



**LED Lights in main entrance**

# Public Building

## Institutional Setting

- Underpinned by Chapter 2 of the Constitution of the Republic of South Africa, 1996, Section, 24 (iii) states that, “secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development”.
- Provincial Energy Efficient Policy
- Guided by BCMC Climate Change Strategy & Energy Audit ?
- Driven by demand and needs of citizens







20kW Grid Tied ABB Inverter

# Starting Point

## Challenge :

- Load shedding, Safety of citizens and income generation of the municipality
- Requirements of the Provincial Energy Efficient Policy to a least provide 5% energy through re-newable energy
- Issue: Inconvenient for citizens, impacts on safety of citizens, theft of electricity, citizens installing renewables outside the municipality guidelines, impact on grid
- Problem to be addressed: Reduce Energy inefficiency at the Beacon Bay Electricity Building(Educational demonstration)





20kW Solar Panels

# Approach

Choose a public building that could be easily monitored, and documented; reduce the energy usage, increase information and education and improve skills and capacities.

## Tools:

Installation of different renewable and energy saving equipment such as Solar Panels, a miniature wind turbine, hybrid air-conditioner units & solar geyser and rain water storage.

Introduction of technological solutions to monitor energy usage, and energy saving.

Training of internal staff and developing informational and educational material to communicate with internal and external stakeholders and also to change behaviour.



# Outputs

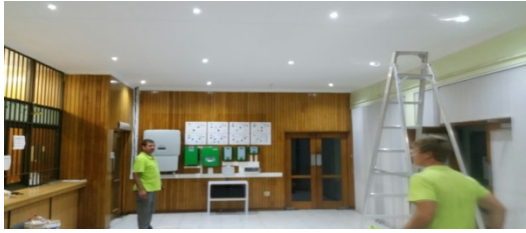
## Results:

- Training of electrical staff
  - Increase knowledge on renewable energy solutions
  - Reduction in energy consumption of the building,
  - Provide a learning and teaching environment for schools and other learning institutions
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- Outcomes:
  - Electricity Building less reliant on single supplier.
  - System provide excess energy which is fed onto the grid
  - Cost effective solution for the municipality as it reduces energy cost
  - of the building.

150 Litre Solar Geyser

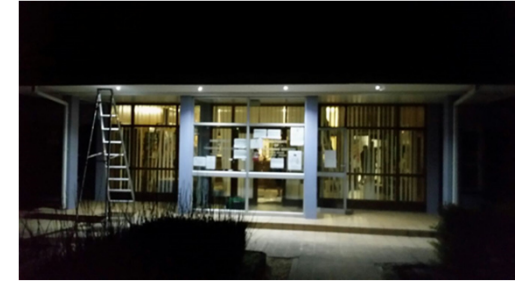






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# Lessons



## Sustainability:

Municipality is considering the long term introduction of renewable energy solutions to all public buildings, including producing clean energy through waste management, sanitation, water, solar and wind.

## Main Lessons Learnt

- Change in mind set
- Need for internal buy-in, Eg; Challenge on electrical consumption
- Options of various technologies available





Real-time measurement values will be available online

## Follow-up

- How to proceed with further energy efficient and renewable energy projects.
- Continue training of consumers and staff
- Partnership with other entities that are like minded

## Thank You!

- **Buffalo City Metropolitan Municipality want to lead by example and show private and commercial customers what is available and that Going Green WORKS!**