



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

City of Cape Town's SSEG approval optimisation: simplified application, less red tape, quicker uptake

Mary Haw | 13 Nov 2025 | SSA Regional EG workshop

Making progress possible. **Together.**

City of Cape Town's solar PV journey... so far

- The History
- The Challenges
- What we did
- How it worked
- What next



Photo credit: Bruce Sutherland

History of SSEG in Cape Town



SSEG REGULATIONS

1st municipality to develop SSEG guidelines in SA



BI-DIRECTIONAL METERING

Grid allows consumers to both **import & export** electricity



AUTOMATED BILLING

Billing system allows customers to **purchase & sell** electricity



SSEG TARIFFS

City created a SSEG tariff to **credit** consumers for excess generation



Black River Parkway was the first official grid-tied system with a capacity of 1.2 MW



Why registration and authorisation is so important

COMPLIANCE WITH THE LAW

Electricity Supply By-Law, 2010 states:

“No generation equipment may be connected to the grid without the express consent of the Director of the Electricity Services Department”

SAFETY

- Staff - To protect maintenance staff from electrical **shocks**
- Customers - property occupants from **fires** and damages
- Businesses – to reduce insurance claims and investment risk

QUALITY OF SUPPLY

To allow the City to provide **safe, high-quality** electricity and avoid metering and billing issues.

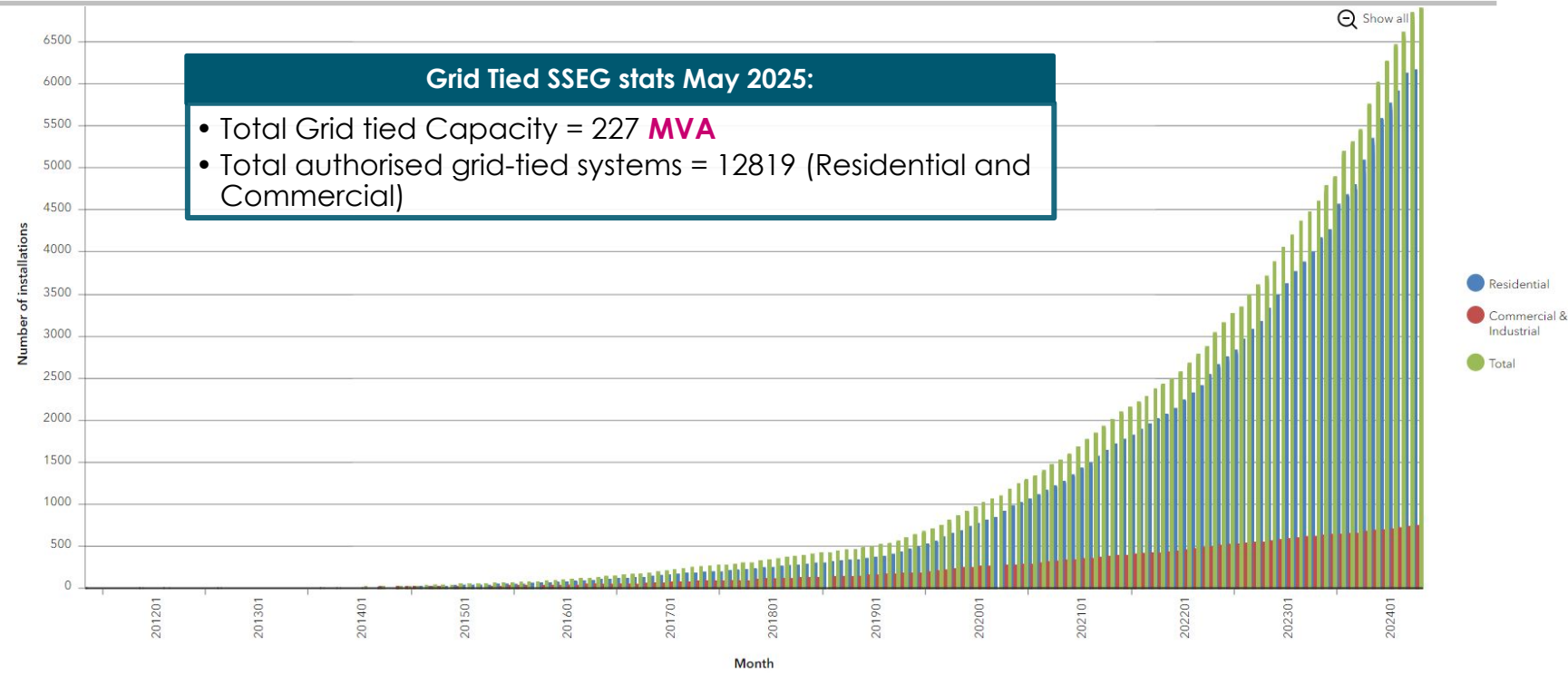
GRID MANAGEMENT

To allow the City to understand electricity usage and adequately maintain and manage the **network**

