AMEU Convention

Sub-theme: *Solving Old Business Problems with Different and Newer Solutions (Marketing, Customer Service, Planning, Construction, Maintenance)*

Creating the utility of the future through innovative public engagement in the City of Cape Town

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1. Introduction

Our current energy landscape is shifting, both globally and in South Africa, to a decentralised, unbundled and market-driven system. Increasingly customers are moving away from being passive electricity consumers, to becoming more active participants in energy markets through implementing energy efficiency and renewable energy technologies, demanding reliable green power and becoming "prosumers" through small-scale embedded generation (SSEG). This transition is driven in part by the falling costs of new, low-carbon technologies and rising utilities prices, but also by the global push to reduce greenhouse gas emissions and avoid the most catastrophic effects of climate change. Recent extreme climatic events in the Western Cape like the 2015-2018 drought as well as the increasing frequency and threat of wild fires, most notably in April 2021, are stark reminders of the reality of climate change and the need to cut carbon emissions and build a city that is resilient to the impacts of climate change.

The City of Cape Town has joined this global effort through its commitment to reach carbon neutrality by 2050; to ensure a climate resilient and energy secure future. In order for a utility to succeed in this future landscape, many of these shifts require the education and engagement of its customers and the wider public as well as a more transparent exchange of information. In the same way that a future energy grid will operate with a two-way flow of electricity between a municipality and its customers, so too must there be a similar exchange of information, data and learnings.

The City of Cape Town has already begun the process of engaging with and educating the public regarding the crucial role they play in achieving this future. This is being carried out through work such as the *Let's ACT* climate change action and awareness campaign, the Cape Town Future Energy Festival, the SSEG registration drive and the Building Centre and My Clean Green Home exhibits. These innovative marketing and awareness programmes enable the City to improve customer service through educating and engaging with residents and businesses, and create the buy-in needed to establish a utility of the future.

2. Background

The creation of the Sustainable Energy Markets (SEM) department, in the City of Cape Town's Energy and Climate Change Directorate, was a direct response to our changing energy landscape. Since 2017, SEM has been working towards energy security and diversification of the City's energy supply through using cleaner and more sustainable sources, as well as driving innovation across the sector. In order to achieve these goals, key focus areas of the department include embedded generation, alternative energy access solutions particularly for low-income households, electricity wheeling, procurement from independent power producers (IPPs), a net zero carbon built environment and shaping the role the City will play in a future energy system and market.

2.1. Understanding our audience

Previous experiences and research findings have indicated a clear need for communications campaigns aimed at educating residents on issues such as climate change, renewable energy and sustainable living. For instance, starting from 2015, the city saw an increase in the number of small-scale embedded generation (SSEG) installations such as rooftop solar PV, however most of these were not authorised by the City due to the lack of public understanding of the need for registration or knowledge of the approval process. This lead to the SSEG registration drive.

In addition, the City undertook a climate change perception study in 2020 to explore the level of understanding and concern that Cape Town residents have about climate change, determine who is considered a credible messenger on information surrounding climate change, as well as what factors contribute to behaviour changes towards mitigation efforts. Findings from the study indicate that levels of awareness and knowledge of climate change vary greatly, depending on factors such as age, demographic and socio-economic circumstances; suggesting that communication needs to be tailored by audience. It also found that Capetonians' experiences of the drought and the COVID-19 pandemic have heightened their awareness of how quickly our lives are impacted by external circumstances such as impacts of climate change related issues. These experiences of crises could be a springboard for introducing communication around climate change. The study also indicated that the biggest motivators for implementing lifestyle changes are saving money and convenience. The concept that small actions driving large changes resonated with the study sample, suggesting that this idea could be used as a key approach in communications around climate change.

3. Engagement Campaigns

These learnings, in addition to the emerging energy landscape, have informed the City's communications strategy going forward. The department has already rolled out a number of projects aimed at educating the public on the importance of

sustainability and energy efficiency as well as the crucial role they can play in achieving a sustainable, energy secure future:

3.1. SSEG Registration Drive

SSEG, particularly privately owned rooftop solar PV, is seen by the City as a key pathway to achieving its goals of carbon neutrality and of diversifying its energy supply. The City is therefore committed to facilitating the uptake of SSEG while ensuring that these systems are safe, legal and do not threaten the integrity of the electricity grid.

