ANNUAL PLAN 2015-16

Sr. No.	Major Head/Sub Major Head/ Minor Head/ Sub Head / Scheme		Approved Budget outlay 2015-16
A	**P-01-40-2810-02-001-99-51-N-V- Administrative Setup of Non Conventional Source of Energy**		
	Admn. Setup of DRE		
	Code	Object	
	01	Salary	42.50
	02	Wages	0
	03	DA	41.00
	04	Travel Exp.	3.00
	05	O.E	4.00
	06	RRT	0
	21	Motor Vehicle	8.00
	34	Other Charges	0
	45	POL	3.50
	67	MR	8.00
	70	LTC	2.00
	79	Ex-gratia	1.00
		Total (A)	**113.00**
B	**P-01-40-2810-02-101-99-99-N-V-Promotion of Non Conventional Energy Source-State Share**		
	-11-Subsidies (Name of the Scheme)		
(i)	CFL based Solar Lantern-10 Watt		0
(ii)	LED based SPV Home Lighting		30.00
(iii)	SPV Street Lighting System for urban area		30.00
(iv)	Solar System for IAY households		0
(v)	SPV Street Lighting System for rural area		100.00
(vi)	Demonstration applications of Solar Thermal Technology for Social Sector		40.00
(vii)	Promoting Solar Water Heating Systems for general public/ Solar Cities		50.00
(viii)	Setting up of demonstration project based on waste to energy and industrial wastes		0
(ix)	Small Solar Power Pack		435.00
(x)	Publicity & Awareness Programme.		58.00
(xi)	Shikshadeep Scheme (CFL Solar Lamp)		0
(xii)	Scheme on promotion of energy efficiency initiatives (BURM)		10.00
(xii)	CDM Project,& R &D and Demonstration Application		0
(xiv)	Green Energy & Energy Conservation Fund		
	a	Energy Audit & its implementation	30.00
	b	SPV pumps	644.00
	c	EC Awards	30.00
		Total (B)	1457.00
C	**P-01-40-2810-02-789-99-51-N-V- Shikshadeep Scheme on LED Based Solar Laterns for Scheduled Caste Students-11-Subsidies**		
	Scheme on LED Based Solar Laterns for Scheduled Caste Students		150.00
		Total (C)	**150.00**
D	**P-01-40-2810-02-101-99-99-N-V-Promotion of Non Conventional Energy Source-State Share -34-Other charges**		
	Energy Efficient Building Programme		30.00
		Total (D)	**30.00**
		Total (A+B+C+D)	**1750.00**

II	P-01-40-3425-60-001-87-99-N-V-Rural Energy Programme-State Share		
	Admn. set up of DRE		
	Code	**Object**	
	01	Salary	95.75
	02	Wages	0
	03	DA	87.75
	04	Travel Exp.	5.00
	05	O.E	7.50
	06	RRT	0
	21	Motor Vehicle	4.00
	34	Other Charges	0
	45	POL	4.00
	67	MR	8.00
	70	LTC	5.00
	79	Ex-gratia	3.00
		Total (II)	**220.00**
		Grant total (I+II)	**1970.00**

ANNUAL PLAN FOR THE YEAR 2015-16

DEPARTMENT OF RENEWABLE ENERGY, HARYANA

1. ADMINISTRATIVE SET UP OF DRE

To meet the expenditure of Salary/DA/TA/OE etc. for six posts of project Officer, one post of private secretary, one post of Programmer, one post of Personal Assistant, four posts of Assistant Project Officers, two posts of Steno Typist and two posts of Clerk, a provision of ₹ **113.00** lacs is proposed for Annual Plan for the year 2015-16 and break up of which is as under:-

(₹ in lacs)

Code	Object	Amount
01	Salary	42.50
02	Wages	0
03	DA	41.00
04	Travel Exp.	3.00
05	O.E	4.00
06	RRT	0
21	Motor Vehicle	8.00
34	Other Charges	0
45	POL	3.50
67	MR	8.00
70	LTC	2.00
79	Ex-gratia	1.00
	Total	**113.00**

