# SMART ENERGY PROGRAM

# 2018 – 2019

## PROSPECTUS

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# GREEN ENERGY & CARBON NEUTRALITY

Energy is one of the most critical components of infrastructure, crucial for the economic growth and welfare of nations. The existence and development of adequate infrastructure is essential for sustained growth of an economy. India's power sector is one of the most diversified in the world. The sources of power generation range from conventional sources such as coal, natural gas, oil, hydro and nuclear power to viable non- conventional sources such as wind, solar, and agricultural and domestic waste. Electricity demand in the country has increased rapidly and is expected to rise further in the years to come. In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required. The total installed capacity of power stations in India stood at 334,146.91 Megawatt (MW) as of February 28, 2018. Total generation capacity / availability of power for Kerala is 3140 MW. Out of total 2760 MW, 69 % is from Hydro, 18 % is from Thermal, and balance 13 % is from Renewable Energy Sources (Solar & Wind).

Energy conservation refers to the reducing of energy consumption through energy efficient technologies and behavioral practices without reducing the required output and comfort. Energy conservation can result in increased environmental quality by reduced carbon foot prints, improve national energy security, personal financial security and higher savings. It is at the top of the sustainable energy hierarchy. It also lowers energy costs by preventing future resource depletion and reserve for our future generations. Energy efficiency aims to reduce the amount of energy required to provide products and services. For example, installing LED lights or natural skylights at your home reduces the amount of energy required to attain the same level of illumination compared with using traditional incandescent, discharge & CFL light bulbs.

Improvements in energy efficiency are generally achieved by adopting a more efficient technology or production process or by application of commonly accepted methods to reduce energy losses. Reducing energy use is also seen as a solution to the problem of reducing greenhouse gas emissions.

Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat. Renewable energy resources and significant opportunities for energy efficiency exist over wide geographical areas, in contrast to other energy sources, which are concentrated in a limited number of countries. Rapid deployment of renewable energy and energy efficiency, and technological diversification of energy sources, would result in significant energy security and economic benefits. It would also reduce environmental pollution such as air pollution caused by burning of fossil fuels and improve public health, reduce premature mortalities due to pollution and save associated health costs. Renewable energy sources, that derive their energy from the sun, either directly or indirectly, such as hydro and wind, are expected to be capable of supplying humanity energy for almost another 1 billion years, at which point the predicted increase in heat from the sun is expected to make the surface of the earth too hot for liquid water to exist called as Green Energy.

Carbon footprint is the amount of CO2 gas emitted to atmosphere each year measured in Tonnes of CO2. Every 1kWh electricity consumed, emits 0.8kg CO2 to atmosphere. Similarly on combustion of every 1 Litre Diesel or Petrol, emits 3 kg CO2 and 1 kg of LPG emits 3 kg CO2 to atmosphere. Hence, by generation of 1kWh of electricity from renewable energy sources like solar or wind, 0.8 kg CO2 emissions can be saved. Net carbon footprint is the difference between Tonne $CO_2$ emissions (electricity and fossil fuels) & Tonne CO2 saved through the use of Renewable energy generation and $CO_2$ captured by Trees & plants .

A building or premises where, net carbon foot print is zero, with $CO_2$ emissions is equal to $CO_2$ savings is called Net Zero Energy or Carbon Neutral building.

## SMART ENERGY PROGRAM (18 - 19)

EMC is a state designated agency for implementing the provisions of EC Act 2001. EMC since its inception has been actively involved in organizing different types of awareness programs on energy conservation for the students of educational institutions. The school energy conservation club of EMC aims at awareness creation among students on energy conservation and environment friendly energy technologies as this would help in inculcating a habit in the younger generation on the judicious use of the scarce and depleting energy resources. Smart Energy Program (SEP) is one of the flagship projects of EMC, which was formed to spark off an initiative for curbing energy wastage through active measures and also popularizing the importance of energy conservation and energy efficiency measures among students. In SEP 18-19, we plan to include and promote Energy conservation & Renewable Energy integration in schools thereby achieving a carbon neutral zero energy campus. SEP 2018-19 will be a joint program of EMC and ANERT.

