Buildings: Business as usual and low carbon scenario
Architects : <2% of all Buildings
ACE : <2% of the buildings
Buildings now going green < 1.5%

Next 15 years: We build what we built in last 50 years
No precedents for solutions

2 innovations in 200 years
Building the Zero Energy Way
Geysers

- synthetic fertilizers or pesticides
- chemicals for treating water
- HCFC CFC or ODS
- toxic paints
Bricks, clay blocks, clay tiles, ceramic tiles, forest timber, incandescent lamps, waste exported, municipal water imported.
LEDs, solar based or hybrids for external lights

Only composites shallow aquifers
as a regular building
save 50% on energy bills
T-Zed: 92 Homes

Embodied CO$_2$ Reduction:
20,000 tons CO$_2$
26,500 tons for Conventional Homes Vs 6253 tons for T-Zed Homes

Operating CO$_2$ Reduction:
1260 tons per annum
1862 tons for Conventional Homes Vs 602 tons for T-Zed Homes
Basement retaining wall

Energy Saved
24,000 GJ

Reduction in Co2 Emission
7,000 T
External wall

Energy Saved
3,000 GJ

Reduction in CO2 Emission
780 T
Internal Flooring

Energy Saved
2,100 GJ

Reduction in Co2 Emission
600 T
Slab

Energy Saved
200 GJ

Reduction in Co2 Emission
50 T
Pathways

Energy Saved
13, 400 GJ

Reduction in CO2 Emission
3, 750 T
Home lighting

Energy Saved
3, 600 MWh/Yr

Reduction in Co2 Emission
3, 750 T/Yr
Zed Collective: 72 Homes

Embodied CO$_2$ Reduction: 1450 tons CO$_2$

4464 tons for Conventional Homes Vs 3015 tons for Zed Collective Homes

Operating CO$_2$ Reduction: 885 tons per annum

1370 tons for Conventional Homes Vs 484 tons for Zed Collective Homes
Zed Woods: 60 Homes

Embodied CO$_2$ Reduction:
1520 tons CO$_2$
4771 tons for Conventional Homes Vs
5255 tons for Zed Woods Homes

Operating CO$_2$ Reduction:
473 tons CO$_2$/annum
740 tons for Conventional Homes Vs
265 tons for Zed Woods Homes
ZedEarth: 156 Stand alone Homes

Embodied CO$_2$ Reduction:
6994 tons CO$_2$
17,264 tons for Conventional Homes Vs 10,270 tons for Zed Earth Homes

Operating CO$_2$ Reduction:
3773 tons CO$_2$/annum
5685 tons for Conventional Homes Vs 1912 tons for Zed Earth Homes
Carbon Sequestration

Number of seed balls distributed so far: 4.5 million

Carbon sequestration by trees (last 10 years): 7.2 Million tons.

Carbon emission reduction [10 years]: 60,000 t.


Note: Per tree CO$_2$ sequestration ranges from 10-16 kg/CO$_2$e/year
Urban Farming - reaching out to 2000 households in Bangalore
Free of riverbed sand cement construction water curing

Special pre-polymerised bonding adhesive
45 blocks/day of blockwork

Vs

20 blocks/day of conventional concrete

Engineered masonry blocks
The Zed atmospheric water generator
Converts water vapor into potable water
Zed vertical wind mast
Generates electricity using wind power
Zed compact water treatment plants processes waste water to give clean water.
Zed offers energy-efficient ACs in Portable and split formats at 0.8 to 2 tons capacity.
FUEL CELL

A zero-pollution, compact, electricity generating unit, using active fuel sources of Hydrogen and Ethanol.
COST ANATOMY
- Project Cost Terms

Concrete: 8.92%
Steel: 11.42%
Frame: 10.71%
Labour: 1.78%
Blocks for Walls: 7.14%
Floor: 5.71%
Joinery: 2.86%
Sanitary Fittings: 3.57%
Plastering: 1.07%
Paints: 1.43%
STP: 0.43%
Electrical: 8.92%
PHE: 9.28%
H A/C: 14.28%
Labour: 5.35%
Metal Works: 5.35%
Glass: 7.14%
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