2. LED BASED SPV HOME LIGHTING SYSTEM

Long term objective	To fulfill the basic lighting requirement of the needy people in the State	
Medium term Objective	Approx. 5,900 no. of LED based home lighting systems (with two LED lights) are proposed to be provided in the State during the next five years.	
Annual objective & impact expected	Being a State Nodal Agency (SDA), HAREDA is implementing the Solar Photovoltaic Programme in the State with and objective to providing lighting in the rural as well as urban areas. Due to rapid growth in industrialization, the demand of energy has increased manifolds, which has led to gap between demand and supply resulting into frequent power cut specially in the rural areas. As solar energy is available in abundance in the State, which can be tapped to generate electricity through PV technologies. The benefit of LED based home lighting systems are as under: • No fuel cost-uses abundantly available free sun light • Expensive transmission lines not required so 100% saving on maintenance of transmission lines and no transmission line losses. • No conventional electricity required. Long operating life. • Highly reliable and trouble-free performance Easy to operate and maintain, Eco-friendly. • To reduce load during peak demand on electricity grid during summer.	
Strategies	The systems shall be purchased by inviting bids for arranging the rate contract through High Power Purchase Committee and the department /HAREDA is in process for the same. The systems shall be distributed among the eligible beneficiaries through respective ADC-cum-CPOS in the State.	
Allocation requirement for 2015-16	An amount of Rs. 30.00 lacs is required for the year 2015-16 with applicable State subsidy for approx. 1000 nos. of systems and rest of the cost shall be borne by the user.	
Roll out of the scheme in terms of commencement of activities/ project	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	1000 nos. 1000 nos. 1200 nos. 1200 nos. 1300 nos. **5,900 nos.**
Cash flow requirement as per roll out plan (in INR)	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	30.00 lacs 30.00 lacs 35.00 lacs 35.00 lacs 40.00 lacs **170.00 lacs**
Reporting system/ format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house/ third party impact assessment method	The impact of the scheme shall be assessed by the in-house monitoring mechanism under which regular monitoring of the scheme shall be done through district offices of the department.	

3. SPV STREET LIGHTING SYSTEMS (11/9 WATT) FOR URBAN AREAS

Long term objective	to reduce the dependence on conventional power for street lighting in urban areas.	
Medium term objective (5 years horizon)	4,000 solar street lights (Stand alone/ Centralised Power plant based) are proposed to be provided in the urban areas of the State in next five years for illuminating premises of various institutions, hospitals, industrial units, group housing complexes, municipal areas, slums etc. which do not require high intensity illumination. **Funds required for 5 years: Rs.160 lac.**	
Annual objective & impact expected	During 2015-16, 750 nos. of solar street lights are proposed to be installed in the State with 9/12/16/20 watt LED, 40 watt module & 12 volt 40 Ah battery. The cost of the systems will be approx. Rs.16000/-. The solar street lights shall help Illumination in the premises of the above said categories of buildings/settlements and will help to conserve electricity. These devices shall also help in popularizing green and clean power. It is expected that installation of 750 solar street lights will benefit about 7500 households and about 37,500 people. Solar street lights not only empower the people of the lowest strata of the society but also serve as a tool for social security	
Strategies	Suitable locations for installation of solar street lights will be identified through the office of the ADC-cum-CPO of the district. Priority shall be given to under privileged areas like slums, SCBC, Bastis etc. The systems shall be installed through rate contract/purchase finalized by the competent authority of the State Govt.	
Allocation requirement for 2015-16	An amount **of Rs. 30.00 lacs** is required for the year 2015-16 for providing State Financial Assistance @ Rs. 4000/- per street light. As per the existing CFA pattern, a solar street light with 40 watt module will also be eligible for CFA of Rs.4800/- from the MNRE/GOI, subject to availability.Balance shall be borne by beneficiary agency	
Roll out of the scheme in terms of commencement of activities/projects	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	750 No. 750 No. 800 No. 800 No. 900 No. **4000 No.**
g) Cash flow requirement as per roll out plan (In INR)	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	30.0 lac 30.0 lac 32.0 lac 32.0 lac 36.0 lac **160.0 lac**
Reporting System/ Format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house /Third Party Impact assessment method	The impact of the project shall be assessed by an in-house Impact Assessment Method under which regular monitoring of the project is ensured through district offices of Department of Renewable Energy/HAREDA. HAREDA may also get impact assessment done from a third party.	