**School level**

- At least 150 schools in each education district (ED) should enroll to SEP. Schools including UP, High school (Govt, Aided, Unaided, CBSE and ICSE) may be enrolled. Each school should enroll minimum fifty students to SEP. Enrollment shall be completed before July 30th 2018 . List of students should be sent in hard copy.
- Each school should make a committee of SEP including School Principal/Headmaster, PTA President, student representative and SEP School Coordinator as the convener.
- Each school should conduct the following competitions and nominate the winners for educational district level.

1. **Quiz competition**
2. **Essay Writing**
3. **Cartoon**
4. **Home Energy Champion**

- Each member school should conduct a program on Energy Conservation and Energy Efficiency.
- The list of member students in the SEP of the school should be submitted to EMC along with the enrollment form through Joint Coordinator. The list should contain details such as Name, Standard & Division.
- EMC will issue certificate for all the member student of SEP.

**Educational district level**

- A committee must be formed in each education district for the well functioning of the program. Members should include DEO, Assistant Education officers under ED, selected Headmaster/Headmistress's, DC with JC of SEP as convener of the committee.
- The joint coordinators in consultation with the DEO, AEO's and district coordinator should organize a campaign on SEP in each educational district in order to discuss the "Energy Conservation Awareness Programme" (Sensitization camp) and its effective implementation before July 30th.

- Each educational district should conduct the four competitions and the program will be titled as “Oorjolsavam”. Competitions should be conducted for HS/UP level separately. For energy quiz competition only one group (consisting of 2 students) from each school shall be permitted. For other competitions (Essay and Cartoon and painting) only 1 student from each school is permitted. Four students and two teachers will be eligible for travel allowance.

**Revenue District Level**

Revenue District level Oorjolsavam competition should be conducted involving the winners from each of the respective educational districts. Cartoon & Essay Writing competitions need not be conducted at District level; the same may be evaluated by a common panel of judges considering the work done at ED level. An official from EMC will attend the program. The winner of each competition from each District gets an opportunity to participate in Kerala State Students’ Energy Congress 2019’.

**State Level**

- In the month of January 2019, EMC will conduct an all Kerala program titled “Kerala State Students’ Energy Congress” (KSSEC). This will be a one day programme consisting of talk on various energy issues such as the importance of energy conservation, energy efficiency, renewable energy integration and sustainable energy by experts and eminent personalities along with the state level finals of different competition (Energy quiz, Essay and Cartoon competition) comprising of winners from each Revenue district.
- TA for the participating team will be provided (II Sleeper class charges/ Super Fast charges).

**Carbon Neutral Schools**

More and more quantities of carbon is being released into the atmosphere each year due to various human activities and is considered as the major cause for Global Warming and Climate Change. In view of the increase in factors leading to climate change because of various human activities, and their adverse impacts on the natural climate it is high time to act for controlling the activities which leads to climate change and to exercise maximum efforts towards promoting adaptation measures. While many of the changes that occurring is totally out of our hands, we have been direct contributors to events that have had negative effects on our environment. Hence it is very much essential to create awareness among people about the serious impacts of climate change and to encourage them to exercise maximum efforts to reduce and minimize their activities which are badly affecting the climatic condition of the earth and it surroundings giving more emphasis to adaptation measures. In order to promote and popularize the scientific interventions to prevent, mitigate and adapt climate change and its impact on natural resources through individual or class actions, it is essential to generate a grass-root level appreciation, especially among children and general public. Children are more receptive to new ideas than adults and have the capability to influence their families more effectively than any outside motivator and are future role models and parents. What they learn and understand at schools is likely to be passed on to their peers and to their own children. They may question existing practices in the household and become agents of change within their families and communities; they have the ability to influence their family members more effectively than any outside motivator. Teachers play a vital role in imparting knowledge to the students and it is in the hands of teachers to mould them. Hence teachers are in a position to facilitate knowledge and promote the learners to achieve better awareness about the things happening in and around the nature. Thus teachers as professionals and influential individuals, supported by the school management, can play an important role in the development of pupils through training and providing a role model in the communities. Schools thus offer an ideal opportunity to mould young minds, in their impressionable age, towards promoting the concept of

climate change and its impact on natural resources. Orientation to the young is definitely an investment towards posterity. One such significant concept is carbon neutrality and a way of integrating such a way of life into community is carbon-neutral campuses. Schools have the basic functions of education; however campuses are mini communities with economic and social responsibility. Thus the aim of this project is to determine principles for betterment campuses, towards carbon neutrality and environmental consciousness and to implement the program in a participatory mode..

