

The financial case for 'green' affordable housing

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The swelling momentum in the affordable housing market in South Africa is evidence of robust growth in an otherwise largely flat residential sector.

For 2016, the Banking Association of SA calculated the upper-income limit of the 'affordable housing' market as R20 800 per month.¹ This segment is served by housing in the range of R300 000–R600 000. In the past year, affordable housing prices have risen by close to 10 percent, effortlessly outdoing the rest of the property market (with the exception of middle-priced houses in Cape Town). Similarly, in mid-2015, attractive income yields led to an affordable-housings portfolio comprising the first residential-only REIT to be listed on the JSE.

The supply shortfall is also likely to persist, says Simon Bray, CEO of Private Property. "There is huge pent-up demand in the market and we have a lot of people that need homes. The housing backlog now stands at 2,1 million units, as calculated by the Department of Human Settlements."²

The sustainability imperative

The affordable housing market has its own challenges. A particular concern is the provision of *sustainable* units. Delivering housing units at attractive prices is central to expanding access to 'quality' accommodation. However, sustainable design and construction is often associated with additional upfront capital costs related to insulation, solar water heaters, and flow restrictors. This 'green premium' is more easily absorbed in high-end housing, where consumers have substantial equity or ready access to credit. By contrast, limited savings and ability to access mortgage financing in emerging middle-income families drives a preference for cheaper, conventional residences.

In return for the higher capital outlay, green features result in significantly lower operating costs through savings in electricity and water bills, typically more than offsetting the initial premium and so delivering lower lifecycle costs. The benefit is especially significant in the affordable-housing segment, where utility costs can easily consume 5-10% of net household income. Green technologies are also often cheaper to

¹ BASA. (2016) Financial sector code affordable housing standards 2016 Available online: <http://www.banking.org.za/docs/default-source/market-conduct-division/affordable-housing-standards3729095f6907679b8066ff0000aa6d08.pdf?status=Temp&sfvrsn=0.5112680997203607%20>

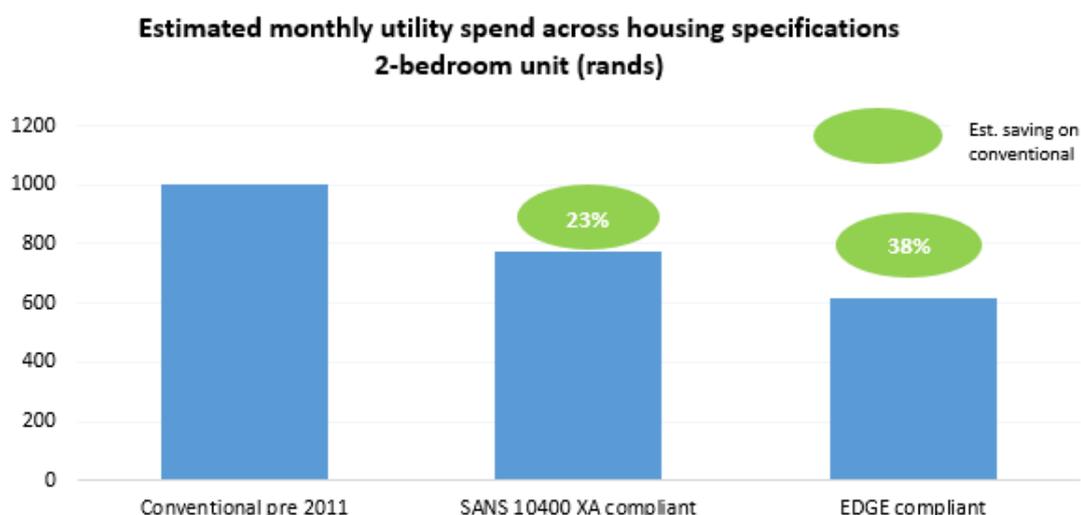
² Mary R Tomlinson, IRR. (2015) Why can't we clear the housing backlog? [Online] Available from: <http://www.politicsweb.co.za/news-and-analysis/why-cant-we-clear-the-housing-backlog--irr> [Accessed: 19 May 2016].

maintain than conventional ones,³ so further reducing the total cost of ownership. Rather than being an unaffordable luxury, environmental sustainability is thus able to contribute meaningfully to financial security for households in the emerging middle class.

The Green Building Council of South Africa (GBCSA) recently launched a certification for residential buildings, based on an internationally applied tool built by the International Finance Corporation (IFC) called EDGE (Excellence in Design for Greater Efficiencies). Achieving EDGE compliance requires that the design of a unit demonstrates a 20% saving in each of three categories – energy, water and embodied energy – over and above regulatory requirements (including compliance with energy-efficiency regulation SANS 10400-XA).

