



Installation of Solar Water Pump 2022 - 2023



Sponsored By

A Vasundhara Abhiyan Concept

स्वस्मै स्वल्पं समाजाय सर्वस्वं।

svasmai svalpaṃ samājāya sarvasvaṃ

A little bit for yourself and everything for others!

Project Executed By



CONTENTS

Confidentiality.....	1
Release History	
1 Acknowledgment	2
2 Introduction to Deepastambh.....	3
4 Project details	6
4.1 Background.....	6
4.2 Objectives	7
4.3 Research Work.....	8
4.4 Documentation required	10
4.5 Project progression.....	17
4.6 Glimpses	18
4.7 Impact Analysis.....	22
4.8 Benefits	
4.9 Future Plans.....	
5 Testimonials	17
6 References	18





CONFIDENTIALITY

Deepastambha Charitable Trust, Pune is submitting this document on the understanding that the contents would not be divulged to any third party without prior written consent from Deepastambha Charitable Trust, Pune.



RELEASE HISTORY

Version	Release	Date	Initials
1.1	V 1.1	29 th March 2023	LS, AS

Disclaimer

Deepastambha is a Charitable Trust registered under Bombay Public Trusts Act, 1950. (Reg no: E-5602). Deepastambha is registered under section 80G of Income Tax Act and also registered under the Foreign Contribution Regulation Act, 2010. We offer consultative and operative services for implementation of CSR activities in rural development for better livelihoods and to achieve Sustainability Development Goals – both at the strategic and operational level.



1. ACKNOWLEDGMENT

It's been a wonderful experience working with team Medline under their CSR initiative. We thank the Management of Medline for their magnificent financial contribution. We thank our well-wishers and guides for their aspiring guidance, invaluable constructive criticism and friendly advice during the project work.

We are happy to have a team of Vasundhara Abhiyan their respective leaders and coordinators for their time, efforts and outstanding work. Finally, we thank all the Deepastambh Charitable Trust volunteers for their unconditional support throughout the project for various activities. We really appreciate volunteers' feedback; it helps us to improve the overall quality of our functions as a charitable trust.





2. INTRODUCTION TO DEEPASTAMBH

Established

In the year 2008

Mission

To integrate the Social Sense in human beings for making this world a better place for all.

Work Domain

- Upayn - donation in the form of gift: All donation camps are covered under this cause
- Eco-Paavitrya - Environmental Sustainability while celebration
- Conserve To Serve - Natural Resource conservation
- Encourage, Engage, Educate and Empower Children -
 - Skool-Falak
 - Skool-Sansad
 - Skool-Kit preparation / Study Material making for slow learners
 - Awareness on Child Abuse
 - Skill-set development
- Gramarthan - Making village self-contained
- Niramayaa - Health and Hygiene awareness Organization visits – Orphanages, Old age homes, Special children, HIV positive children, Cancer patients etc.

- Other weekly activities: Traffic awareness activities, cleaning activities, Knowledge sharing, Plant visit, new initiatives, exploring new social issues, slum area activities, animal rights etc.

Area of work

- Across Maharashtra
- Online activities across globe

Statistics

- Over 1500+ activities, 750 registered members & counting.
- Associated with 40 NGOs, 500+ schools in Pune and over 55 corporates for CSR activities.

Legal & Intellectual Property

- Deepastambh is a Charitable Trust registered under Bombay Public Trusts Act, 1950.
- We are registered under section 80G of Income Tax Act, and we have obtained registration certificate 2A.
- We are registered under the Foreign Contribution Regulation Act, 2010 (FCRA).
- “Upayn” has received the registration for trademark protection.