Since the City became the first municipality in South Africa to introduce SSEG guidelines and allow for grid-tied systems with bi-directional metering and a feed-in tariff in 2014, there has been a dramatic increase in the number of installations across Cape Town. However, many of these installations were not being registered for approval with the City as per the by-law due to a lack of public understanding of the need for registration or the risks that unregistered PV systems could pose to both people and the electricity grid. The City therefore initiated a communication campaign to raise awareness on the importance of SSEG registration, and encourage residents to apply for approval of their systems. This ran from June 2018 to June 2019, during which time the City saw a 350% increase in the number of applications for SSEG registrations, as shown in Figure 1 below. This increase indicates the success of the campaign, as well as the impact that such an initiative can have on residents' behaviour. It also shows the long-term positive impact even after the end of the campaign, evident in the sustained growth in approved installations shown in Figure 2. However, there still remains a large number of unauthorised, illegal systems within Cape Town, indicating that this is an area of work which needs to be consistently addressed. There is ongoing work including streamlining of the registration process, engagements with installers, updates to key informational documentation as well as social and mainstream media placements.

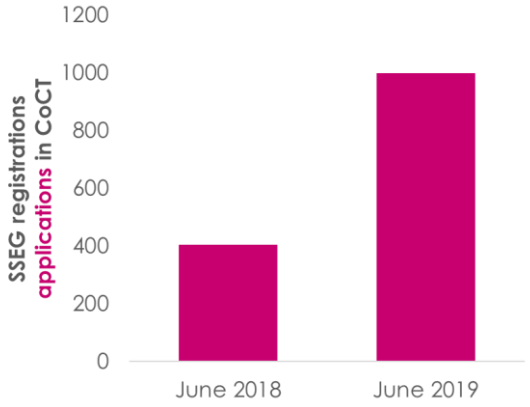

Figure 1: Applications for small-scale embedded generation (SSEG) applications received by the City of Cape Town saw a 350% increase during the registration drive and awareness campaign.

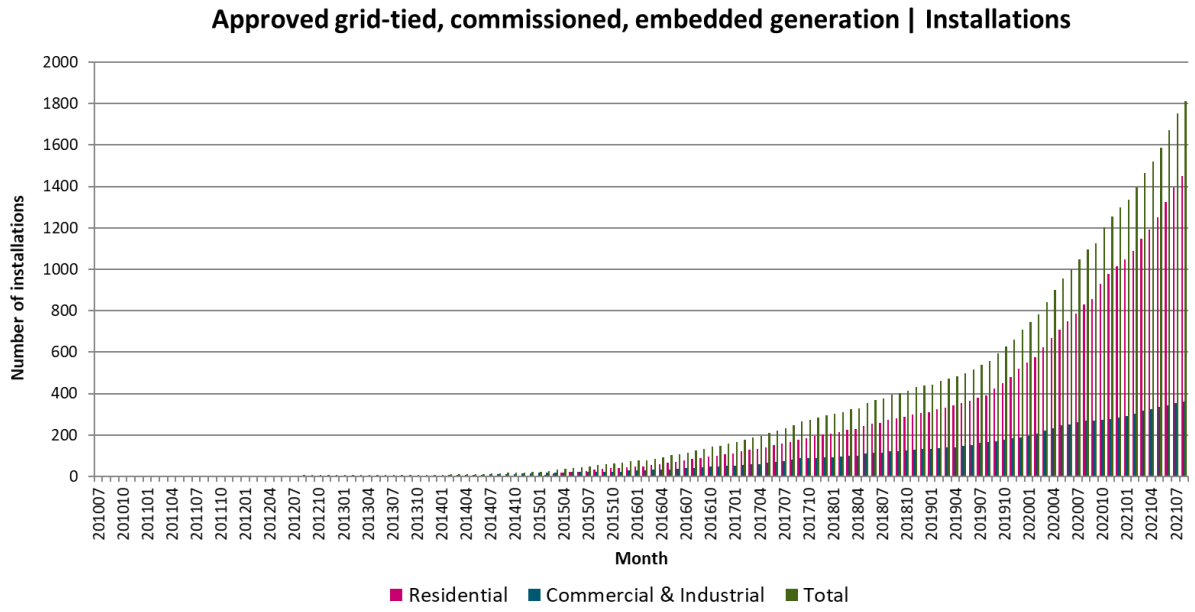

Figure 2: The increase in the number of approved, grid-tied SSEG installations in both the residential and commercial sectors across the City of Cape Town from July 2010 to July 2021.