***Methodology :-***

The major contributor to carbon emission is energy use and the major components of it are electricity and transportation. We often rely on fossil fuels as energy sources. Fossil fuels emit greenhouse gases when burned to produce energy. Since , increasing greenhouse gas emissions affect climate, our energy use can have a huge impact on the climate. Other major contributors hindering carbon neutrality in the campuses are water consumption for various purposes, waste disposal, solid waste and waste water, land modifications and construction management. The sustainability indicators for measuring the campus carbon neutrality will include the following;

i. **Energy**: This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliances, vehicles.
ii. **Water**: This indicator addresses water consumption, water sources, irrigation, storm water, appliances and fixtures for water.
iii. **Waste disposal**: This indicator addresses solid waste (including hazardous waste), generated/used in the campus
iv. **Landscape**: The landscape indicator addresses green space and it's contribution towards carbon sequestration
v. **Campus administration and policy**: This indicator will address the current scenario of the campus in developing campus (buildings, construction, office vehicles etc.)and sustainability in office procedures.

**Key activities:-**

1. Sensitising the teacher coordinator in the school on carbon neutral school program (Dedicated session in sensitisation program).
2. Formulating school level team for carbon neutral school program
3. Data Collection and up loading the same in mobile app
4. Implementation of the recommendations in
   report generated by the app based on the survey made (support will be given for the selected schools for implementation )

**NECD**

On December 14th - National Energy Conservation Day (NECD), all districts should conduct a district level general awareness program for public. It can be any of the following or some mode of awareness campaign

1. Awareness campaigns
2. Rally
3. Plays like skits and mime
4. Exhibitions

The program should be conducted in presence of elected representatives of the government/local body such as MLA/District Panchayath President/Mayor etc.

- In addition to NECD, if the district committees decide to conduct an exhibition for the public and students with the help of KSEB, ANERT, Engineering colleges and other technical institutions, EMC will ensure its support.
- For the conduct of this program each district coordinator will get Rs. 10000/-

## BENEFITS FOR SEP ENROLLED SCHOOLS

Each school can upload their energy consumption data through an android application which can be downloaded free of cost from play-store. EMC will analyze the Energy performance of the respective schools using the uploaded data. Technical and financial support will be given to implement the recommendations of carbon emission report for selected schools to achieve carbon neutrality.

## FUNDING PATTERN

- Travelling Allowance should be distributed for participants at the respective venues (Fast Passenger bus ticket charges or a maximum of Rs 100).
- The advance amount will be sanctioned to concerned JC's on recommendation of DC.
- Reports must include Statement of Expenditure, Utilisation Certifictae, Registration forms (Original), Bills etc. They must be certified by respective DC's if funds are allocated to JC's.

| | |
|---|---|
| **Sensitization Camp:** | |
| The budget allocated for the program is | **(2,500* + 125# x (Number of Participating schools+10))** |
| *** =** Organizational expenditure towards Venue arrangement, banner etc | |
| # = Expense towards TA, Tea, Snacks etc | |
| **Oorjolsavam (Educational Dist Level):** | |
| The budget allocated for the program is | **(2,500* + 12,000% + 200# x Number of Participants@)** |
| ***** = Organizational expenditure towards Venue arrangement, banner etc | |
| **%** = Honorarium for judges 8 X 1,500 = 12,000 (2 each for Cartoon, Painting, & Essay Writing,1 quiz master each for HS & UP Quiz) | |
| **#** = Expenses towards TA & food | |
| **@** = 5 students & 2 teachers from a school (One each for Painting, Cartoon & Essay writing a group of 2 for Quiz competition) | |
| **Oorjolsavam (District Level):** | |
| The budget allocated for the program is | **(2,500* + 12,000% + 200# x Number of Participants@)** |
| ***** = Organizational expenditure towards Venue arrangement, banner etc | |
| **%** = Honorarium for judges 8 X 1,500 = 12,000 (2 each for Cartoon, Painting, & Essay Writing,1 quiz master each for HS & UP Quiz) | |
| **#** = Expenses towards TA & food | |
| @ = First, Second & Third position holders of competitions in ED level (HS & UP) | |