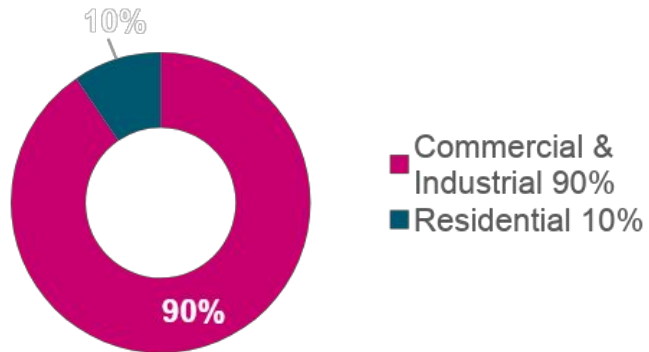


SSEG Growth in Cape Town

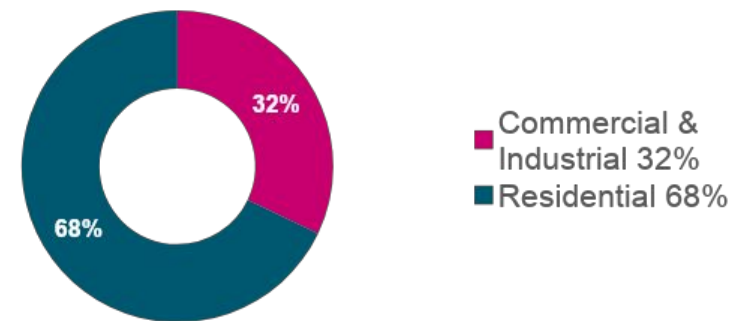
- About **90%** of are from Residential SSEG Customers
- However, Residential Installations only form approx. **10%** of
- Bulk of CCT resources is on the many



SSEG Installed Capacity MVA



SSEG Grid Tied Installations



SSEG Challenges

More unregistered poor quality installations

- Safety risks: electrocution, fires
- Legal and Grid management considerations

Lengthy registration process

- Increased workload and admin burden
- Longer turnaround times

Lower quality applications

- Incorrect paperwork
- Discrepancies between application and installation

Limited quality assurance in the industry



REGISTER YOUR PV SYSTEM

CONNECTING WITHOUT APPROVAL IS ILLEGAL AND DANGEROUS

Illegally connected systems could compromise the safety of your family, our family and the electricity grid.

All new and existing PV systems must be authorised by the City of Cape Town

Go to www.capetown.gov.za/solarPV for registration details and www.saveelectricity.org.za for further information on solar PV

Make yours a safe and legal PV system



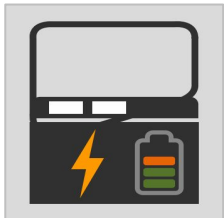
Streamlining SSEG Approvals



Simplified SSEG Types

Changes

- As of 1 October 2023, all Solar PV SSEG Applications are treated as **grid-tied**
- This means **ALL** solar PV and/or battery systems will need to:
 - Use inverters and ancillary equipment that appear on 'City of Cape Town Approved inverter and equipment in terms of NRS 097-2-1' list
 - Be signed off by an ECSA registered person

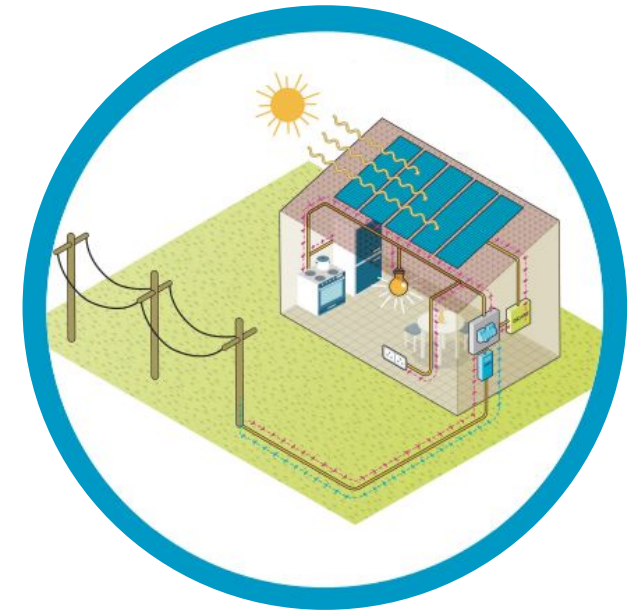


Includes battery-only back-up systems **wired into** your building;

- does not include **commercial UPSs** for clean power (IEC/SANS 62040) or **plug in 'trolley' inverters** without fixed PV.