4. SPV STREET LIGHTING SYSTEM FOR RURAL AREAS

Long term objective	to reduce the dependence on conventional power for street lighting in rural areas.	
Medium term objective (5 years horizon)	12500 solar street lights (Stand alone/ Centralized Power plant based) are proposed to be provided in the rural areas of the State in next five years for illuminating community places like panchayat ghar, chaupals, streets etc. **Funds required for 5 years: Rs.500 lac.**	
Annual objective & impact expected	During 2015-16, 2500 nos. of solar street lights are proposed to be installed in the State with 9/12/16/20 watt LED, 40 watt module & 12 volt 40 Ah battery. The cost of the systems will be approx. Rs.14000/-. The solar street lights shall help Illumination in the community places in villages and will help to conserve electricity. These devices shall also help in popularizing green and clean power. It is expected that installation of 2500 solar street lights will benefit about 12,500 households and about 62,500 people. Solar street lights not only empower the people of the lowest strata of the society but also serve as a tool for social security especially in semi urban/ rural areas where higher incidence of crimes are reported in night/ dark.	
Strategies	Suitable locations for installation of solar street lights through the office of the ADC-cum-CPO of the district. Priority shall be given to under privileged areas like slums, SCBC, Bastis etc. The systems shall be installed through rate contract/purchase finalized by the competent authority of the State Govt.	
Allocation requirement for 2015-16	An amount of **Rs. 100.00 lacs** is required for the year 2015-16 for providing State Financial Assistance @ Rs. 4000/- per street light. As per the existing CFA pattern, a solar street light with 40 watt module will also be eligible for CFA of Rs.4800/- from the MNRE/GOI. Balance shall be borne by beneficiary agency	
Roll out of the scheme in terms of commencement of activities/projects	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	2500 No. 2500 No. 2500 No. 2500 No. 2500 No. **12,500 no.**
Cash flow requirement as per roll out plan (INR in lac)	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	100.0 lac 100.0 lac 100.0 lac 100.0 lac 100.0 lac **500.0 lac**
Reporting System/ Format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house /Third Party Impact assessment method	The impact of the project shall be assessed by an in-house Impact Assessment Method under which regular monitoring of the project is ensured through district offices of Department of Renewable Energy/HAREDA. HAREDA may also get impact assessment done from a third party.	

5. **DEMONSTRATION APPLICATION OF SOLAR THERMAL TECHNOLOGIES FOR SOCIAL SECTOR**

Long term objective	To conserve electricity and other conventional fuels	
Medium term objective (5 years horizon)	250000 LPD solar water heating systems (Flat Plate collector type) are proposed to be installed in socially oriented institutions like working women hostels, orphanages, Deaf and Dumb centers, crèches, Old age homes, Nari Niketans, bal Niketans, Sports hostels, etc. during next five years.	
Annual objective & impact expected	There will be substantial saving in electricity and other conventional fuels as the payback period of solar water heating system is 3-4 years.	
Strategies	HAREDA shall arrange the rate contract for the supply, installation and commissioning of solar water heating systems. The systems shall be installed as per MNRE/GOI and HAREDA norms. The cost of 100 LPD systems is about Rs. 26000/- and MNRE/GOI is not providing the 30% central financial assistance from Oct-2014 onward. These systems are proposed with 50% State financial assistance of the project cost.	
Allocation requirement for 2015-16	An amount **of Rs. 40.00 lacs** is required for the year 2015-16 for providing State Financial @ 50% of the project cost.	
Roll out of the scheme in terms of commencement of activities/projects	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	30000LPD. 50000LPD 50000LPD 50000LPD 50000LPD _____ **250000 LPD**
Cash flow requirement as per roll out plan (In INR)	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	40.00 lac 90.00 lac 90.00 lac 90.00 lac 90.00 lac _____ **450.0 lac**
Reporting System/ Format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house /Third Party Impact assessment method	The impact of the project shall be assessed by an in-house Impact Assessment Method under which regular monitoring of the project is ensured through district offices of Department of Renewable Energy/HAREDA. HAREDA may also get impact assessment done from a third party.	

6. PROMOTING THE INSTALLATION OF SOLAR WATER HEATING SYSTEMS FOR GENERAL PUBLIC

Long term objective	To conserve electricity and other conventional fuels
Medium term objective (5 years horizon)	750000 LPD solar water heating systems (Flat Plate collector type- 250000LPD and Evacuated tube collector type- 500000 LPD) are proposed to be provided to residents of Haryana and Haryana Govt employees living in Chandigarh under domestic sector during next five years.

Annual objective & impact expected	There will be substantial saving in electricity and other conventional fuels as the payback period of solar water heating system is 3-4 years.	
Strategies	The installation of solar water heating systems shall be done by the domestic users at their own level from the suppliers and shall be got verified through the office of the ADC-cum-CPO of the district. The systems shall be installed as per MNRE/GOI and HAREDA norms. The State financial assistance @ Rs. 3000/- per sq mtr of the flat plate collector area subject to the max of 6.0 mtr of the collector area to the residents of Haryana and Haryana Govt employees living in Chandigarh For ETC based systems, the subsidy will be Rs. 1000/- per sq mtr limited to Rs. 4500/- for 300 LPD capacity. The subsidy shall be released directly to the beneficiaries on submission of requisite documents to HAREDA i.e. invoice/ bill of the system, photograph & Commissioning Report duly verified by the concerned Project Officer of District Office	
Allocation requirement for 2015-16	An amount **of Rs. 50.00 lacs** is required for the year 2015-16 for providing State Financial @ Rs. 3000/- per sq mtr of the flat plate collector area subject to the max of 6.0 mtr of the collector area to the residents of Haryana and Haryana Govt employees living in Chandigarh For ETC based systems, the subsidy will be Rs. 1000/- per sq mtr limited to Rs. 4500/- for 300 LPD capacity.	
Roll out of the scheme in terms of commencement of activities/projects	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	150000LPD. 150000LPD 150000LPD 150000LPD 150000LPD _____ **750000LPD**
Cash flow requirement as per roll out plan (In INR)	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	50.0 lac 45.0 lac 45.0 lac 45.0 lac 45.0 lac _____ **225.0 lac**
Reporting System/ Format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house /Third Party Impact assessment method	The impact of the project shall be assessed by an in-house Impact Assessment Method under which regular monitoring of the project is ensured through district offices of Department of Renewable Energy/HAREDA. HAREDA may also get impact assessment done from a third party.	

