Green Buildings Challenge

Challenge Statement

According to the UNEP, a green economy is defined as one that leads to improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.

The City of Tshwane seeks innovative solutions to assist it with addressing challenges related to the greening of buildings within the City.

Background

A green building is designed to maximise and demonstrate energy efficiency and to meet green specifications with respect to:

- Lighting (e.g. the maximisation of natural light sources, compact fluorescent lights, individual switching, movement sensors, etc.);
- Reduction of water consumption as compared to the conventional buildings of similar size.
- Efficient Staff Movement (e.g. reduced reliance on lifts, coherent accommodation of interrelated sections, etc.); and
- Indoor/Internal Climate control (e.g. increased passive climate control and reduced reliance on mechanical air conditioning or centralized air conditioning system with customised control for each office/area)
- Urban greening (e.g. indoor planting, roof gardens, etc.);
- Environment friendly building materials, finishes, furniture and equipment (i.e. no poisonous paints or adhesives, no energy inefficient appliances, no exotic hardwoods, no toxic laminates, etc.);
- Efficient resource use – (e.g. reduction of paper use etc.)
- Ergonomic and 'worker-friendly' work spaces.
- Solar generated power for the facility.
- Strategically located to cater for commuting mass transport, promote fuel efficient transport & cycling facilities.

The City of Tshwane is seeking innovative solutions to of key green building elements in building in the city as listed above. Further to this the City of

Tshwane seeks innovative solutions to increase self compliance by developers of the green building regulations and standards that would not present additional financial load on the city.

Sand mining is a growing activity in many regions in the city with a number of operations conducting illegal activities to supply the building industry. This is in direct contravention of the green buildings objectives on environmentally friendly building materials and efficient resource utilisation. Illegal sand mining results in sever environmental damage and is not sustainable in the long term. The City of Tshwane seeks solutions on alternative approaches to reduce the illegal sand mining activities within selected communities.

Key attributes of preferred solutions

- Financially achievable – solutions must be capable of self-sustaining or within reasonable cost parameters when compared to current options available to the City.
- Community enhancing – solutions that provide positive impact to communities currently affected by these challenges or provide opportunities for communities to effect their own solutions are preferred.
- Job creating – solutions that create employment opportunities with emphasis on designated groups are preferred.
- Environmentally neutral – solutions must not negative affect the environment within the city.
- Limited scope – challenge areas discussed are broad and preference will be given to solutions that are focused and can be implemented within a limited and manageable scope.
- Process or product – the solution can be a product or process that will contribute to addressing the any of the challenges listed above.
- Collaborative – solutions that enable other stakeholders such as communities or private entities to contribute to addressing the challenges above are preferred.