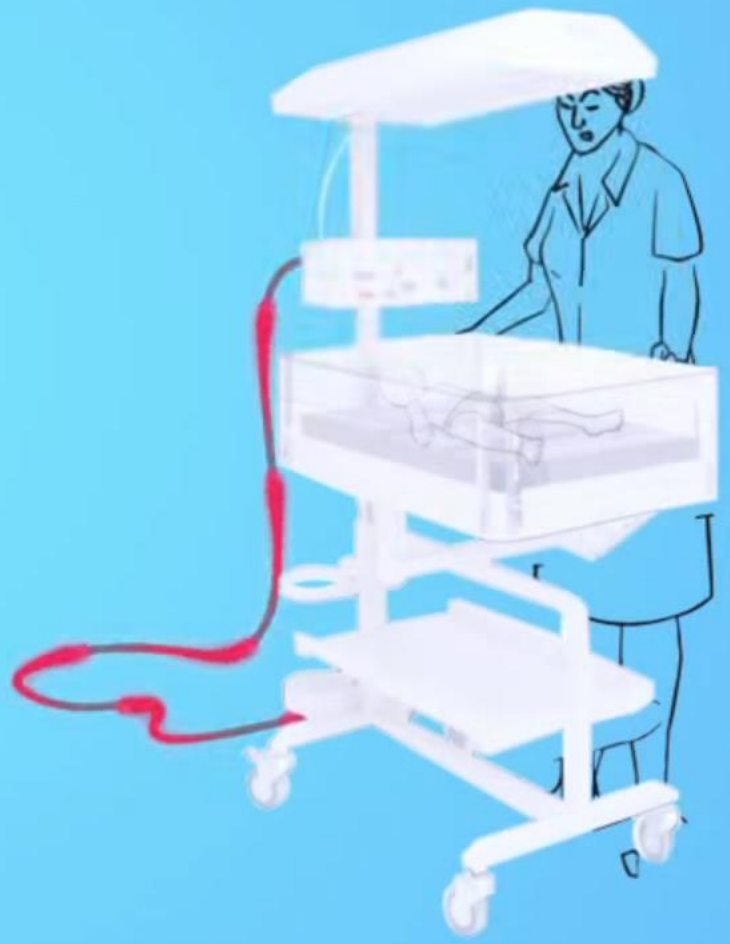
A GE Healthcare & SELCO Foundation initiative

ENERGY EFFICIENT LABOUR ROOMS

ENERGY EFFICIENT-LOW POWER CONSUMPTION

OUR WARMER CONSUMES
ONLY 154W POWER
MAY RESULT IN
CONSIDERABLE SAVINGS

RELIABLE OPERATION DURING ELECTRICAL FLUCTUATIONS



Device is designed to withstand this voltage but may not give expected output outside stated operating voltage range of 230V +/- 10%

Kannur PHC

- the largest PHC in Karnataka
- Serves 65,000, and 11 sub-centers

Challenges prior to installation of Solar power and energy efficient labor room:

- High referral out due to power outage
- Power outage for 2-3 hours/day and more than 24 hours in case of technical issues
- High voltage fluctuation attributing to frequent machine breakdown
- Conducting deliveries with torch or under candle light during wee hours
- Absence of regular servicing for neonatal equipment

	Indian-make devices		GE Lullaby ™	
	Power (W)	Energy (Kw)	Power (W)	Energy (Kw)
Radiant warmer	700	4200	380	2280
Phototherapy machine	270	2160	20	160

Kannur PHC

Clinical impact

~40% reduction in the number of referrals-out

35-40 Deliveries per month

50% Reduction in the number of neonates referred out

>100% increase in average number of low-birth weight babies handled/ month

Commercial impact

100% Reduction in diesel expenses per month towards generator

70% Reduction in the electricity bills

	Pre-execution of Solar power	Post-execution of Solar power	% Savings
	Jun-16 - Nov-16	Jun-17 - Nov-17	
Average Electricity bill (in INR)	2,500	740	70%
Cost of Diesel to run generator (in INR)	500	0	100%

Sittilingi Valley Tribal Health Initiative

- Dharmapuri, Tamil Nadu
- Serves 1 lakh across 250 villages

Challenges prior to installation of Solar power*

- Inadequate voltage ~110V to 120V leading to insufficient heating and warming
- High voltage fluctuation attributing to frequent machine breakdown
- Frequent electricity outage – 2-3 hours every day resulting into delays and anxiety
- Elevated expenses per month towards diesel and generator maintenance – INR 10,000 – INR 15,000
- 3-7 days of downtime in case of equipment breakdown
- 24-48 hours of power cuts during monsoons or technical breakdown
- 3-7 days of downtime in case of equipment breakdown