7. SMALL SOLAR POWER PACKS

1.a) Long term objective	Decentralized generation of power from renewable energy sources helps in reducing the dependence on conventional power as well as promotion of green and clean power.This scheme aims at to make each and every house hold in the State to produce energy using solar energy for his own use as a tool for energy security. The scheme has two components: **Solar Invertor Charger** with 300 W/500 W solar modules **Off-grid solar power plants** of 1 kW to 100 Kwp capacity and Grid Connected Solar Power plants from 1.0 to 500 KWp

b) Medium term objective (5 years horizon)	**9550 units of Solar Invertor Chargers** of 300 W/500 W and **offgrid power plants / Grid connected solar power plants of 9700 kW capacity** aggregate are proposed to be provided in the State in next five years. Solar Invertor Chargers shall be provided to rural and urban households to charge their existing invertors. This will help in charging the existing invertors by solar energy during the day time. Solar Offgrid/ Grid connected power plants shall be provided to domestic /individual/ industrial/ commercial /institutional /Govt./semi-govt. users for their captive energy requirements. The surplus plus power if any can be feed to the grid in case of Grid connected solar power plants under net metering facility. **Funds required for 5 years: Rs.720.00 lac + Rs.2500 lac= Rs.3220.00 lac.**
c) Annual objective & impact expected	**During 2015-16, 1050 units of Solar Inverter Chargers** of 300 W/500 W and **off grid/ grid connected power plants of 1150 kW (450 KWp /700 KWp) capacity** aggregate are proposed to be provided in the State. A solar Inverter Charger costs about Rs.70 per watt without battery and is used for charging existing invertors and is useful as in many areas the power supply is insufficient to even fully charge the invertors. A solar Power plant cost about Rs.1.20 lac per kW with battery bank and Rs.0.75 lac without battery bank and is used to energize equipments of low power requirement like lighting, fans, computers fridge etc. The solar power plant shall help in providing uninterrupted power supply for essential services will help to conserve grid power. The surplus plus power if any can be feed to the grid in case of Grid connected solar power plants under net metering facility
d) Strategies	Beneficiaries for solar invertor chargers and solar power plants shall be identified through the office of the ADC-cum-CPO of the district/ press advertisement/ online mechanism on first come first serve basis. The systems shall be installed through rate contract/purchase finalized by the competent authority of the State Govt.
e) Allocation requirement for 2015-16	For providing 1050 solar invertor chargers during 2015-16 an amount of **Rs. 80.00 lac** is required for providing State Financial Assistance @ Rs. 20/watt solar power subject to maximum Rs.6000/- for 300 Watt solar inverter charger and Rs. 10,000/- for 500 watt solar inverter charger. For installation of offgrid/ Grid connected solar power plants of 700 KW capacity during 2015-16 an amount of **Rs. 355 lac** is required for providing State Financial Assistance @ 30% of the system cost. **CFA** will also be availed from the MNRE/GOI as per prevalent subsidy pattern, subject to approval from MNRE,GoI.
f) Roll out of the scheme in terms of commencement of activities/ projects	Yar: 2015-16 2016-17 2017-18 2018-19 2019-20 **Total**
	Solar Invertor Charger: 1050 No. 1500 No. 2000 No. 2000 No. 3000 No. **9550 No.**
	Offgrid/ Grid connected power plants: 1150 kW. 1500 kW. 1750 kW. 1750 kW. 2000 kW. **8150 KW**
g)Cash flow requirement as per roll out plan (INR in lac)	2015-16: 80.00 lac / 355.0 lac 2016-17: 115.00 lac / 465.0 lac 2017-18: 150.00 lac / 540.0 lac 2018-19: 150.00 lac / 540.0 lac 2019-20: 225.00 lac / 600.0 lac **Total: 720.00 lac / 2500.0 lac**
h) Reporting System/ Format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.
i) In house /Third Party Impact assessment method	The impact of the project shall be assessed by an in-house Impact Assessment Method under which regular monitoring of the project is ensured through district offices of Department of Renewable Energy/HAREDA. HAREDA may also get impact assessment done from a third party.