Excludes diesel/petrol standby generators which must be authorized via Standby Supply (Generator) Application



Going Digital

Energy Services Application System

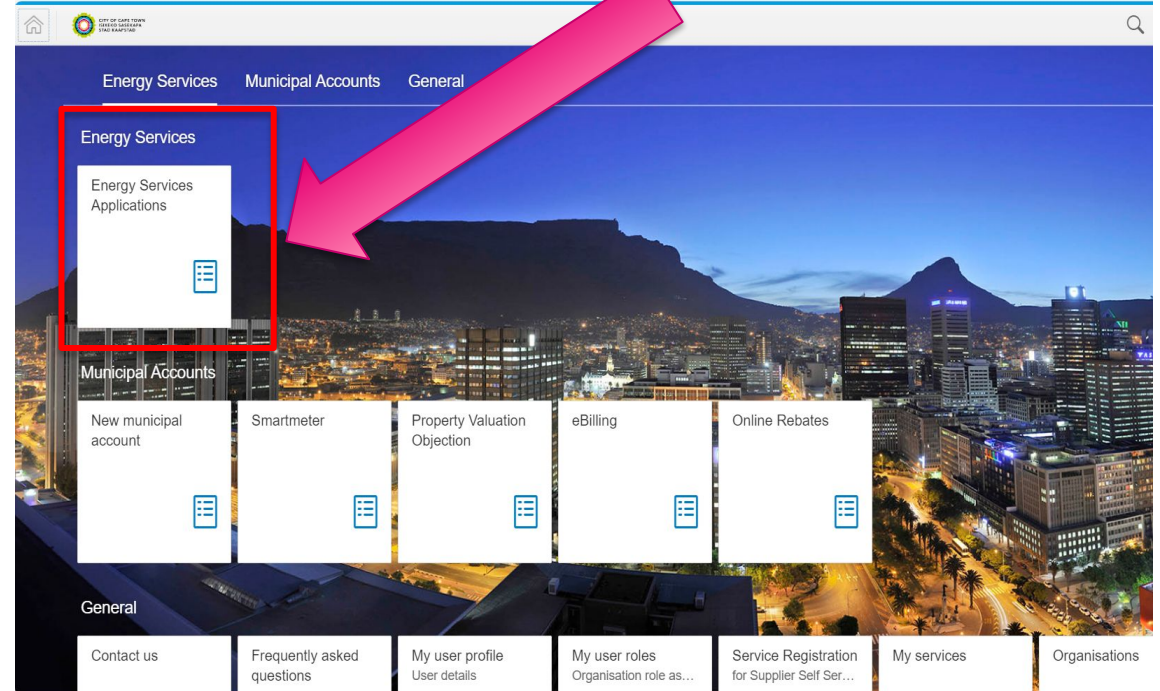
Aim:

Develop a streamlined and simplified online application system to make it easier for customers to register their SSEG systems

How:

- Develop eServices application linked to backend master data
- Standardise and simplify the SSEG Process to automate **Permission to Install** letters
- Registration of service providers (Electricians and ECSA people) so that they are vetted and can authorise via the system.

Click Here



City-approved inverter list process automation

Inverter-approval process was streamlined to improve turn-around time on verification