Projects and Activities

- Educational activities to encourage, engage, educate and empower children
- **Skool-Falak** – Preparation of Display Boards by children with information that is extra curricular.
- Library set-up and development of reading habits and techniques
- **Skill Development Programs** - Yoga classes, dance classes, career development, computer classes, drawing, craft, etc.
- **Career Guidance Sessions** / additional classes for various extra curricular subjects
- **Awareness:** Child abuse awareness, cleanliness awareness, menstrual hygiene awareness through digital media.
- **Swacha Maze Gaon:** Cleanliness Drives, competition in schools, knowledge sharing etc.
- **Watershed Management Projects** - Conducting watershed surveys, Built a water reservoir with capacity of 25 Lakh Ltr at Ranjane, de-silting of water bodies in Pune and Osmanabad District –

approx 10 Cr. liter water recharged, repair work of 4 check dams covering length of 2.5kms in Pune District as part of Shramsetu - “*Shramadan*” activities.

- **Niramayaa** - Conducting awareness programmes on menstruation health and personal hygiene, monthly OPD, conducting Health Camps on Cervical Cancer and Breast Cancer, Eye Check- up, Hemogram tests etc.
- **Team building** – celebrating festivals with villagers, watching movies, encouraging *volunteerism* amongst villagers for various development oriented initiatives.
- **Women Empowerment** – Training on various skill sets, lectures on entrepreneurship development, prototype programs for confidence building, counseling sessions for family members
- Others - Installation of solar water pump, water ATMs, tree plantation drives etc.

Geographical Scope

Maharashtra

Vision for SDGs for Maharashtra 2030



1. The fundamental principle of the vision- Sustainable, balanced and all inclusive socio-economic growth of the State
2. A sustainable environment enables a sustained growth across all sectors.
3. Investment in environment helps in self-sustaining growth over long term hence, utmost importance has been given to environment; forming a bedrock for the five pillar strategy

4. PROJECT DETAILS

Vasundhara Abhiyan Pune, an environmental non-governmental organization (ENGO), has been devotedly active since 2006 in the Baner-Pashan Hill region. The organization has been passionately engaged in initiatives such as tree plantation, conservation, soil preservation, and rainwater harvesting. Their efforts have nurtured urban environments into thriving hubs of biodiversity, while simultaneously fostering awareness among citizens, schools, and corporations for a greener tomorrow.

With its inception tracing back to 2006, Vasundhara Abhiyan Baner embarked on its conservation journey at Tukai Hill in Pune. The organization has impressively planted over 40,000 native plants belonging to over 350 distinct species. Notably, the organization has ingeniously christened each of its 30 water tanks after rivers, serving as vital sources for tree hydration.

The pursuit of rainwater harvesting has led to the construction of more than 40 bunds of varying sizes, enhancing the conservation efforts. The diligent members of Vasundhara Abhiyan devote two hours daily to their green endeavors. Beyond their tree-centric initiatives, the organization orchestrates a

range of supplementary environmental programs. Transparency remains a cornerstone of the organization's ethos, evident in its meticulously kept records, a practice that has fostered a reputation for unwavering transparency since its inception.

The fruition of impactful initiatives is often accompanied by significant temporal and labor investments. Such is the case with the conservation work at Tukai Hill, Baner. The Vasundhara Abhiyan team encountered a unique challenge in managing electricity bills incurred by watering the planted trees atop the hills. Their commendable feat of planting 40,000 native trees was met with the formidable task of sustaining and maintaining these trees, primarily through consistent watering.

This demand led to the operation of 30 water tanks, incurring substantial electricity consumption and subsequently, substantial bills. Seeking an innovative solution, Vasundhara Abhiyan sought partnership with Deepastambha Charitable Trust. The initial interaction involved a comprehensive project assessment by the trust, which diligently gathered the project's technical intricacies.

Impact of Bunding for Water Conservation



4.2 Objective

Objective of Solar Water pump system

- To provide water supply regularly to water 43000+ trees against irregular electricity supply and heavy electricity bills.
- To save electricity and utilize those funds for other developments of the project.
- Use of green energy and conservation of environment.

