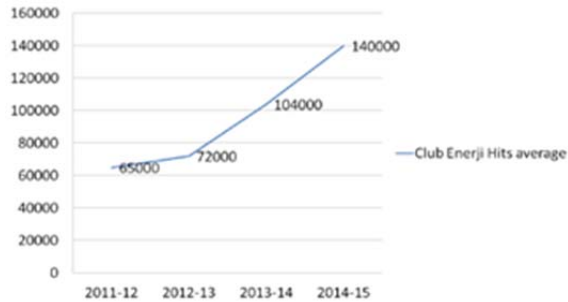


Fig. 5: The average hit pattern on the Club Enerji website
(Source: Tata Power)

Some of the accolades won by the initiative are:

- ‘Most Innovative Campaign’ award at The Energy Daily’s 2010 Leadership Awards. [9]
- ‘Gold Medal’ in Environmental Communication category, ABCI Award 2010.
- ‘Second rank’ in the ‘Earth Care’ category for Siemens Ecovative Award 2010.
- CMO Asia Award 2011’ for the Best Marketing Campaign 2011.
- Recognized as the best practice for presentation at International forum in Auckland in December 2012.
- ‘APELA 2012-Eco Advocate Award’ by Asia-Pacific Enterprise Leadership Awards (APELA), Singapore.
- ‘Gold Stevie Award’ for best Marketing Campaign of the Year 2012 in the Energy category in the 2012 International Business Awards.
- ‘Asian Leadership Award’ for Environmental Leadership & Best Corporate Social Responsibility Practice in FY 2014.
- Won Gold in the Multimedia CD-Rom Interactive Presentation category, Twitter Meter won Bronze in the category of Web Communication Online Campaign in 2015 ABCI awards

9.4. Benefits to Community

The initiative has sensitized millions of citizens. It has resulted in saving the considerable amount of energy whose trends are depicted in Figure 6. Many houses and schools have recorded significant reduction in their electricity bills.

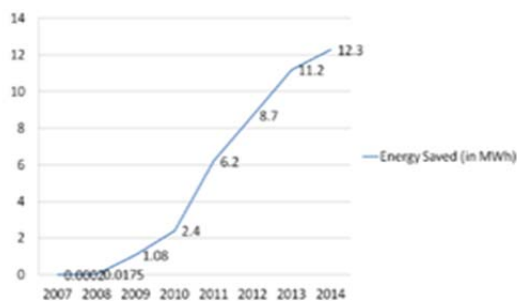


Fig. 6: Saved energy trends (Source: Tata Power)

10. CHALLENGES AND MITIGATION

10.1. Maintaining Quality

When the Club Enerji was launched in 2007, the team realized that teaching school children’s requires different skill. The teachers were recruited from an NGO to teach kids. The external grant at the start of the initiative prompted the company to record the savings generated due to the initiative and thus ensuring the accountability of the money used. Monitoring the initiative with ensuring the out-stationed quality became a daunting task when the initiative became national. Tata Power formulated an appropriate strategy to put the entire structure in place. It was tedious exercise from the point of view of conceptualization as there were no existing examples to deploy resources, structure, monitor them, etc. Over the years, Club Enerji has embedded proper quality checks and developed a base of volunteer members to keep the quality checks on the sessions through regular visits and to make the initiative self-sustainable.

10.2. Finding Appropriate Partners

Initially, the tie-ups and partnerships with other relevant partners proved a stumbling block for the Club Enerji team. While looking at the partners, the team ensured that they are not using the initiative as the platform to get into schools and utilize it as a vehicle to sell their products. The team continues to monitor its partner agencies regularly to ensure that the objective of the programs is fulfilled.

10.3. Continuous Engagement of Stakeholders

Finding interesting concepts and projects to keep children engaged in the conservation programs continues to be a major challenge. It is imperative to inculcate new things in the module making it innovative to motivate continually the kids to save and sensitive.

The Club Enerji team came with the concept of giving a particular conservation theme like afforestation, waste management, etc. each year to tackle this challenge. The program also needed buy-in from principals and from the teachers who are actually driving it. The principal meet is organized periodically to inform school administrators of the latest happening. The mentors who perform well are recognized in a yearly program. Such types of a program could not succeed if the schools are required to be persuaded again and again. When the children learn something important, and it helps the school to save its electricity bills. It automatically results in a multiplier effect making it a win-win situation for all

10.4. Scaling the Initiative

Scalability of the initiative is necessary but expanding the program in the locations where Tata Power is not operational is continues to be a challenge.

By launching the Mini Enerji club program, the team also ensured the program to become self-sustainable. The company now also wants to scale the initiative globally.

10.5. Ensuring Sustainability of the Initiative

To ensure the program is self-sustainable is a challenge. The program was thought through and, therefore, the pilot came handy. It helped Club Enerji team to learn things that resulted in the increased ground execution and efficiency. The grant of 50 lakh during the pilot of the initiative led to the establishment of strong monitoring mechanism since the start of the initiative.

11. CONCLUSION

The Club Enerji model is industry agnostic and could be implemented in any industry that is keen to protect and promote environmental sustainability. Tata Power's forte is in the power sector; therefore, the company came out with an initiative focusing on energy conservation. The other firms can opt for conservation initiatives (namely biodiversity, safety, forest/flora, etc.) in their area of expertise. The Club Enerji model, rather than the whole movement, can be replicated by other organizations in multiple domains.

12. ACKNOWLEDGEMENT

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