## HONORARIUM FOR COORDINATORS

The Honorarium for SEP coordinators will be based on the participation index, calculated as

**Participation Index** = (Number of Schools Enrolled + Number of Teachers attended Sensitization camp + Number of Schools participated in Oorjolsavam)

Honorarium for District Coordinators = **Rs 30 x Participation Index**

Honorarium for Joint Coordinators = **Rs 55 x Participation Index**

## REIMBURSEMENT OF EXPENSES - SCHEDULE

| Amount | In receipt of |
|---|---|
| Advance for sensitisation camp | Intimation of Date and Venue of the camp. |
| Balance payment of sensitisation camp | Report of sensitisation camp with participants details, UC and expenses statement through district coordinators |
| 1st instalment of honorarium to Joint Coordinators and District Coordinators | On completion of Enrolments and reports of sensitisation camps |
| Advance for Oorjolsavam – 50% of Overall expense | Intimation of date and venue of the program |
| Balance payment of Oorjolsavam | Report of Oorjolsavam with participants details, UC and expenses statement through district coordinators |
| Advance for NECD Programme - **Rs 7,500** | Intimation of venue & nature of programme along with list of People's Representatives |
| Balance payment of NECD Programme - **Rs 2,500** | Submission of report of NECD with participants details, expenses statement through district coordinators |
| Balance honorarium for DCs &JCs | After the State level program and submission of report of SEP |

# DETAILS OF COMPETITIONS

Each educational district should conduct the four competitions involving winners from School level. The Educational District level winners will be shortlisted to participate in the Revenue district level competitions. The first place holder in each competition (HS/UP level) will get an opportunity to participate in the state level competition – KSSEC 19.

- A certificate of merit will be presented to all the Educational District/ Revenue District winners

The criteria for each competition is as below,

## 1. Energy Quiz – Educational District / District Level

**Eligibility Criteria:**

- Each member school can nominate a group consisting of 2 students for participating in the Energy Quiz.
- A preliminary screening should be done, the screening can be in the form of an objective type written quiz – which should be evaluated on spot by participants themselves after interchanging the answer scripts. Only one member from the group should attend the preliminary screening.
- The Energy Quiz should have a minimum of 10 participating teams.

**Guidelines:**

- Must have 2 – 3 rounds of questions with different points. (at least 2 set of questions in a round/group)
- There should be a time clock for each question and if the group is unable to answer pass on the question to the next group. The marks for passed questions will be half of the originally set points.
- The team with the maximum points at the end of 3 rounds will be declared the winner.
- In case of a tie, a rapid fire round will determine the winner among the tied teams.

## 2. Essay Writing – Educational District / District Level

**Essay Topic:** "Energy Consumption & Energy Conservation in our homes"

**Eligibility Criteria**

Participants must be:

- A student from SEP enrolled schools.
- Only one entry from a school is allowed

**Essay Submission Guidelines**

- Length of Essay: 800 words (excluding bibliography and citations).
- 1.5hr (90 minutes) for essay writing.
- Paper Size: Letter Size Paper (216 × 279 mm)
- They must limit the essay within the sheets provided, no additional sheets will be provided.
- Students must produce their own work and cite sources properly and consistently.
- The essay should mention the participant's name, School name, Educational district, and Revenue district during the evaluation phase.
- The essay can be written in Malayalam / English.

## 3. Cartoon – Educational District / District Level

**Cartoon Theme:** "Energy & Environment"

**Eligibility Criteria:**

Participants must be:

- A student from SEP enrolled schools.
- Only one entry from a school is allowed

**Guidelines:**

- Paper size: A4 (210 X 297 mm) or A3 (297 X 410 mm)
- 1.5 hr (90 minutes) for Cartoon competition.
- Students should bring their own materials for drawing

## 4. Home Energy Champion

### Objective

50% of the State Energy Consumption is by the domestic sector. The Competition is aimed to reduce the energy consumption in domestic sector especially at homes by encouraging school children to have a habit of energy conservation and there by contributing remarkable savings in energy consumption of the state. Energy Savings certificate will be given to selected first and second prize winners during Kerala State Energy Congress 2019.