Online request survey

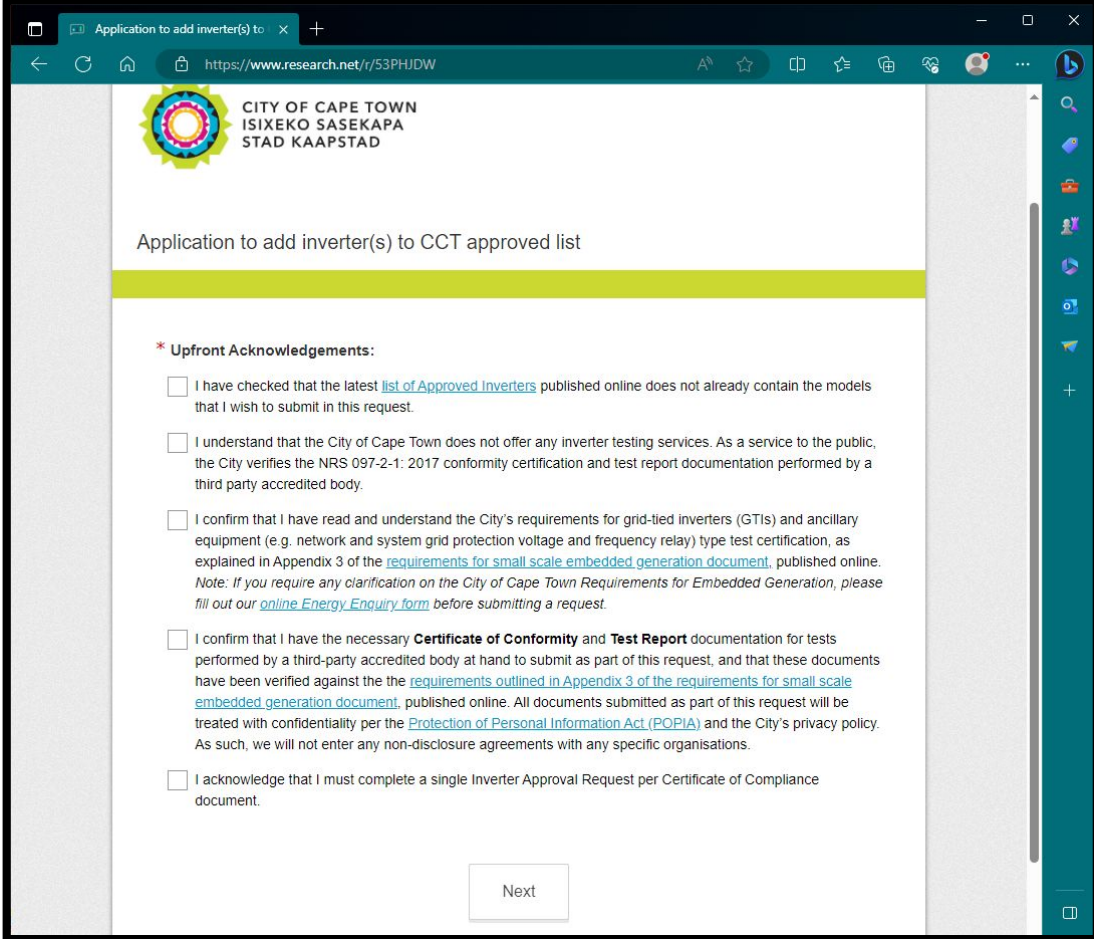
- Ease the process and reduce back and forth email corrections.
- Submission form + attachments are generated into a folder for review

Easier for Staff and Customers

Simplified IEC requirements checks, making it faster to review submissions

Communication

Created a dedicated mailbox with detailed auto-reply thus reducing admin
(inverter.approval@capetown.gov.za)



The screenshot shows a web browser window with the URL <https://www.research.net/r/53PHJDW>. The page header features the City of Cape Town logo and the text "CITY OF CAPE TOWN ISIXEKO SASEKAPA STAD KAAPSTAD". The main heading is "Application to add inverter(s) to CCT approved list". Below this is a section titled "* Upfront Acknowledgements:" with four checkboxes and their corresponding text:

- I have checked that the latest [list of Approved Inverters](#) published online does not already contain the models that I wish to submit in this request.
- I understand that the City of Cape Town does not offer any inverter testing services. As a service to the public, the City verifies the NRS 097-2-1: 2017 conformity certification and test report documentation performed by a third party accredited body.
- I confirm that I have read and understand the City's requirements for grid-tied inverters (GTIs) and ancillary equipment (e.g. network and system grid protection voltage and frequency relay) type test certification, as explained in Appendix 3 of the [requirements for small scale embedded generation document](#), published online. *Note: If you require any clarification on the City of Cape Town Requirements for Embedded Generation, please fill out our [online Energy Enquiry form](#) before submitting a request.*
- I confirm that I have the necessary **Certificate of Conformity** and **Test Report** documentation for tests performed by a third-party accredited body at hand to submit as part of this request, and that these documents have been verified against the [requirements outlined in Appendix 3 of the requirements for small scale embedded generation document](#), published online. All documents submitted as part of this request will be treated with confidentiality per the [Protection of Personal Information Act \(POPIA\)](#) and the City's privacy policy. As such, we will not enter any non-disclosure agreements with any specific organisations.
- I acknowledge that I must complete a single Inverter Approval Request per Certificate of Compliance document.

