



MAHAURJA

PRAKRUTI

Mono Wheel Genset

Give light to ignite hope for knowledge
and life



About us

- PRAKRUTI - A charity and society of members registered in 1988 promoting Environmentally viable society based on
 1. Natural living & Sustainable agriculture
 2. Energy and natural resource conservation & utilization
 3. Solid & liquid waste recycling/reutilization
 4. ***Ashram Shalas (AS) & Rural Centers***



PRAKRUTI'S VISION FOR RURAL MAHARASHTRA

- Providing level-playing field to students of Ashram Shalas (AS) as well as Rural areas
- Pilot Project → illuminating 50 Ashram Shalas → Rural Maharashtra
- Cost-effective + efficient + beneficial exercise → fun and entertainment



Sustainable Energy Generation

- Think → Renewable energy → solar wind (restricted thinking)
- Ignoring VITAL sources → Animal & Human energy generation
- Example → Mono wheel generators
- Also → Cycles with minor modifications useful for water pumping, spraying, filtration, veg cutting, etc for agriculture and other uses
- Swing irrigation pump



Ashram Shalas (AS)

- Located in remote areas, AS suffer maximum power outages. Thus these children don't have a ***level-playing field***..
- To ensure equal opportunity with the Metropolitan Students the Mono Wheel Genset has been conceived.
- The gen capacity needs to be improved by design modifications and Vigyan Ashram located in Rural Poona Dist has started the work.

Rural Students, Youths & Elders

- Provision of a reading room cum library and multi-purpose hall under each Gram Panchayat
- To power this an exercise cycle can be provided
- With four hours peddling 300w-hrs will be generated and 20 LEDs will illuminate the hall for 5 hours. Each LED will give sufficient light for reading over a small area of 10ft x 10ft
- This set up will cost about Rs. 16000 including luminaires if sourced in bulk



Inspecting the Genset (Old Model)





Advantages of Mono Wheel Genset

- Low cost, low space requiring tool for illuminating AS, using human energy.
- Provides sports → each student paddles for 15/20 minutes; no fatigue but exercise & fun
- Uses health giving human energy.
- Good for AS with large co-ed students strength – low cost and assured lighting.
- Charging possible at any time of day/night & during monsoon.



Cycle Genset with battery below





ECONOMIC FEASIBILITY

- 2 Cycles per AS → 50 AS = 100 Cycles
- Each AS to have One Hundred 24-LED luminars consuming 2.3W each → 300W (including distribution losses)
- Current cost at retail level → Rs. 13,000/-
- 24-LED Cost at retail level → Rs. 500/-
- For fifty sets, total cost in bulk, estimated at Rs. 25 lakhs (100 cycles+ 5000x24 LED luminars+10% spares)



TECHNICAL FEASIBILITY

- 75/80W per hour of paddling
- Two bikes per AS
- 10 hours paddling by teams of 100 students per day
- Generating $750 \times 2 = 1500$ w-hrs
- Thus availability 300 w-hr for 5 hrs



Meter & Dynamo/Alternator





MTC Veg Cutter





MTC Mono Wheel Pump





MTC Animal Powered Genset





Future Plans

- Vigyan Ashram (VA) have undertaken work to improve generation to 75/80W
- Guidance taken from **CTARA IITB**
- Dapoli Engineering Company has already produced exercise bike with 75/80W Gen Capacity, modifying CTARA Design for single rider
- Work with Nomadic tribes (Bhatkyas / Vanjaras) for providing power to their caravans



An appeal

- We desire MAHAURJA to adopt this project and we will fully participate
- Our vision to put these bikes in at least 5/6 districts jointly selected and concentrate on the maintenance and utilization of this
- Project Cost includes 2 engineers, assisting AS to oversee uninterrupted utilisation
- 10% spares included in Project Cost
- DPR under preparation



MAHAURJA

THANK YOU

*Thank You Mr. DG,
MAHAURJA, for sparing
your valuable time and
encouraging us to put
this vision into action*



MAHAURJA

Contact Us

<http://www.savebombaycommittee.org>

Kisan Mehta

President

PRAKRUTI

kisansbc@mtnl.net

+91 22 2414 9688

Cell +91 92234 48857

Kanu Kamdar

Hon Dir Soft Energy

PRAKRUTI

kanukamdar@gmail.com

+91 22 2415 7892

+91 98219 99401