

ABSTRACT

South Africa's electricity demand, over exceeds its' supply capability; this in-turn affects a myriad of developmental factors namely: economic growth, business growth prospects, property development, the environment, as well as society as a whole. The traditional (fossil fuel generated) centralized electricity production model, has proven to be insufficient in terms of production capability as well as infrastructure expansion. This has in-turn presented an opportunity for real estate (more specifically listed regional and super-regional retail real estate) to capture a niche gap in the electricity generation market, that of becoming: decentralized renewable electricity generating production plants, that can become self-sufficient and sustainable, while plugging excess electricity back into the national electricity grid; these would in-turn form a network of individual power plants, that can contribute towards the national electricity grid through a smart-grid system, regulated by Nersa and monitored by Eskom.

Structured interviews with industry professionals were captured through audio-recordings; the conversations were then author transcribed through pattern emergence as an interpretation tool, analyzed, and the findings documented in this research report. The major findings illustrated that: there were sufficient incentives from the government that promoted electricity generating real estate; feed-in tariffs were being explored within certain municipalities; within the listed property sector, portfolio greenness was becoming more and more important in commercial property development as well as portfolio sustainability; and technological price-parity had been reached within South Africa (meaning that the justification for utilizing the conventional electricity extractive development strategy, rather than the renewable electricity generating strategy, could no-longer be used as an excuse, due to both methods working out to relatively the same costs overall). Key recommendations where that: the self-sufficiency and electricity generation drive should come mainly from tenants, who could then place pressure on the landlords, who would then begin developing in a generation focused way rather than a cost-saving and low cost method; municipalities needed to look at other revenue generating schemes, as an intervention such as this one would see a possible loss of revenue due to a smart-grid system; and developers needed to begin thinking outside of the box, and creating wealth not only in monetary terms, but also in sustainability terms.

It was concluded that, as much as this intervention could work in the long-run, it would face a few immediate challenges in the short to medium run, namely: grid connection approval, IPP (Independent power producer) approval, the challenges of shopping mall design with a huge dependence on HVAC / mechanical ventilation which uses tremendous amounts of electricity, as well as the electricity consumption of a regional & super regional retail centre almost being on par with the potential electricity that could be produced. With all that having been mentioned, this intervention would be a five to ten year development strategy that could be worked towards, and would create a new benchmark for listed commercial regional & super-regional retail developments within Gauteng.