3.2. Let's ACT. For a stronger Cape Town

Guided by the findings of the climate change perception study, in March 2021 the City launched its new climate change communications campaign – *Let's ACT. For a stronger Cape Town*. The campaign will act as the umbrella campaign for all the City's projects and communications in support of the Carbon Neutral 2050 Commitment, with the aim of enabling and supporting both residents and businesses to take action for a stronger, healthier city, resilient to a future changing climate. Initial media placements, which include videos, media releases, social media and mainstream media, have focused on educating Capetonians on what climate change is and the opportunities we have in our own lives to make a difference. Much of the City's future climate change and sustainability communications programmes will fall under this 'banner', including the recently launched Climate Change Action Plan. This Plan acts as the City's roadmap to achieve the ambitious goals set out in the Climate Change Strategy, and details specific programmes of action, projects and future operating guidelines, each of which will be communicated through *Let's ACT*.

3.3. Cape Town Future Energy Festival

Achieving the City's climate change and energy goals will rely on wide-scale behaviour changes and buy-in from residents, driven by education and awareness campaigns like *Let's ACT*. Another such initiative was the Cape Town Future Energy Festival, which ran throughout 2020 and into 2021 as a series of mainly virtual events. The Festival aimed to highlight to residents the benefits of smart choices around resource efficiency; and to spark conversations about Cape Town's future energy

landscape. These sometimes complex concepts were communicated through a diverse range of events using virtual platforms and catering to both businesses and individuals, young and old. Events held during the Festival included the following:

- **Future Energy Conversations:** A series of conversations that brought together thought leaders to discuss the tough questions around energy, climate change and sustainability. The series was targeted at those who want to develop a deeper understanding about the challenges and opportunities associated with the ambitious targets of meeting carbon neutrality by 2050 and provided a platform for people to share inspiring case studies.
- **Smart City Kids**: An edutainment series of virtual multi-media shows aimed to educate children aged 4 to 8 on key environmental issues such as energy, waste, water, transport, food and protecting biodiversity.
- **Smart Living Quiz Night:** A fun and informative live, virtual quiz for residents to test their knowledge of sustainable practices in their homes, while also offering practical tips for resource and cost saving.
- **My Clean Green Home:** An exhibit of a net zero carbon home designed to demonstrate to the public sustainable design principles, technologies and behaviours, as well as show that net zero carbon houses are feasible, accessible and can be achieved by residents of Cape Town.
- **Watt's in the Pot?** A virtual cooking show that aimed to highlight the importance of energy efficiency in the kitchen.

Each of these events brought awareness to the public around the pressing issues of energy, sustainability and climate change, while highlighting their role in becoming part of the solutions. The Smart Living Quiz, Watt's in the Pott? and My Clean Green Home events provide practical and attainable measures people can take with measurable benefits such as cost savings. The Festival allowed the City to showcase innovations and businesses which are leading the way in sustainable energy, and to share the good news stories of the hard work that is underway in its own operations. Public awareness on these issues is important in creating a social landscape where policies and facilitation mechanisms introduced by the City to advance sustainability goals will be more readily accepted. Over the course of its run, the Festival was able to reach an extensive audience through its various online and social media channels, as shown in Figure 3. This was enabled through the use of multi-media platforms, active social media and engaging content.

Summary	
Estimated Total Festival Reach	
Website sessions	9488
Facebook reach (combined paid and organic)	701247
Twitter Impressions	97909
LinkedIn Impressions	12323
Instagram reach	6021
YouTube Impressions	20400
My Clean Green Home physical visitors	2522
My Clean Green Home virtual visitors	4435
Mainstream media MCGH	542502
TOTAL REACH	**1396847**

Figure 3: Summary showing the estimated total reach for the duration of the Festival through its various platforms.