4.3 Research work

Solar Water Pump System

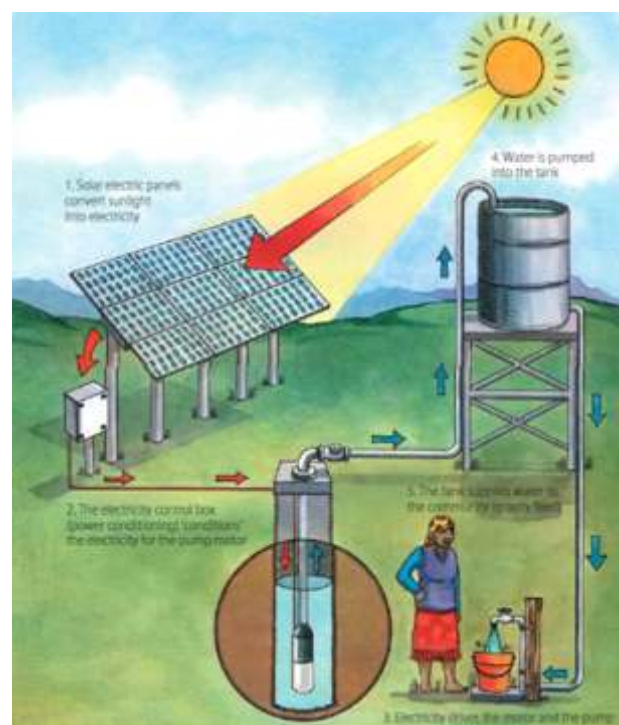
Access to a safe, sustainable water supply is a growing concern in every region of the world. In many communities, groundwater is being pumped by diesel fueled systems, which are both expensive and can be difficult to maintain. In communities where electricity is scarce, solar can be a part of the solution.

Solar-powered pumps run on electricity generated by photovoltaic (PV) panels or the radiated thermal energy available from collected sunlight as opposed to grid electricity - or diesel-run water pumps.

Generally, solar-powered pumps consist of a solar panel array, solar charge controller, DC water pump, fuse box/breakers, electrical wiring, and a water storage tank.

The operation of solar powered pumps is more economical mainly due to the lower operation and maintenance costs and has less environmental impact than pumps powered by an internal combustion engine.

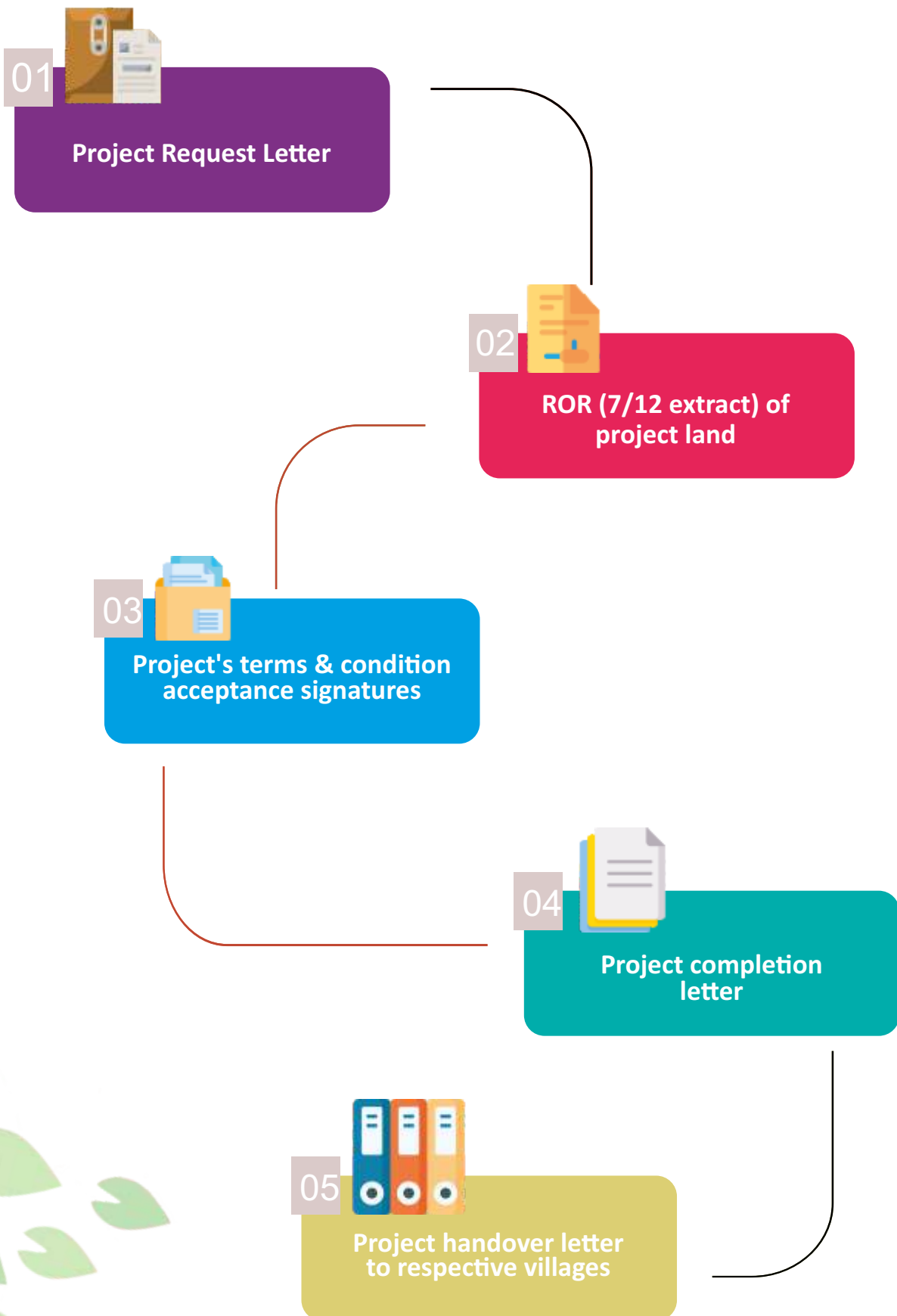
Solar pumps are useful where grid electricity is unavailable or impractical, and alternative sources (in particular wind) do not provide sufficient energy.



