

Global Sustainable Energy Vision 2050–Southern perspective

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Global Sustainable Energy Vision 2050 – Southern perspective

Social imperatives:

- ❖ provide all with basic energy needs and
- ❖ allow developing countries to develop, as well as use cheap and affordable energy supply
- ❖ today about 1 billion people rely on traditional cooking with biomass, mainly inside their houses, with no proper ventilation and chimney, causing indoor pollution and health problems
- ❖ the same people have no access to electricity, or electricity is not reliable and/or unaffordable
- ❖ The majority of people without basic energy supply are living in Africa and South Asia



Problems of centralised solutions

- ❖ Power grids are very unreliable in rural areas of many developing countries, days without any power are common,
- ❖ In areas with small power demands, construction costs and transmission losses are high, resulting in a very high real cost of power
- ❖ High costs of connection and use make power unreachable even in many electrified villages
- ❖ LPG & kerosene for cooking leads to dependency on imports and high costs due to high oil prices.

Local, sustainable solutions

- ❖ In many areas there are enough local sources for energy (and is renewable) to provide all with basic energy needs for households and small businesses
- ❖ Renewable energy could provide clean and affordable energy solutions in most rural areas
- ❖ Efficient utilisation of energy is an important part of the solution.
- ❖ The challenges are to disseminate successes, choose the right solutions in each area/village/ family, have availability of micro-funding, build capacities for installations, maintenance etc.

Technical solutions

- ❖ Improved cooking stoves, as part of the integrated solutions with appropriate kitchen facilities to prevent indoor pollution and biomass fuel management
- ❖ Biogas for cooking, and lighting etc.
- ❖ Biomass (Biogas plants and Gasifier) based decentralised power generation (off-grid)
- ❖ Solar cooking
- ❖ Briquetting
- ❖ Solar PV electricity
- ❖ Micro hydro
- ❖ Solar drying
- ❖ -and many other solutions for space heating, transport....



Organisational solutions

- ❖ Self-help groups
- ❖ Micro-financing groups
- ❖ Village cooperatives/societies
- ❖ Private sector involvement
- ❖ Micro-utilities
- ❖ Micro-entrepreneurs
- ❖ Trade associations



Promotion of local, sustainable solutions

- ❖ INFORSE South Asia collected Regional experiences (Bangladesh, India, Nepal, Sri Lanka)
- ❖ Manual to introduce sustainable energy solutions for poverty reduction & choose the right solutions
- ❖ Manual will be published in CD in 5 languages
- ❖ Financial manual on sustainable energy solutions based on Grameen Shakti and others' experiences
- ❖ INFORSE South Asia will undertake national dissemination in 2007 with partners (Grameen Shakti in Bangladesh; INSEDA, AIWC & SDA in India; CRT in Nepal; and IDEA in Sri Lanka)

Agani cook stove in Sri Lanka

AGANI Improved stove promotion in Sri Lanka



Improved cook stoves in Indian villages



Cooking with briquettes made from biomass wastes in Nepal



Different stages of construction of Grameen Bandhu biogas plant

Employment to poor rural women in their own villages in spare time and at their convenience for weaving bamboo structures for building bamboo reinforced Grameen Bandhu biogas model



Animate Energy

Treadle Pump for irrigation- Marginal farmers using this technology for vegetable cultivation can recover the cost in 1-2 years, by selling the produce. Treadle Pump is popular in the eastern part of India, where the water table is less than 25 feet



Cooking with box type and parabolic solar cookers in South Asian Countries



Solar Dryers for vegetable and fruit drying

Domestic Solar Dryer



PV operated community Solar Drying system



Solar Lanterns being promoted in Indian Villages by NGOs

Solar PV Lanterns



Solar PV Irrigation Pump Set in Rural India



Solar PV operated decentralized water purification unit for round the clock drinking supply in non-electrified/uncertain power supply villages

- Being promoted by INSEDA in Indian villages for sustainable drinking water supply for Community.
- 2500 Liters water (removes Bacteria & Virus)/day
- 800-1,000 people get safe drinking water each day



Promotion of Jatropha Curcas for bio-fuel and manure production for sustainable livelihood in villages



Solar PV home power system for lighting and mobile charging in Bangladesh

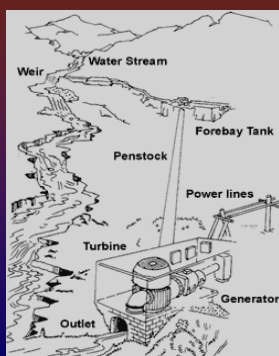


Solar PV Home Lighting System

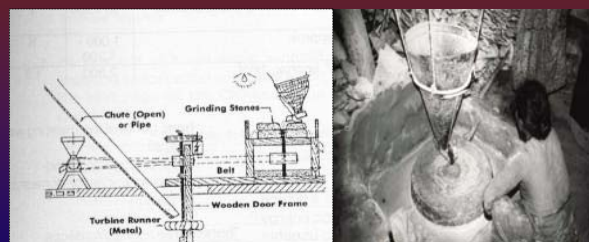
Operates two lights and one DC fan or black and white TV



Micro hydro system in Sri Lanka



Improved Water Mill for Multiple Applications (Operation for Grinding on the right) in Nepal



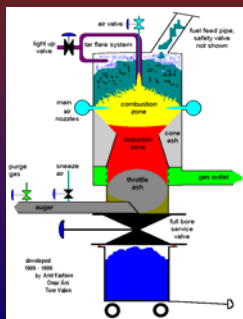
Operation of dual fuel engine on biogas for generating electricity and mechanical operation in a village in Rajasthan, India



Solar PV system for village street lighting and community use



Biomass gasification for village level/ small-size decentralized power generation



Wind Energy for small scale Irrigation and Power Generation

Wind Mill for Irrigation



Small size Wind Generator



THANK YOU

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