8. PUBLICITY AND AWARENESS PROGRAMME

Long term objective	To create awareness about the programmes/projects being implemented by the Department/HAREDA.
Medium term Objective	To give vide publicity about the schemes being implemented by the Department/HAREDA through printing of pamphlets &

	broachers advertisement in the news papers and magazines, preparation of jingles/interviews in radios, television, erection of hoardings, wall paintings, posters, organizing exhibitions, participation in fairs etc.	
Annual objective & impact expected	To give vide publicity about the schemes being implemented by the Department/HAREDA through printing of pamphlets & broachers advertisement in the news papers and magazines, preparation of jingles/interviews in radios, television, erection of hoardings, wall paintings, posters, organizing exhibitions, participation in fairs etc.	
Strategies	Publicity and awareness shall be done through printing of pamphlets & broachers advertisement in the news papers and magazines, preparation of jingles/interviews in radios, television, erection of hoardings, wall paintings, posters, organizing exhibitions, participation in fairs etc	
Allocation requirement for 2015-16	An amount of Rs. 30.00 lacs is required for the year 2015-16.	
Roll out of the scheme in terms of commencement of activities/ project	2015-16 2016-17 2017-18 2018-19 2019-20 Total	NA.
cash flow requirement as per roll out plan (in INR)	2015-16 2016-17 2017-18 2018-19 2019-20 Total	30.00 lacs 30.00 lacs 40.00 lacs 40.00 lacs 50.00 lacs 190.00 lacs
Reporting system/ format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house/ third party impact assessment method	The impact of the scheme shall be assessed by the in-house monitoring mechanism under which regular monitoring of the scheme shall be done through district offices of the department.	

(ii) Publicity and Awareness Programme for popularising Energy Conservation Building Code (ECBC)

Long term objective	• To promote energy efficiency in building sector. • To enforce energy efficient techniques including energy efficient building design concepts to conserve energy in Residential and commercial buildings use less energy.
Medium term Objective	• To promote Energy Conservation Building Code adoption in Commercial establishments.
Annual objective & impact expected	• To help in achieving Energy Efficiency targets of the Government of India and to create public awareness and environment consciousness amongst the citizens about ECBC.
Strategies	• To adopt multipronged strategy involving regulatory, promotional and awareness measures to promote Energy Conservation Building Code in the State. • Issuance of Notification on Energy Conservation Building Code, which is under process. • Wide Publicity is to be given for promote the ECBC • Seminar/ Workshops are to be organized for the publicity and awareness among.
Allocation requirement for 2015-16	An amount of Rs. 18.00 lacs is required for the year 2015-16.

Roll out of the scheme in terms of commencement of activities/ project	2015-16 2016-17 2017-18 2018-19 2019-20 Total	NA.
cash flow equirement as per roll out plan (in INR)	2015-16	18.00 lacs
Reporting system/ format	Reporting shall be done as per BEE prescribed norms.	
In house/ third party impact assessment method	Monitoring and assessment will be done by the Department.	

(iii) In exercise of the powers conferred by section 18 of the Energy Conservation Act, 2001(Central Act 52 of 2001), a notification vide no. No. 22/52/2005-5 Power dated 03.09.2014 has been issued to make it mandatory the installation of Solar Photovoltaic Power Plant for certain category of buildings/areas in the State of Haryana. For this purpose programs of wide publicity is to be carried out throughout the state for which during the year 2015-16 an **amount of Rs. 10 Lac** will be required.

9. PROMOTION OF ENERGY EFFICIENCY INITIATIVES (BURM)

The Govt. of India have enacted the Energy Conservation Act, 2001 (52 of 2001) to provide for efficient use of energy and its conservation and for matters connected therewith or incidental thereto. The Act has become effective from 1st March, 2007. The Haryana Govt. has designed the Department of Renewable Energy, Haryana as the State Designated Agency (SDA) for implementing the Energy Conservation Act, 2001 in the State.