Utility

A system with 335-watt PV array capacity and 7.5 HP pump can give a water discharge of 42,000-105,000 liters per day from a depth of 375 ft. This quantity of water is considered adequate for irrigating about 43000+plants/trees.

4.4 Documentation



Project Request Letter to Deepastambh



वसुंधरा अभियान बाणेर

“वृक्षसंवर्धन व पर्यावरण पुरक उपक्रम”

नोंदणी क्र. रजि. नं. महा/४२१/२०१७/पुणे दि. २२/०३/२०१७

दिनांक: १३/०१/२०२३

प्रति,

मा. विश्वस्त

दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे

विषय: वसुंधरा अभियान, बाणेर येथील सौर वॉटर पंप, प्रकल्पाची विनंती करण्या बाबत.

महोदय,

उपरोक्त विषयास अनुसरून वसुंधरा अभियान, बाणेर तर्फे आम्ही दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे यांना विनंती करतो की आमच्या वसुंधरा अभियान, बाणेर येथे ४००००+ झाडांना पाण्याची सोय व्हावी याकरिता सौर वॉटर पंप, सौर प्रकल्प बसविण्यात यावा, जेणे करून ४००००+ झाडांना पाणी पुरवठा करण्यासाठी लागणाऱ्या विजेची बचत होईल. व झाडांचे संवर्धन करण्यासाठी नियमित वीजपुरवठा निर्माण होईल.

त्यासाठी लागणारी जागा आम्ही उपलब्ध करून देऊ, तरी आपणाकडून सौर वॉटर पंप, प्रकल्पास मान्यता मिळावी ही विनंती.

कळावे,

आपला कृपाभिलाशी

Dhanase B.S.
अधिकारी

वसुंधरा अभियान,

बाणेर, पुणे



Project Request Letter to Medline



वसुंधरा अभियान बाणेरे

“वृक्षसंवर्धन व पर्यावरण पुरक उपक्रम”

नोंदणी क्र. रजि. नं. महा/४२९/२०१७/पुणे दि. २२/०३/२०१७

दिनांक: १३/०१/२०२३

प्रति,

मा. संचालक

मेडलाईन इंडस्ट्रीज इंडिया प्रा. लि. पुणे

विषय: वसुंधरा अभियान, बाणेरे येथील सौर वॉटर पंप, प्रकल्पाची विनंती करण्या बाबत.