Considering a typical 2-bed affordable home occupied by a family of four, a conventional unit constructed pre-2011 may have a monthly utility bill of approximately R1000.⁴ A similar unit built

to SANS 10400-XA regulation offers a significant saving of R225 to its occupants from energy efficient measures. The same unit built to EGDE specifications today can save a family an additional R155, with average utility spend estimated at R620.⁵



Source: Own analysis

The potential financial savings associated with occupying efficient housing will rise further as Eskom tariffs increase. Other benefits include lower carbon emissions and enhanced resident comfort (and possibly health, if fossil fuels are used for heating), thereby giving expression to the triple bottom line.

The business case for going 'green'

There are many international examples demonstrating tangible value for developers, buyers and financiers of green homes alike.

In Portland, USA, a study revealed that existing homes with a third-party certification for sustainability and energy efficiency sold for 30 percent more than homes without such a certification in the year 2010 to 2011.

³ For example, an LED downlight may last for more than 10 years, compared with halogens which are replaced annually.

⁴ Based on a consumption estimate of 600 kWh electricity at an average of R1,50/kWh plus R100 for water.

⁵ 20 percent saving on electricity and water.

Higher sales prices (8 percent on average) were also noted for newly built houses with a sustainability certification.⁶ Similarly, a UK study shows that houses with better energy-performance ratings sell at higher prices and that the price premium increases by up to 14% as performance improves.⁷

Utility savings can be substantial. In a recent case study of energy-efficient affordable housing in Virginia USA, results reveal that an average family of four saves \$54 per month on their electricity bill in an energy-efficient affordable home. Energy usage was also lower than expected, at approximately 30 percent less than standard homes.⁸

A 2013 study by the Institute of Market Transformation examining actual loan performance data of about 71 000 energy-efficient (Energy Star rated) and non-energy-efficient home mortgages in the USA, indicates that default risks are on average 32 percent lower in energy-efficient homes, controlling other loan determinants.⁹ This means that green mortgages¹⁰ are better bets for banks, too.

Proof points are not limited to the first world. In Mexico, more than 900 000 green mortgages have been issued to low-income households under the Hipoteca Verde programme, with utility savings realized by homeowners more than offsetting the additional loan instalment.¹¹

The greening of affordable housing in South Africa is a logical step that needs to be taken. However, making this ideal a reality requires convincing an array of developers, financiers, customers and partners to see the world through new eyes and thus create a new market.

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⁶ PR Newswire. (2011) Certified Homes Outperform Non-Certified Homes for Fourth Year in Portland Metro Region. [Online] Available from: <http://www.prnewswire.com/news-releases/certified-homes-outperform-non-certified-homes-for-fourth-year-in-portland-metro-region-123477939.html> [Accessed: 28 May 2016].

⁷ GOV. UK. (2013) An investigation of the effect of EPC ratings on house prices. [Online] Available from: <https://www.gov.uk/government/publications/an-investigation-of-the-effect-of-epc-ratings-on-house-prices> [Accessed: 28 May 2016].

⁸ Affordable Housing Finance. (2015) Study: Energy-Efficient Affordable Housing Pays Off in Virginia. [Online] Available from: http://www.housingfinance.com/management-operations/study-energy-efficient-affordable-housing-pays-off-in-virginia_o [Accessed: 27th May 2016].

⁹ Institute for Market Transformation. (2013) Home Energy Efficiency and Mortgage Risks. [Online]

Available from:

http://www.imt.org/uploads/resources/files/IMT_UNC_HomeEEMortgageRisksfinal.pdf [Accessed: 28th May 2016].

¹⁰ An energy efficient mortgage (EEM) (or "green mortgage") is a loan product that allows borrowers to reduce their utility bill costs by allowing them to finance the cost of incorporating energy-efficient features into a new housing purchase, or the refinancing of existing housing. Source: https://en.wikipedia.org/wiki/Energy_efficient_mortgage, accessed 4 July 2016 **Energy efficient mortgage - Wikipedia, the free encyclopaedia.** https://en.wikipedia.org/wiki/Energy_efficient_mortgage

¹¹ Building and Social Housing Foundation. (2012) Green Mortgage. [Online] Available from: <https://www.bshf.org/world-habitat-awards/winners-and-finalists/green-mortgage/> [Accessed: 28 May 2016]