Haryana Govt. has initiated many new schemes for promotion of Energy Conservation in the State. To develop an energy and environment sensitive youth, who shall act, perform and inspire people from every strata of Society to use energy resources wisely and intelligently. The programme was launched by the Department in collaboration with Management Development (MDI), Gurgaon as one of its kind pilot mission called Bal Urja Rakshak Mission (BURM) on 18th December, 2008 at Gurgaon. The objective of this mission is to sensitize students of 8th and 9th standard in the areas of energy conservation, Renewable Energy, climate change and sustainable development. The above mission is planned to be implemented in 525 schools of the State, under which about 5 lacs students shall be sensitized. This programme is being implemented in district Gurgaon, Faridabad, Panchkula, Hisar, Narnaul, Rohtak, Ambala & Kurukshetra.

During the year 2015-16, it is proposed to extend implementation of this mission at Faridabad district. **A budget provision of Rs 10.00 lacs is proposed** to carry out the various activities of this mission in the new and ongoing districts.

10. GREEN ENERGY/ENERGY CONSERVATION (EC) FUND

(i) Scheme on Energy Audit

1. a) Long term objective	To create demonstration manual based on success stories of the demonstration projects and dissemination of results of the demonstration projects through interactive workshops so that similar projects may be replicated and To ensure energy saving targets of the State are achieved.	
b) Medium term Objective	To identify areas where excess energy consumption or wastage of energy is taking place and To support the implementation of energy saving measures recommended by the energy auditor	
c) Annual objective & impact expected	To achieve annually avoided capacity addition target of at least 20 MW through Energy Conservation Activities.	
d) Strategies	• **Step-I-** To identify willing and potential industrial units in four of the six SME clusters namely, Faridabad, Gurgaon, Rewari & Karnal for energy efficiency campaign through interaction meets. • **Step-II-** To carry out Walk Through Energy Audit (WTEA) in identified units in each of the four clusters. Walk through Energy Audit involves preliminary investigations about the process, fuel consumption and assessment of the energy saving potential. • **Step-III** To carry out Detailed Energy Audit of potential industries on the basis of their response, scope of energy efficiency gains, expert recommendations and participation. Department has another scheme for financial assistance for conduct of energy audit of 50:50 cost sharing basis limited to 50,000/- • **Step-IV-** Eight best detailed energy audit reports to be selected for developing them as demonstration projects on waste recovery through WHRB, Recuperators, Economizers, Automatic voltage Regulators, Power capacitors etc. State is also providing financial assistance to Industries/ Intuitions for Implementation of Energy Audit report recommendations. Under the scheme, two categories are defined for financial assistance. First category is of the industries which have implemented 50% of recommendation of energy audit report at their own investment. Second category is of the industries which have implemented 25% to 50% of recommendation of energy audit report at their own investment. The financial assistance for first category is of 40% of the total cost investment required for implementation of energy audit report subject to maximum of Rs.3.00 Lakhs and for second category it is 25% of the total cost investment required for implementation of energy audit report subject to maximum of Rs.2.00 Lakhs. • **Step-V**: Preparation of demonstration manual based on success stories of the demonstration projects and shall disseminate the results of the demonstration projects through interactive workshops so that similar projects may be replicated.	
e) Allocation requirement for 2015-16	An amount of Rs. 30.00 lacs is required for the year 2015-16.	
f) Roll out of the scheme in terms of commencement of	2015-16 2016-17 2017-18	NA.

activities/ project	2018-19 2019-20 Total	
g) cash flow requirement as per roll out plan (in INR)	2015-16 2016-17 2017-18 2018-19 2019-20 Total	30.00 lacs 30.00 lacs 40.00 lacs 50.00 lacs 50.00 lacs 200.00 lacs
h) Reporting system/ format	The progress of the scheme shall be reported by way of Energy quantification and Annual Energy Conservation Report	
i) In house/ third party impact assessment method	The impact of the scheme shall be assessed by the in-house preparation energy quantification report and data collection from utilities and other stakeholders. Third party impact assessment may also be carried out to assess the impact of implementation of various schemes.	

(ii) SCHEME ON SOLAR WATER PUMPIMG SYSTEM

Long term objective	To reduce the dependence on conventional power and to replace diesel pumps.	
Medium term objective (5 years horizon)	2450 solar water pumps are proposed to be provided to Medium and small farmers of the state to irrigate their fields during next five years.	
Annual objective & impact expected	About 65.2 % population lives in the rural area. It is difficult to meet the energy demand from the conventional sources. Renewable Energy sources are available in abundant and these are sufficient to meet energy demand. Medium and small farmers in the state are using diesel pump sets to irrigate their fields. These pumps create pollution and affect the climate. Solar Pumps are very useful for meeting the irrigation needs of the farmers and are pollution free. Once the systems are installed, there is no recurring & running expenditure on their day to day working, thus helping these small farmers for having sustainable income from their farming.	
Strategies	HAREDA is also in the process to arrange rate contract for the supply, installation and commissioning of solar water pumping systems and likely to be finalized by the end of Jan-2015. Suitable locations for installation of solar water pumps will be identified through the office of the ADC-cum-CPO of the district. The systems shall be installed through rate contract/purchase finalized by the competent authority of the State Govt.	
Allocation requirement for 2015-16	An amount **of Rs. 644.00 lacs** is required for the year 2015-16 for providing State Financial Assistance @ 30% of the pump cost. About 30% share shall be provided by MNRE/GOI and remaining 40% shall be borne by beneficiaries.	
Roll out of the scheme in terms of commencement of activities/projects	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	462 nos. 500 No. 500 No. 500 No. 500 No. **2450 Nos.**
Cash flow requirement as per	2015-16 2016-17	600.0 lac 700.0 lac