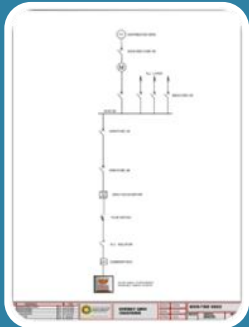
A "Next" button is located at the bottom right of the form.

Technical / Installer Resource Updates



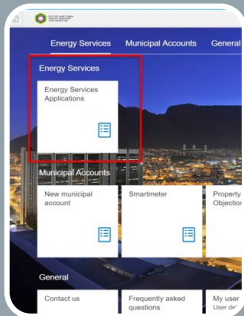
Requirements for SSEG Document

- Simplified SSEG systems and descriptions
- Description/details of systems that do not require registration
- Inverter approval process improvement
- Updated Metering Accommodations
- Detail of Payment of Credits for Export: 'Cash for Power' requirements



Embedded Generation Schematic Drawings Guideline

- Updated Standardised SSEG systems drawings
- Includes new - Battery only grid-tied SSEG option,
- Solar PV geyser drawings



Online SSEG Application

- Standardised and simplify the SSEG Process to automate Permission to Install letters
- Registration of service providers (Electricians and ECSA people) for vetting



Informative / Customer Resource Updates



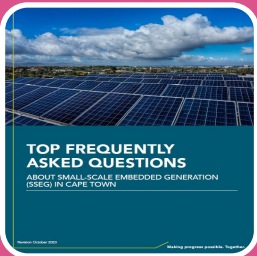
Rooftop Solar PV Guideline

- Guidelines for installers
- Latest drawings and requirements referenced



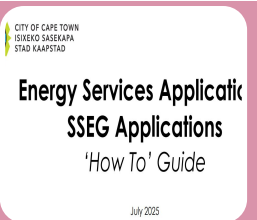
Energy Webpages

- Updated documents all attached documents
- Aligned website titles to be easier to identify for customers
- Issued Notice on SSEG systems standardization and date thereof



Improved our FAQs

- SSEG system configuration option changes (WHY?)
- Authorisation requirement and ECSA sign-off (WHAT?)



'How-to' Guide

- Guide for SSEG-related service providers submit SSEG applications for authorisation
- Updated step by step process for application process for all customers



SSEG Customer Incentives – Cash for Power Initiative

SSEG Feed-in Tariffs

- City buys exported excess generation at 101.23c/kWh (excl. VAT) for residential customers
- City pays an additional incentive tariff of 25.00 c/kWh (excl. VAT)

Municipal Bill Offsets

- Removed Net Consumer Requirement for customers
- Bill Offsets - Now customers **can credit offset against total monthly municipal account**

Cash for Power Initiative

- If some credit remains after the offset, the City will pay the customer
- Process is being streamlined but SCM requirements still applicable



SSEG Customer Incentives

Cheaper Residential AMI Meters

- City released a 40% cheaper Single Phase AMI meter

Reduced Meter Reading Fee

- Also reduced Residential AMI monthly Access Fee
- From R96,20 to R5,22 (excl. VAT)

ENERGY | 8.06.2023

Massive cost cut for home solar power producers in Cape Town — from R96 to R6 per month