महोदय,

उपरोक्त विषयास अनुसरून वसुंधरा अभियान, बाणेरे तर्फे आम्ही मेडलाईन इंडस्ट्रीज इंडिया प्रा. लि. पुणे यांना विनंती करतो की आमच्या वसुंधरा अभियान, बाणेरे येथे ४००००+ झाडांना पाण्याची सोय व्हावी याकरिता सौर वॉटर पंप, सौर प्रकल्प बसविण्यात यावा, जेणे करून ४००००+ झाडांना पाणी पुरवठा करण्यासाठी लागणाऱ्या विजेची बचत होईल. व झाडांचे संवर्धन करण्यासाठी नियमित वीजपुरवठा निर्माण होईल.

त्यासाठी लागणारी जागा आम्ही उपलब्ध करून देऊ, तरी आपणाकडून सौर वॉटर पंप, प्रकल्पास मान्यता मिळावी ही विनंती.

कळावे,

आपला कृपाभिलाशी

Shondge B.S.

अधिकारी

वसुंधरा अभियान,

बाणेरे, पुणे



Project Completion Letter to Medline



वसुंधरा अभियान बाणेर

“वृक्षसंवर्धन व पर्यावरण पुरक उपक्रम”

नोंदणी क्र. रंजि. नं. महा/४२१/२०१७/पुणे दि. २२/०३/२०१७

दिनांक: २३/०३/२०२३

प्रति,

मा. संचालक

मेडलाईन इंडस्ट्रीज इंडिया प्रा. लि. पुणे.

विषय :- वसुंधरा अभियान, बाणेर येथील ७.५ एच पी क्षमतेची सौर पंप यंत्रणा हा प्रकल्प पूर्ण झाल्या बाबत.

माननीय महोदय,

आपण आमच्या वसुंधरा अभियान, बाणेर येथील ७.५ एच पी क्षमतेची सौर पंप यंत्रणा या प्रकल्पासाठी, दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे यांच्या सहयोगातून मेडलाईन इंडस्ट्रीज इंडिया प्रा. लि. यांनी अर्थसहाय्य केले होते. आपणास कळविण्यास आनंद होत आहे कि, सादर प्रकल्पाचे काम हे उत्तम दर्जाचे, समाधानकारकरीत्या आणि वेळेत पूर्ण झाले आहे.

वसुंधरा अभियानाच्या कार्या मधील आपल्या सहकार्याबद्दल समस्त वसुंधरा अभियान सभासद आपले ऋणी आहेत. या पुढेही वसुंधरा अभियानाच्या कार्यासाठी आपले पाठबळ मिळावे हि विनंती.

कळावे,

आपला कृपाभिलाषी

Dhorelge B.S.

अधिकारी

वसुंधरा अभियान,

बाणेर, पुणे.



Project Completion Letter to Deepastambha



वसुंधरा अभियान बाणेर

“वृक्षसंवर्धन व पर्यावरण पुरस्कार उपक्रम”

नोंदणी क्र. रजि. नं. महा/४२१/२०१७/पुणे दि. २२/०३/२०१७

दिनांक: २३/३/२०२३

प्रति,

मा. विश्वस्त

दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे.

विषय :- वसुंधरा अभियान, बाणेर येथील ७.५ एच पी क्षमतेची सौर पंप यंत्रणा हा प्रकल्प पूर्ण झाल्या बाबत.

माननीय महोदय,

आपण आमच्या वसुंधरा अभियान, बाणेर येथील ७.५ एच पी क्षमतेची सौर पंप यंत्रणा या प्रकल्पासाठी दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे यांच्या सहयोगातून मेडलाईन इंडस्ट्रीज इंडिया प्रा. लि. यांनी अर्थसहाय्य केले होते. आपणास कळविण्यास आनंद होत आहे कि, सादर प्रकल्पाचे काम हे उत्तम दर्जाचे, समाधानकारकरीत्या आणि वेळेत पूर्ण झाले आहे.