roll out plan (In INR)	2017-18 2018-19 2019-20 **Total**	700.0 lac 700.0 lac 700.0 lac **3400.0 lac**
Reporting System/ Format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house /Third Party Impact assessment method	The impact of the project shall be assessed by an in-house Impact Assessment Method under which regular monitoring of the project is ensured through district offices of Department of Renewable Energy/HAREDA. HAREDA may also get impact assessment done from a third party.	

(iii) **State Level Energy Conservation Award**

Long Term Objective	• To create awareness among the industrial, commercial, Govt. Building and Educational Institutes sectors about the energy conservation • To recognize the efforts of the industrial, commercial, Govt. Building and educational Institutes sector consumers in conserving energy by way of giving them awards/certificates of merit
Medium term objective (5 years horizon)	The Govt. of Haryana has designated the Department of Renewable Energy/Haryana Renewable Energy Development Agency (HAREDA) as the State Designated Agency (SDA) to coordinate, regulate and enforce the provision of the Energy Conservation Act, 2001 in the State of Haryana. The Haryana Govt. has identified energy conservation as one of the thrust areas and many initiatives have been taken in this regard. The Department of Renewable Energy, Haryana has prepared on Energy Conservation Action Plan. One of the activity under this plan is to give awards to those consumers of industrial, commercial, govt. buildings, educational institutions, hospitals, municipal committees/ corporations and individuals who have excelled in adopting the various energy conservation measures in their buildings/ units to save electricity / other fuels.
Annual Objective & impact expected	To create awareness among the industrial, commercial, Govt. Buildings and educational institutes sectors about the energy conservation To recognize the efforts of the Industrial, Commercial, Govt. Buildings and Educational Institutes sector consumers in conserving energy by way of giving them awards / certificates of merit.
Strategies	To encourage and motivate, it is proposed to give State Level Award for Excellence in Energy Conservation and management every year for the following Categories of consumers of industrial, commercial, govt. building, educational institutions, hospitals, municipal committees / corporations and individuals who have excelled in adopting the various energy conservation measures in their buildings/ units to save electricity / other fuels.
Allocation requirements for 2015-16	An amount of Rs. 30.00 Lacs required for the year 2015-16 for awards.
Roll out of the scheme in term of	Energy Conservation and Management every year for the various Categories is at annexure-I

commencement of activities / projects	
Cash flow requirements as per roll out plan (in Rupees)	2015-16 30.00 2016-17 30.00 2017-18 30.00 2018-19 30.00 2019-20 30.00
Reporting System / Format	Through ADCs & Advertisement through press.
In house / Third Party Impact assessment method	Through Government constituted Committee.

11. ENERGY EFFICIENT BUILDING PROGRAMME.

Department is implementing a programme on promotion of solar passive architectural concepts in building design with an objective to promote energy efficient building design and building constructions with optimum use of solar energy and other forms of ambient energy in energy management. The State Govt. has decided that all new buildings to be constructed in Govt./Govt. aided sector will incorporate energy efficient building design concepts including renewable energy technologies **w.e.f 30.6.2006**. Renewable Energy Department has constructed a model energy efficient building at institutional Plot no.1, Sector-17, Panchkula. This building has features such as solar power plant, solar water heating systems, VRV Air conditioning, Rain water harvesting structure, solar chimneys, UPVC windows, Mist etc. Further, the architecture of the building is such that the temperature of building shall be maintained between 28 -30 C throughout the year and it shall consume 80% less energy in compared other conventional building. Further, this building is having exhibition and work shop and aditya solar shop for providing services such as demonstration of solar and energy efficient devices, its repairs and sale for general public. A training centre has also been constructed for providing training to the institutions, govt. officers, school and college students on use of renewable and energy efficient techniques. To keep this building & various devices maintained, it is required that specific amount should be kept for regular repair & maintenance of building specially for annual maintenance contract comprehensive maintenance charges of solar devices, lift, mist cooling system, VRV Air Conditioning generator, transformer and cleaning/water proofing in rain water harvesting system, land scaping etc. for which an **amount of ₹ 30.00 lacs** is required for the year 2015-16.

