Joburg

a world class African city

Danida R15 million: Johannesburg implementation

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Outline of presentation

1. The Johannesburg context
2. The approach of the City of Joburg to R15 million interventions
3. R15 million interventions: an overview
4. Cosmo City case study: carbon savings, lessons learnt and challenges
5. Way forward

The Johannesburg context

- Backlog of access to services increasing at estimated 7% per year due to growing demand - despite extending services
- Settlements located on the periphery of the city have recorded the highest rates of population growth, unemployment and poverty levels (City of Johannesburg, 2004)
- 20% of inhabitants not located in formal housing (City of Johannesburg, 2005)

The approach: Integrated urban environmental management

- Uplifting communities = while at the same time mitigating climate change
- Tackling energy and water poverty by reducing electricity and water costs = by offering more energy and water efficient alternatives
- Creating sustainable and livable human settlements

R15 million interventions

- **Cosmo City:** Promoting poverty-oriented climate change ‘proofing’ in low-income urban community
- **Basa njengo Magogo:** Reducing domestic fuel burning emissions
- **Provincial working sessions:** Determining a municipal response to climate change, in line with the National Climate Change Response

Cosmo City context

- R350 billion mixed use inclusionary housing development
- Emerged out of urgent need to accommodate informal residents of Zevenfontein and Riverbend
- Covers an area of approx 1100 hectares,+/- 200 ha zoned for open spaces and conservation
- 40 km northwest of central Joburg
- Approx 3400 low-income houses have been occupied to date – target 5000
- Environmentally sensitive area: river system, a ridge and relatively undisturbed grassland
- Residents undergo environmental training prior to relocation to Cosmo

Project design

- Experimental pilot
- Low-income context
- Integrated initiatives concentrated in specific areas
- Baseline and monitoring to measure impacts of the project, energy/water savings and thermal efficiency improvements
- Ongoing awareness raising/capacity building

Cosmo City project

- ‘Climate proofing’ of approx 350 low-income houses:
  - Improving thermal efficiency
  - Promoting water conservation practices
  - Decreasing energy consumption

Planned initiatives

- Installing ceiling insulation
- Providing rainwater harvesting tanks, guttering and water flow reducers for taps
- Installing 150L Solar Water Heaters and CFLs
- Planting indigenous trees, shrubs and grass on each stand

Annual carbon offset

Intervention	Annual offset per home (tCO_2)	Total annual offset (tCO_2): 350 homes
150L Solar Water Heater	1.4	490
CFL bulbs (3 per household)	0.20	70
Ceiling insulation	0.75	262.5
Total	**2.35**	**822.5**

Site selection criteria

- Visibility for awareness and promotion
- Concentrating initiatives for integrated impact
- Easily administered, maintained and monitored

Progress to date

- Undertaken a qualitative survey to determine energy and water use behaviour
- Met with local councillors and community representatives
- Initiated coordination of efforts between key implementing municipal agencies of the City (eg Johannesburg City Parks)