वसुंधरा अभियानाच्या कार्या मधील आपल्या सहकार्याबद्दल समस्त वसुंधरा अभियान, बाणेर आपले ऋणी आहे. या पुढेही आमच्या कार्यासाठी आपले पाठबळ मिळावे हि विनंती.

कळावे,

आपला कृपाभिलाषी

Dhondse B.S.

अधिकारी

वसुंधरा अभियान,

बाणेर, पुणे.



Handover Letter



लोकार्पण प्रमाणपत्र

वसुंधरा अभियान, बाणेर यांच्या विनंती अर्जानुसार दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे यांनी ७.५ एच पी क्षमतेची सौर पंप यंत्रणा या प्रकल्पाची उभारणी केली. सदर प्रकल्पाची उभारणी दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे यांच्या देखरेखीखाली झाली असून त्यांच्या कामाचा दर्जा आणि गुणवत्तेसाठी सदर ट्रस्ट कटिबद्ध आहे.

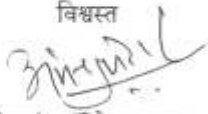
या कामात प्राथमिक अर्थसहाय्य केल्या बद्दल " मेडलाईन इंडस्ट्रीज इंडिया प्रा. लि. आणि बांधकाम सहाय्यासाठी सन्टेक सोलर इंडिया " यांचे दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे सदैव आभारी आहे. तसेच समस्त वसुंधरा अभियान, बाणेर सदस्यांचा पाठींबा या प्रकल्पाला मिळाल्याबद्दल त्यांचेही आम्ही आभार मानतो.

आज (शनिवार, दिनांक २३/३/२०२३ रोजी ७.५ एच पी क्षमतेची सौर पंप यंत्रणा या प्रकल्पाचे लोकार्पण करण्यात आम्हाला (दीपस्तंभ चॅरिटेबल ट्रस्ट, पुणे) अतिशय आनंद होत आहे !

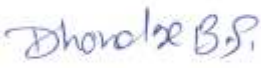
यापुढे ७.५ एच पी क्षमतेची सौर पंप यंत्रणा या प्रकल्पाची संपूर्ण जबाबदारी हि वसुंधरा अभियान, बाणेर यांची राहिल. सदर प्रकल्पाची देखरेखीची जबाबदारी व अन्य गरजेचे फेरबदलाचे अधिकार व निर्णय प्रा वसुंधरा अभियान, बाणेर मार्फत घेतले जातील.

आपल्या अभियानाला अजून मोठे करण्याची आपल्या सर्वांची जबाबदारी आहे, आणि या कार्यात प्रत्येकाचा वाटा खूप मोलाचा आहे.

आजचा संघर्ष उद्याचे सामर्थ्य तयार करतो

विश्वस्त

दीपस्तंभ चॅरिटेबल ट्रस्ट,
पुणे.



अधिकारी

वसुंधरा अभियान,
बाणेर, पुणे.

4.5 Project Progression



4.6 Glimpses

Primary Visit



Installation





Inauguration



4.7 Impact Analysis

Solar Water Pump System – 7.5 HP

Description	Value	Units
System	7.5	HP
Electricity generation	10,500	Kwh (Units/Year)
Escalation of electricity price	2	%
Average electricity rate	11.5	Rs/Kwh
Required electricity to run pump	10,500	Kwh
Electricity saving in Rupees	120750.00	Rs/Year
Payback period	6 to 6.5	Years



4.8 Benefits

Solar Powered Pump Technology

Solar powered pump technology brings more convenient and cleaning solution for drinking water supply in rural village. The main advantage of the solar water pump is that it uses sunlight at no cost. Just as solar water pumps reduce dependence on electricity or diesel, once installed, there is no recurrence cost of electricity or fuel. Compared to conventional water pumps, solar water pumps require very little maintenance.