By Myles Illidge



New, much cheaper meter to let Capetonians sell their excess power

Lameez Omarjee

news24

Comments

Gift article

Book



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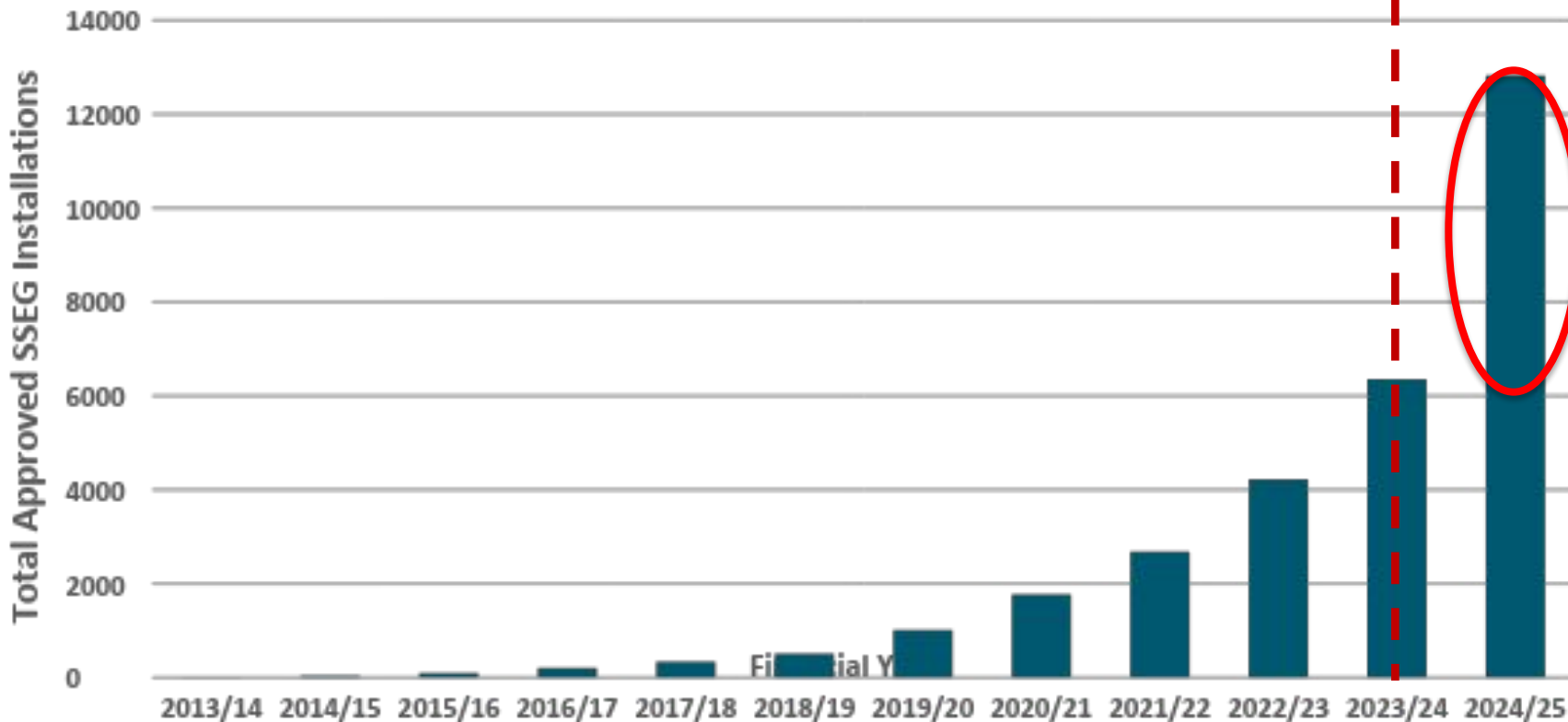


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Outcomes of Streamlining SSEG Approvals