3.4. Engaging on Net Zero Carbon Buildings

The built environment offers significant opportunities to improve climate resilience and decrease emissions. In Cape Town, residential and commercial buildings account for approximately 24% of energy consumption and are responsible for the largest proportion of carbon emissions (approximately 42%) due to the high carbon intensity of South African electricity. (*City of Cape Town* Greenhouse *Gas Inventory, 2018 data year*). Therefore, in line with its carbon neutrality by 2050 commitment, the City has set the goal that all new buildings be carbon neutral by 2030, which will expand to cover all buildings by 2050. Achieving these goals will require a fundamental shift in thinking and understanding around how buildings are designed and operate – from energy and water efficiency, to embedded generation, material use and building design elements – as well as the education and buy-in of the public to choose better buildings and to drive these changes in their own homes.

To highlight the importance of energy efficiency and moving towards net zero carbon homes, the City hosts a display at The Building Centre, Northgate Estate, which is targeted at home-owners, designers, architects and other industry professionals. The City's exhibit, which has recently been redesigned as part of the *Let's ACT* campaign, is used to showcase what measures can be implemented in residential or commercial buildings and renovation projects to contribute to achieving net zero carbon buildings. Visitors will gain information on clean energy options, energy efficiency measures as well as efficient design and operation of buildings.

Another project which seeks to educate and engage the public around net zero carbon buildings and sustainable living is My Clean Green Home. Originally part of the Cape Town Future Energy Festival, the My Clean Green Home exhibit is a net zero carbon model home, designed to demonstrate to the public sustainable design principles, technologies and behaviours, as well as show that net zero carbon houses

are feasible, accessible and can be achieved by residents of Cape Town now. The exhibit was opened for a series of pop-up events across Cape Town so that members of the public could tour the Home and experience for themselves the features that contribute to a net zero carbon home. A virtual walkthrough was also developed to reach a wider audience, which also includes an energy calculator for visitors to estimate the energy efficiency of their own homes. So far, the Home has attracted around 3 000 visitors who have been able to experience the exhibition and learn about how they can contribute to the City's net zero carbon targets through their own actions. Additionally, there were almost 5 000 visitors to the website for a virtual tour of the Home, as of April 2021.

3.5. Energy Water Waste Forum

To promote resource efficiency in the commercial sector, the Energy Water Waste Forum has been a platform for sharing practical knowledge and support for businesses that operate within Cape Town since 2009. The commercial sector consumes a significant portion of the city's energy and as such, is a key target in the drive to reduce carbon emissions in the city. The Forum invites large and small property owners, large corporates, managing agents, facility managers, sustainability managers and other related service providers to share knowledge, learn more about sustainable operations and understand changes to the regulatory landscape. Sessions seek to inspire members to action with case studies of successful implementation of resource saving measures, discussions on ambitious targets by leading players and learning more about how regulations, municipal mechanisms and industry associations can support the shift towards sustainable business practices.

4. Looking forward

While the successes of these projects are evident in their outcomes, there are still hurdles to overcome for the City to continue expanding and refining the way it communicates and engages with residents. Cape Town, like the rest of South Africa, encompasses a diverse range of residents, businesses and consumers. Shaping its messaging and ensuring that the messages reach the right audience is an ongoing challenge, and in many cases, the municipality may not always be the best entity to deliver messages that encourage behaviour change. This challenge highlights the importance of building partnerships and engaging with key stakeholders who may be better suited to deliver the City's messages, which is an important component of the *Let's ACT* campaign. These stakeholders could be community groups, religious organisations, schools and educational groups, leaders and elders within communities. The focus then shifts to how the City can best support these partners in relaying messages or content.

As the level of government the public most commonly interacts with, municipalities often endure much of the criticism about service delivery, policies and regulations or by-laws. For instance, on the SSEG application and registration process, the City has received critiques ranging from the pace of approvals, to the tariff structure, to the

need for regulation at all. The challenge municipalities therefore face, is striking a balance between providing the necessary information and creating an enabling environment, while maintaining service delivery within the bounds of the regulatory framework. Slow-moving, bureaucratic municipal processes can also be cumbersome in the fast-paced environments of both communications and technology, which can cause current communication efforts or regulatory frameworks to seem outdated or ill-fitted to the reality on the ground.

5. Conclusion

The transition to a new energy future depends on the education, engagement and buy-in from the customer. To remain viable, local government utilities need to explore and establish alternative business models, as well as change how they interface with their customers. The City of Cape Town is striving to create a utility of the future through its innovative public awareness and engagement campaigns, while continually learning and adapting our communications process as the new energy landscape emerges.