Millions of people around the world live with limited access to water. In many communities, ground water is extracted through electric water pumps, which uses diesel to fuel their systems. However, these systems are not only costly, but requires regular servicing and the purchasing of fuel, they emit carbon dioxide polluting the atmosphere.

sustainable. Solar panels last around 25 years, and requires a little maintenance throughout this time. The whole system will draw the energy from the sun and directly run the water pump for water supply through by solar pump drive. There is nearly zero CO2 emission and friendly to the environment.

It is based on three kinds of proven technology such as,

- solar modular
- solar pump drive and
- pump facility

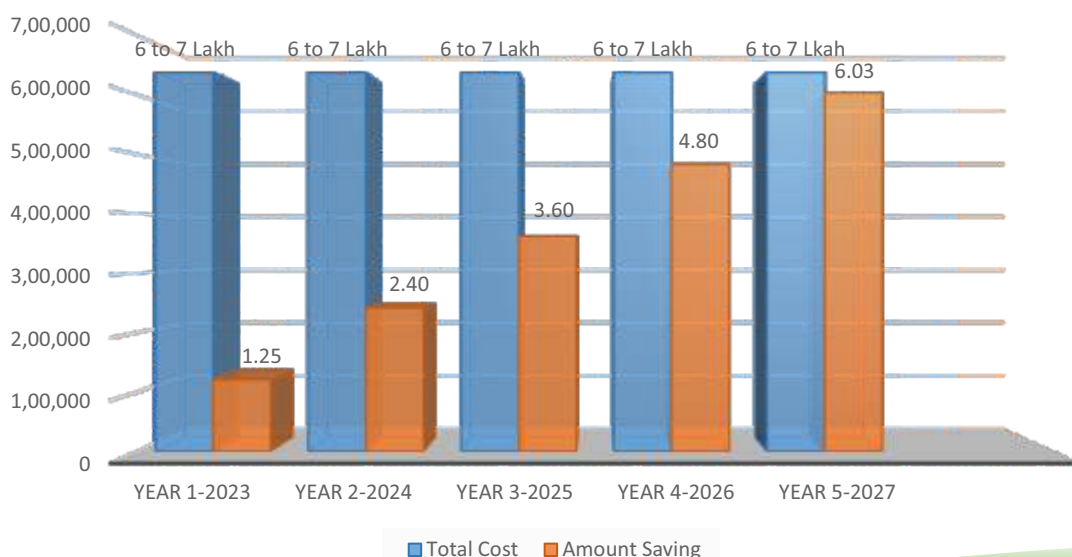
The work life of the system will be more than 15 years. Based on the more than 15 years lifetime-circle costing calculation the solar powered water supply system will reduce maintenance cost and release the folk labor force compared to the traditional solution.

Graphical Representation of Cost

As mentioned in the graph below, the annual electricity saving is Rs. 120,750/-. The graph shows cost savings for the next 5 years from the date of installation of the Solar Water Pump.

Thus the returns on social investment for next 5 years will be Rs. 6.03/-.

Retruns on Social Investment





5. TESTIMONIALS

“

First of all, I would like to express my heartfelt thanks to Medline Company and Deepastambha for completing the Solar water pump system project. This project will help improving watering system needed for the enhancement of the environment.

Mr. Amit Pitre

”

“

I am grateful to Medline Company and Deepastambha for completing Solar water pump system project. Considering the need of current situation, this project is going to help us achieving our goal of conservation of an environment

Mr. Pandurang Bhujbal

”





6. REFERENCES

External expertise

- Solar power - Sun Tech India – Mr. Shubham Kaushik

Mobile app / website used

Other references

- Reference raters - Government of India Ministry of New & Renewable Energy





Deepastambha Charitable Trust

Chinar Apartment, 2nd floor, Jagannath Tarte Marg, Erandwane, Off Karve Road,
Pune, Maharashtra 411004.

Contact: +91 9970704444 / 020 25461144

Email: info@deepastambha.com
www.deepastambha.com