SSEG Installation Approvals Growth

Approved Grid Tied SSEG Installations

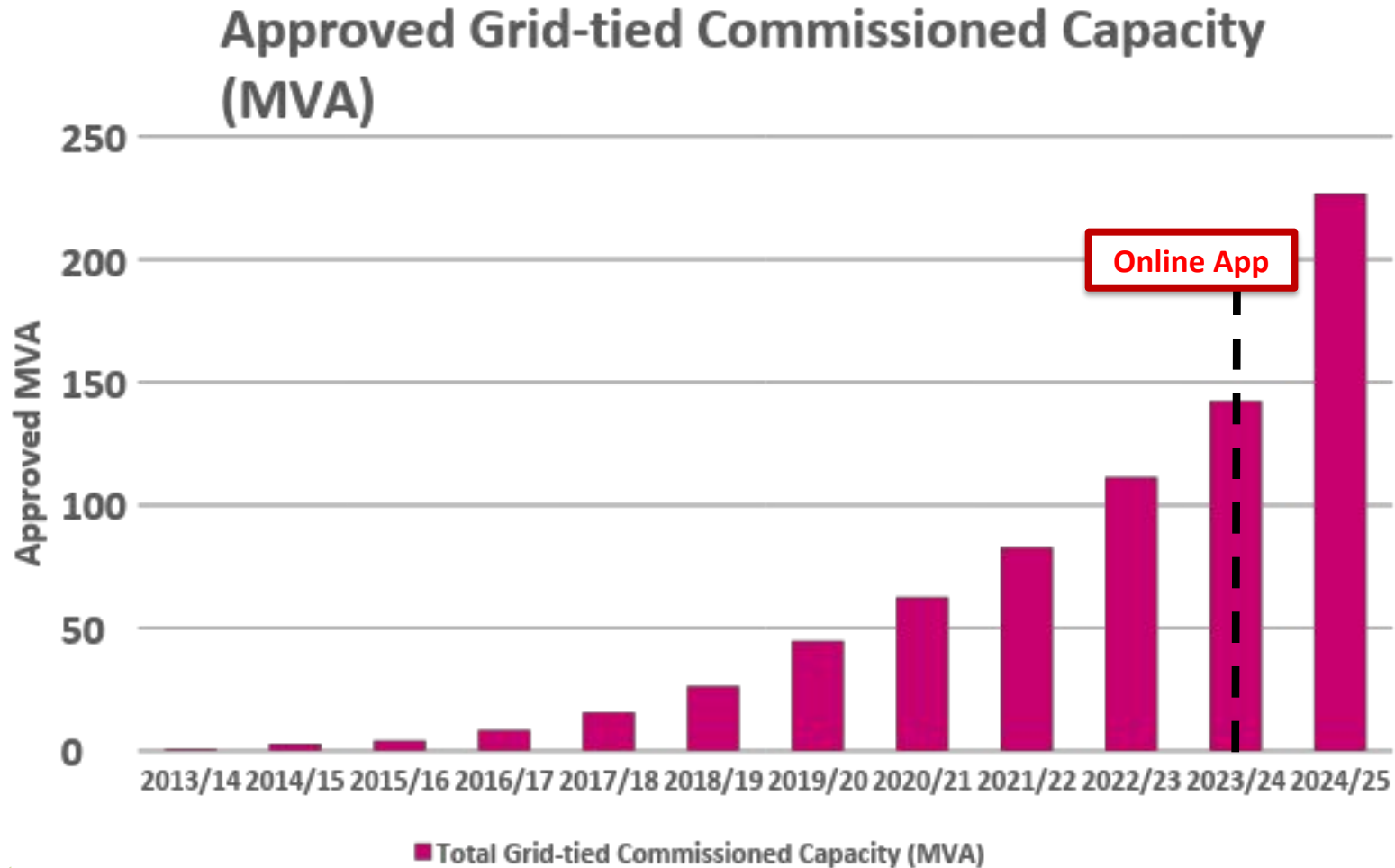


Data Insights

- SSEG App is working
- App launched in Mar 2024
- Since then, the same size team has doubled their SSEG approvals.
- As of 30 May 2025, 12819 Grid Tied SSEG apps have been approved.



SSEG Capacity Growth



Data Insights

- SSEG is growing
- As of May 2025, there is a total of 227MVA Approved Grid Tied SSEG
- This shows roughly a **57% annual** increase in MVA
- Promotes simplified, safe and legal installations

SSEG Application Growth Analysis

- Impact of Online Application System Launch (Mar 2024)

PRE-ONLINE TOTAL

17,777

2012 - Feb 2024

ONLINE ERA TOTAL

11,725

18.5 months

GROWTH RATE

+421%

Annual comparison

MONTHLY AVERAGE

634

Online era

Transformational Results

5.2x

Faster Processing

420%

Volume Increase

29,502

Total Applications

227 MVA

Installed Capacity

Monthly Processing Capacity



Old System
122/month

New System
634/month



SSEG Online System Performance Analysis

- Current application status distribution

Total Applications: 11,725

Application Status Visualisation



■ Commissioning approval issued ■ Waiting on customer ■ Cancelled ■ Waiting on Commissioning report
■ Compliance documents received ■ Busy Processing

Conclusion and Next Steps



Working towards an improved SSEG Process

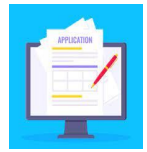
Initial Aim

To develop a streamlined and simplified online application portal/system to make it easier for customers to register their SSEG systems

How we did this



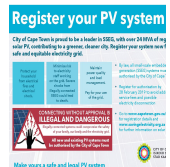
Simplify the SSEG Process



Develop an Online Application Process



Optimise Approvals and documentation



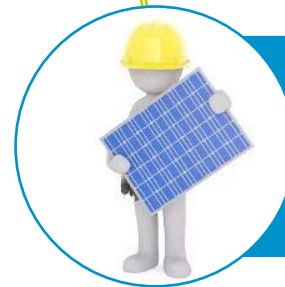
Stakeholder Engagement and Communications



Who Benefits



Improved user experience
Faster turnaround times
Household Load-shedding resilience