### Eligibility Criteria

Participants must be:

- A student from SEP enrolled schools.
- Any number of entries from a school are allowed

### Guidelines

- The details of appliances along with their wattage and daily operating hours, monthly energy consumption etc. Shall be submitted in the prescribed application format.
- The details of bimonthly electricity consumption in units along with savings in units in comparison with previous bill from April to November 2018 shall be submitted in the prescribed application format.
- The filled up forms shall be forwarded to EMC through proper channel signed by the parent, teacher, nodal officer etc.
- Collecting and submitting the forms shall be the responsibility of the concerned Joint coordinator and District coordinator.

## AWARDS FOR STATE LEVEL WINNERS

- State level winners will get an opportunity to visit any industry (like a power plant, dairy or textile industry). Either a Teacher/Parent/Joint Coordinator can accompany each student along with District Coordinator or his nominee.
- Energy savings certificate will be given to selected winners of Home Energy Conservation competition.
- All expense as per eligibility will be borne by EMC.
- A certificate of merit and Memento will be presented to all the winners.
- Each winner along with one accompanying parent will be eligible for travel allowance, lodging facilities.

# FORMS

# HOME ENERGY CHAMPION - COMPETITION

Details of Energy Consumption of various appliances at your home

| Sl No | Appliance | Wattage | Hrs / Day | Units / Month |
|---|---|---|---|---|
| 1 | Lamps (LED/CFL/Incandescent) | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | Tubelights / Batterns | | | |
| 7 | Night Lamps | | | |
| 8 | Air conditioner | | | |
| 9 | Refrigerator | | | |
| 10 | Washing Machine | | | |
| 11 | Electric Iron Box | | | |
| 12 | Ceiling Fan | | | |
| 13 | Mixer / Grinder | | | |
| 14 | Electric Water Heater | | | |
| 15 | Television | | | |
| 16 | Computer | | | |
| 17 | Water Pump | | | |
| 18 | Induction Cooker | | | |
| 19 | Vacuum Cleaner | | | |
| 20 | Microwave Owen | | | |
| 21 | Pedestal Fan / Table Fan | | | |
| 22 | Inverter / UPS | | | |
| 23 | Any Other appliance | | | |
| | | | **Total** | |

**Electricity Consumer No ..... Section .....**

**Energy Saving Data Sheet**

| Sl No | Month | Units Consumed | Units Saved | Parents Sign | Teachers Sign |
|---|---|---|---|---|---|
| **1** | **April – May 2018** | | | | |
| **2** | **June – July 2018** | | | | |
| **3** | **Aug – Sept 2018** | | | | |
| **4** | **Oct – Nov 2018** | | | | |
| | **Total** | | | | |

**Actions Taken at your Home for Energy Savings**

Name & Signature of Nodal Teacher / officer

# ഊർജ്ജ ചാമ്പ്യൻ മത്സരം

വൈദ്യുതി ഉപയോഗിച്ചുള്ള വീട്ടുപകരണങ്ങളെപറ്റിയുള്ള വിവരങ്ങൾ :

| ക്രമ നമ്പർ | ഉപകരണത്തിന്റെ പേര് | വാട്ട്സ് | പ്രവർത്തനസമയം (മണിക്കൂറിൽ) | ഒരു മാസത്തെ ഊർജ്ജ ഉപഭോഗം (kWH) |
|---|---|---|---|---|
| 1 | ബൾബുകള് (എൽ.ഇ.ഡി/ സി.എഫ്. എൽ/ ഇൻകാൻഡിസെന്റ്) | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| 2 | ട്യൂബ് ലൈറ്റ്കള്/ ബാറ്റേണ് | | | |
| 3 | നൈറ്റ് ലാംബ് | | | |
| 4 | എയർകണ്ടിഷ്ണര് | | | |
| 5 | റഫ്രിജറെറ്റര് | | | |
| 6 | വാഷിംഗ് മെഷീൻ | | | |
| 7 | ഇസ്തിരിപ്പെട്ടി | | | |
| 8 | ഫാൻ | | | |
| 9 | മിക്സി/ഗ്രൈൻഡര് | | | |
| 10 | വാട്ടർ ഹീറ്റര് | | | |
| 11 | ടെലിവിഷൻ | | | |
| 12 | കമ്പ്യൂട്ടർ | | | |
| 13 | വാട്ടർ പമ്പ് | | | |
| 14 | ഇൻഡക്ഷന് കുക്കര് | | | |
| 15 | വാക്വം ക്ലീനര് | | | |
| 16 | മൈക്രോവേവ് ഓവന് | | | |
| 17 | ടേബിൾ ഫാന് | | | |
| 18 | ഇൻവെർട്ടര് / യു പി എസ് | | | |
| 19 | മറ്റുള്ള ഉപകരണങ്ങള് | | | |
| | | | **ആകെ** | |

കൺസ്യൂമർ നമ്പർ ..... ഇലക്ട്രിക്കൽസെക്ഷൻ.....