Current energy use and water heating practices

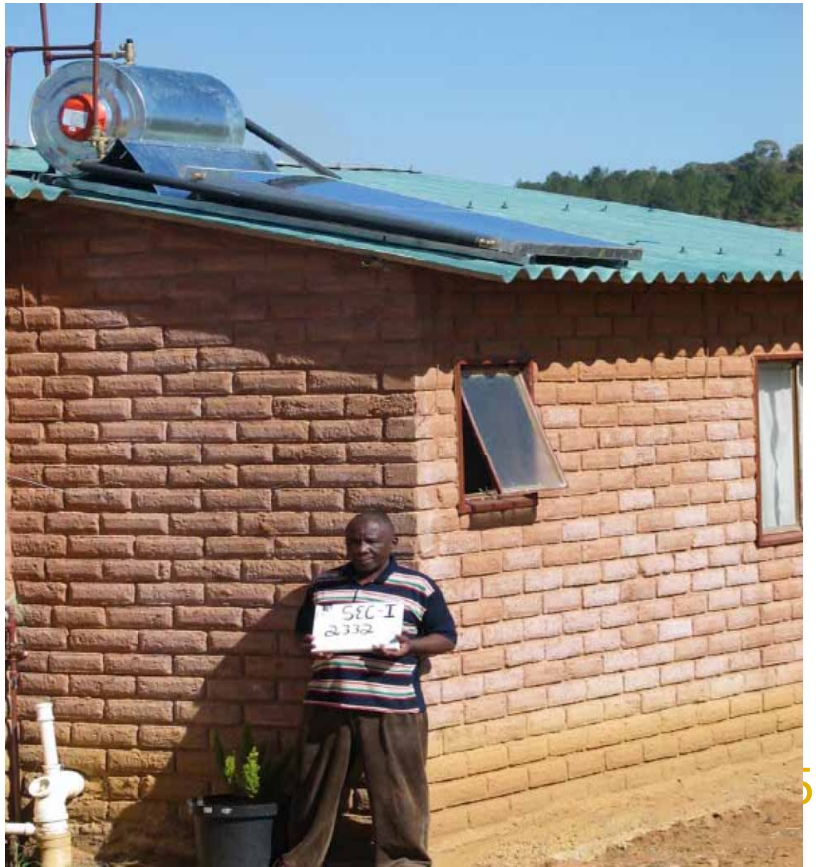
- No electric geysers
- No ceilings
- Each unit: 36m2
- Electrified, incandescent light bulbs
- Pre paid water and electrical meters
- Preliminary qualitative survey indicates that the majority of people heat water using two-plate stoves and electric kettles, and heat indoor spaces with electric heaters (mainly two-bar)

Job creation and awareness building

- Using local labour for all interventions for the full duration of the project
- Training of community members: 10 residents will undergo 6 weeks formal training on plumbing and SWH installation, paid for by the City
- Setting up of a residential coordinating committee for the project to maintain the technology, monitor problems and communicate with the City
- Holding workshops on the technologies
- Situating the project in a larger-scale and more comprehensive ongoing awareness-raising effort at Cosmo on environmental sustainability through CBOs, NGOs and community leaders

Challenges and lessons learnt

- Selection criteria for recipients
- Meeting growing community expectations in the context of a rapidly expanding housing development
- Potential resistance to new technology
- Quality of RDP homes
- Maintenance and costs of SWHs
- Supply chain procedures



Way forward

- Clarification of selection criteria with community
- Ongoing interaction and awareness building in the community
- Comprehensive monitoring and evaluation of the project to determine acceptance of technologies
- Continually promoting the economic and environmental benefits of technologies
- Establishing stronger links with South African SWH suppliers

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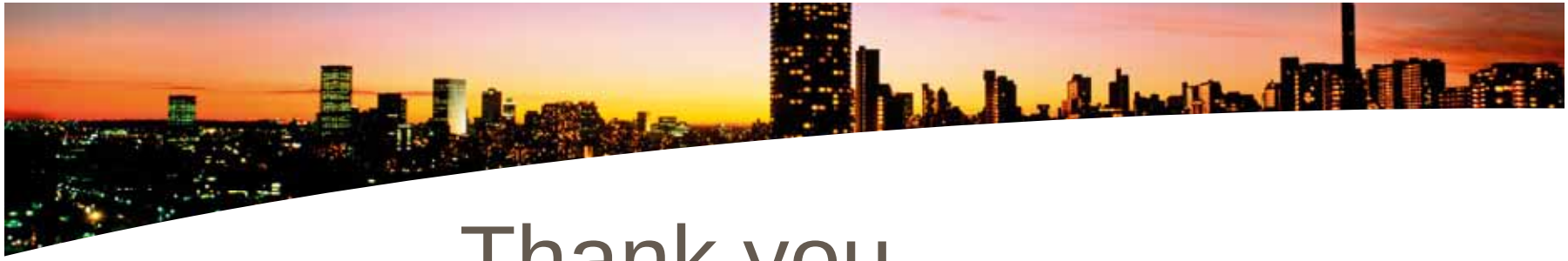

Thank you

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