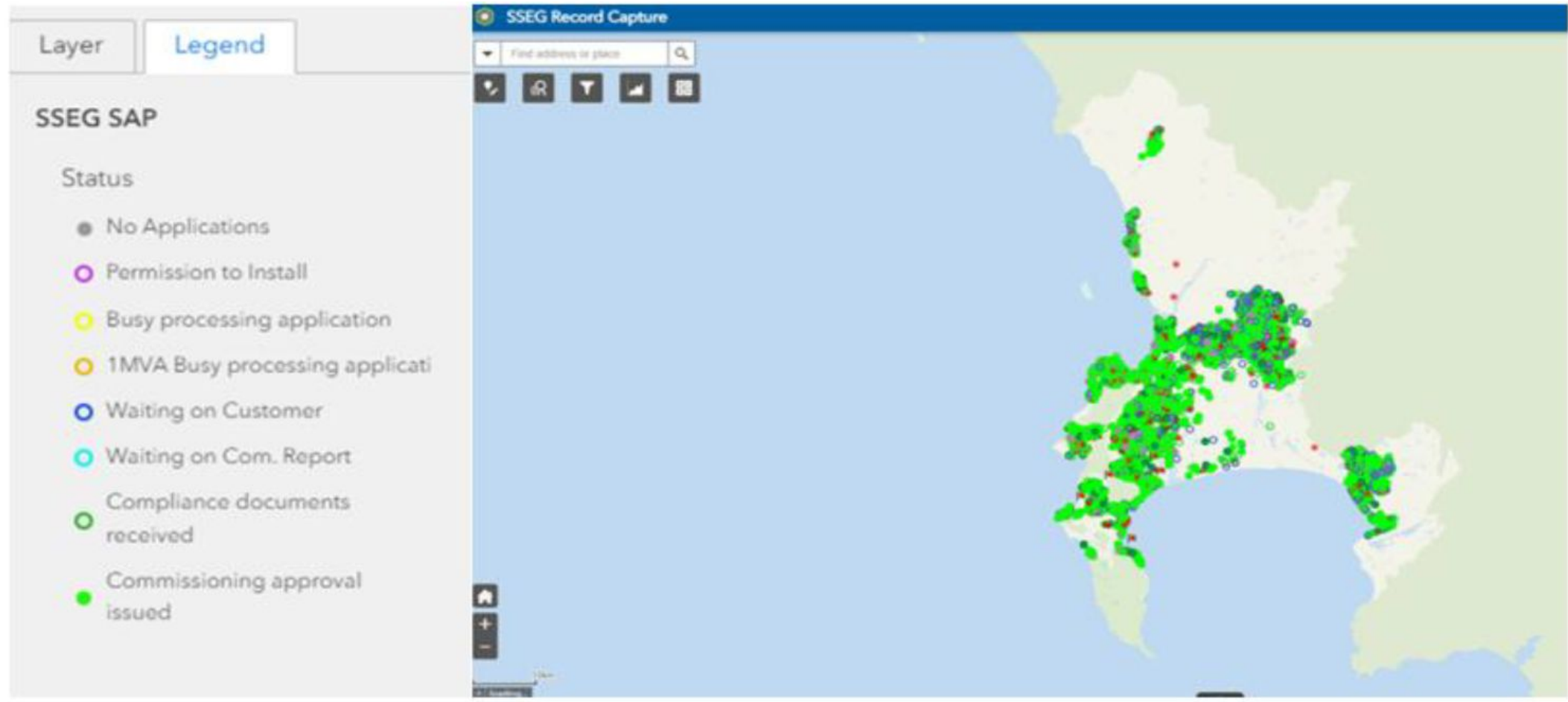
Simplified application process
Faster permission to install approvals
Easier stock and timeline management



Increase in safe and legal SSEG systems
Reduced risk on the distribution network and CCT workers
Lessened admin burden and easier application tracking



Better data



New innovations



Conclusion

SSEG Online App Success

- The Online SSEG app has been a large success
- The City has a total of **227MVA** approved Grid Tied SSEG Capacity Installed
- The Online app has doubled SSEG approvals (total of over 12 000 approved applications to date)
- This is due to automation, a user friendly app and helpful support resources

Current Challenges

- Some customers delay the submission of their final docs for many reasons
 - The installation is in and customers aren't incentivised to do the final step
 - Installer not submitting or delaying the issue of the COCs
- This leads to delays in their SSEG being commissioned (and safely switched on)

Next steps

- Ongoing targeted Comms Campaigns
- Continue to drive compliance





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Thank You

Making progress possible. Together.