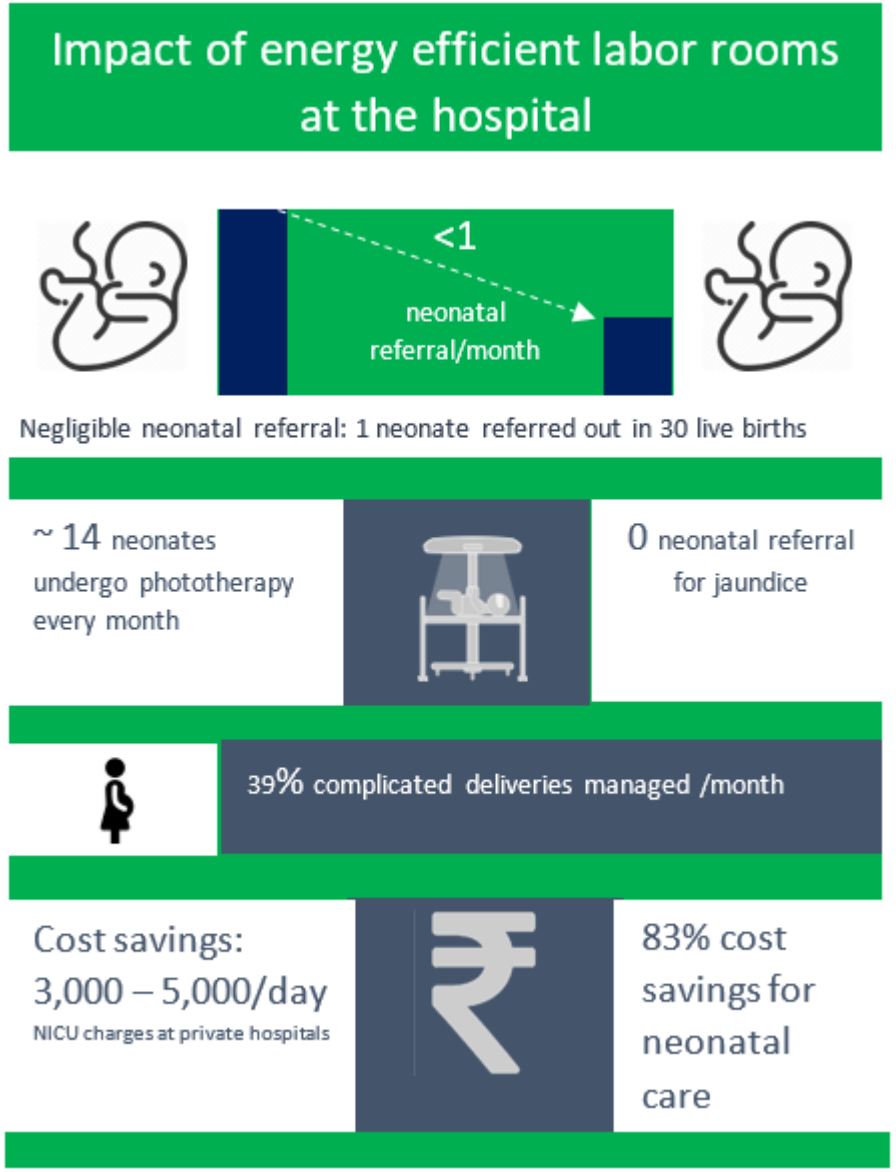
Sittilingi Valley Tribal Health Initiative

- From ~20 now up to 40 deliveries per month

Comparison of expenses before and after installation of energy efficient OT and labor

Expenses per month towards	Prior to inception of energy efficient labor rooms	Post inception of energy efficient labor rooms	% decrease
Electricity	INR 19,500	INR 14,000	28%
Diesel	INR 11,930	INR 8,830	26%
DG Maintenance	INR 5,000	INR 1,000	80%

With the 24/7 energy efficient labor room, we now have continuous power without any fluctuation and can manage pre-term babies effectively. In the last few months, number of babies being delivered at the hospital has increased. Although, one cannot attribute it directly to solar energy, but at least we are now able to cater to the increasing demand effectively…"
Head of nursing



Sittilingi Valley Tribal Health Initiative

Impact of energy efficient labor rooms

Commercial impact

30% reduction in monthly expenses towards diesel

80% reduction in monthly expenditure towards maintenance of generator

>25% reduction in monthly electricity expenses

>15% increase in the number of complicated deliveries

>60% increase in the number of neonatal admissions

100% increase in the number of surgeries being conducted

Operational impact

No power outage and no voltage fluctuations

>45 mins saved in case of power outage