12. Shikshadeep Scheme on LED Based Solar Laterns for SC Students under SC Sub-Plan.

Long term objective	To fulfill the basic lighting requirement of the SC families who have constructed their houses under IAY scheme in the State
Medium term Objective	Approx. 16,600 no. of LED based home lighting systems with two LED lights and a fan are proposed to be provided in the State during the next five years.
Annual objective & impact expected	Being a State Nodal Agency (SDA), HAREDA is implementing the Solar Photovoltaic Programme in the State with and objective to providing lighting in the rural as well as urban areas. Due to rapid growth in industrialization, the demand of energy has increased manifolds, which has led to gap between demand and supply resulting into frequent power cut specially in the rural areas. As solar energy is available in abundance in the State, which can be tapped to generate electricity through

	PV technologies. The benefit of LED based home lighting systems (MNRE, Model-III) are as under: • No fuel cost-uses abundantly available free sun light • Expensive transmission lines not required so 100% saving on maintenance of transmission lines and no transmission line losses. • No conventional electricity required. Long operating life. • Highly reliable and trouble-free performance Easy to operate and maintain, Eco-friendly. • To reduce load during peak demand on electricity grid during summer.	
Strategies	The systems shall be purchased by inviting bids for arranging the rate contract through High Power Purchase Committee and the department /HAREDA is in process for the same. The systems shall be distributed among the eligible beneficiaries through respective ADC-cum-CPOS in the State.	
Allocation requirement for 2015-16	An amount of Rs. 150.00 lacs is required for the year 2015-16 with applicable State subsidy and MNRE subsidy for approx. 3000 nos. of systems and rest of the cost shall be borne by the user.	
Roll out of the scheme in terms of commencement of activities/ project	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	3000 nos. 3000 nos. 3400 nos. 3400 nos. 3800 nos. **16,600 nos.**
cash flow requirement as per roll out plan (in INR)	2015-16 2016-17 2017-18 2018-19 2019-20 **Total**	150.00 lacs 150.00 lacs 200.00 lacs 200.00 lacs 250.00 lacs **950.00 lacs**
Reporting system/ format	The progress of the scheme shall be reported by way of physical progress and will be supplied on quarterly basis.	
In house/ third party impact assessment method	The impact of the scheme shall be assessed by the in-house monitoring mechanism under which regular monitoring of the scheme shall be done through district offices of the department.	

13. MAJOR HEAD:-3425-Other Scientific Research (Plan)- 60- others- 001-Direction & Administration- (Sub Head) 87– Rural Energy Programme (State Share)-99-State Share

To introduce the micro level energy planning for conserving the existing energy sources and also to exploit the non-conventional energy sources for the socio-economic development of rural sector, Department is implementing the various programmes/projects like Power projects (Biomass Power Projects, Co-generation Power Projects, Small Hydro Power Projects, Wind Power Projects, SPV Power Projects, Waste to Energy Power Projects), Implementation of the Energy Conservation Act and Energy Conservation Programmes, Solar Energy based Programmes/Projects**(**Solar Photovoltaic Demonstration Programme, SPV Urban Programme, Solar Water Heating Programme, Solar Cooker Programme, Solar Passive Architecture Programme, SPV Water Pumping Programme), Bio-Energy Programme**(**Institutional biogas Programme, Biomass Gasification Programme, Bio-oil Programme), Implementation of the Integrated Rural Energy Program, Other

Programs **(**Village Electrification Programme, Akshay Urja Shops, Energy Parks, Multi/Bilateral Programme, Publicity and Awareness Programme)

To meet the expenditure of the salaries of the 46 posts of different categories of district headquarters of all the districts for the implementation of the above programmes of the Department at the district level. A budget provision of ₹ 220.00 lacs is required for the year 2015-16. Break up of budget provision is proposed as under:- (₹ in lacs)

Code	**Object**	**Amount**
01	Salary	95.75
02	Wages	0
03	DA	87.75
04	Travel Exp.	5.00
05	O.E	7.50
06	RRT	0
21	Motor Vehicle	4.00
34	Other Charges	0
45	POL	4.00
67	MR	8.00
70	LTC	5.00
79	Ex-gratia	3.00
	Total	**220.00**

A total approved budget estimates **of ₹ 1970.00 lacs** (Amount of ₹ 1750.00 lacs under head 2810-New and Renewable Energy and amount of ₹ 220.00 lacs under head 3425-Other Scientific Research- Rural Energy Programme) for the Annual Plan during the year 2015-16.