ഊർജ്ജ സംരക്ഷണ വിവര പട്ടിക:

| ക്രമ നമ്പർ | മാസം | ഊർജ്ജ ഉപഭോഗം (kWH) | സംരക്ഷിച്ച വൈദ്യുതോർജ്ജം (kWH) | മാതാപിതാക്കളുടെ ഒപ്പ് | അധ്യാപകന്റെ ഒപ്പ് |
|---|---|---|---|---|---|
| **1** | ഏപ്രിൽ- മെയ് 2018 | | | | |
| **2** | ജൂൺ - ജൂലൈ2018 | | | | |
| **3** | ഓഗസ്റ്റ്-സെപ്റ്റം 2018 | | | | |
| **4** | ഒക്ടോ -നവം 2018 | | | | |
| | **ആകെ** | | | | |

ഊർജ്ജ സംരക്ഷണത്തിനായി സ്വീകരിച്ച മാർഗങ്ങൾ

അധ്യാപകന്റെ/ഓഫീസറുടെ പേരും ഒപ്പും :

# STATEMENT OF EXPENDITURE

**District** :

**Educational District** :

**Programme** : Sensitisation Camp / NECD Celebrations / Others

(Strikeout whichever unnecessary) Oorjolsavam (District) / Oorjolsavam (Educational District)

| **Date & Venue of the program** | **Amount Sanctioned** | **Details of the expenditure incurred in item wise** | | |
|---|---|---|---|---|
| | | Sl | ITEM | AMOUNT |
| | | | | |
| | | | **TOTAL** | |

Place:

Date: Name & Signature of the coordinator:

Cross Checked by (DC):

# UTILIZATION CERTIFICATE

| Sl.No: | Letter/Proceedings No: & Date | Amount |
|---|---|---|
| | | |
| | | |
| | **Total** | |

Certified that Rs. …… of advance payment sanctioned during the year 2018-19

in favour of……..(Name) a sum of Rs …..……

has been utilized for the purpose of SEP program as per the letter cited

Certified that I have satisfied myself that the conditions on which the advance payment was sanctioned have been duly fulfilled and that I have exercised the necessary steps to see that the money was actually utilized for the purpose for which it was sanctioned.

Kind of checks exercised

1. Verifying vouchers with relevant sanction order
2. Checking of vouchers with cash/bank book
3. Counter checking of the payment sanctions
4. Routine general check up

Date: Name & Signature of the coordinator:

Cross Checked by (DC):

# SMART ENERGY PROGRAM (SEP)

## (SENSITISATION CAMP)

**District : - .....** **Educational District: - .....**

**Venue :- ..... Date: -.....**

## REGISTRATION FORM

| Sl No | Name & Contact Number | School | Signature |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

| | | | |
|---|---|---|---|
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| 16 | | | |
| 17 | | | |
| 18 | | | |
| 19 | | | |
| 20 | | | |
| 21 | | | |

## ENERGY MANAGEMENT CENTRE - KERALA
## THIRUVANANTHAPURAM-695 017

**Smart Energy Program 18 – 19 (Sensitisation Camp / Oorjolsavam ____)**

**@ .....**

**TA Form**

Name :

Address :

| From | To | Actual fare |
|---|---|---|
| | | |
| | | |
| | **TOTAL** | |

Date:

Received Rs: Signature:


## ENERGY MANAGEMENT CENTRE - KERALA
## THIRUVANANTHAPURAM-695 017

**Smart Energy Program 18 – 19 (Sensitisation Camp / Oorjolsavam ____)**

**@ .....**

**TA Form**

Name :

Address :

| From | To | Actual fare |
|---|---|---|
| | | |
| | | |
| | **TOTAL** | |

Date:

Received Rs : Signature: