



**Western Cape
Government**

BETTER TOGETHER.

ENERGISING THE WESTERN CAPE

Presentation to the Eden Green Energy Summit

11-12 April 2018

Dr Hildegarde Fast
DDG: Energy Security Game Changer, Lead

Focus of the Energy Security Game Changer

Enough power for growth in the Western Cape that is sustainable and low carbon



Roll out of Independent Power Producers (PPP's)
Liquefied Natural Gas (LNG)



Enhanced Load Management

10% reduction in current W Cape demand from Eskom by 2020 generated through alternative low carbon supply & energy efficiency measures



Enhanced uptake of Solar PV



Enhanced uptake of efficient water heaters



Reduced energy consumption in both public and private buildings



Supporting the Uptake of Rooftop Solar PV (SSEG)

SSEG – Small Scale Embedded Generation are systems less than 1MW that generate electricity from wind, solar or biogas.

FOCUS AREAS OF THE GAME CHANGER

MUNICIPALITIES:

- **SSEG Wireframe** adopted by SALGA & AMEU as **standard for munics across SA**
- **Smart Meter Standard approved**, and manufacturers starting to align with its specifications
- **DC Wiring Code** to be completed this year – no more PrEng sign off would be required

FINANCING:

- Increase in **interest by major banks** to offer PV-specific finance
- Other financing models (PACE, PAYs and GIB) being explored

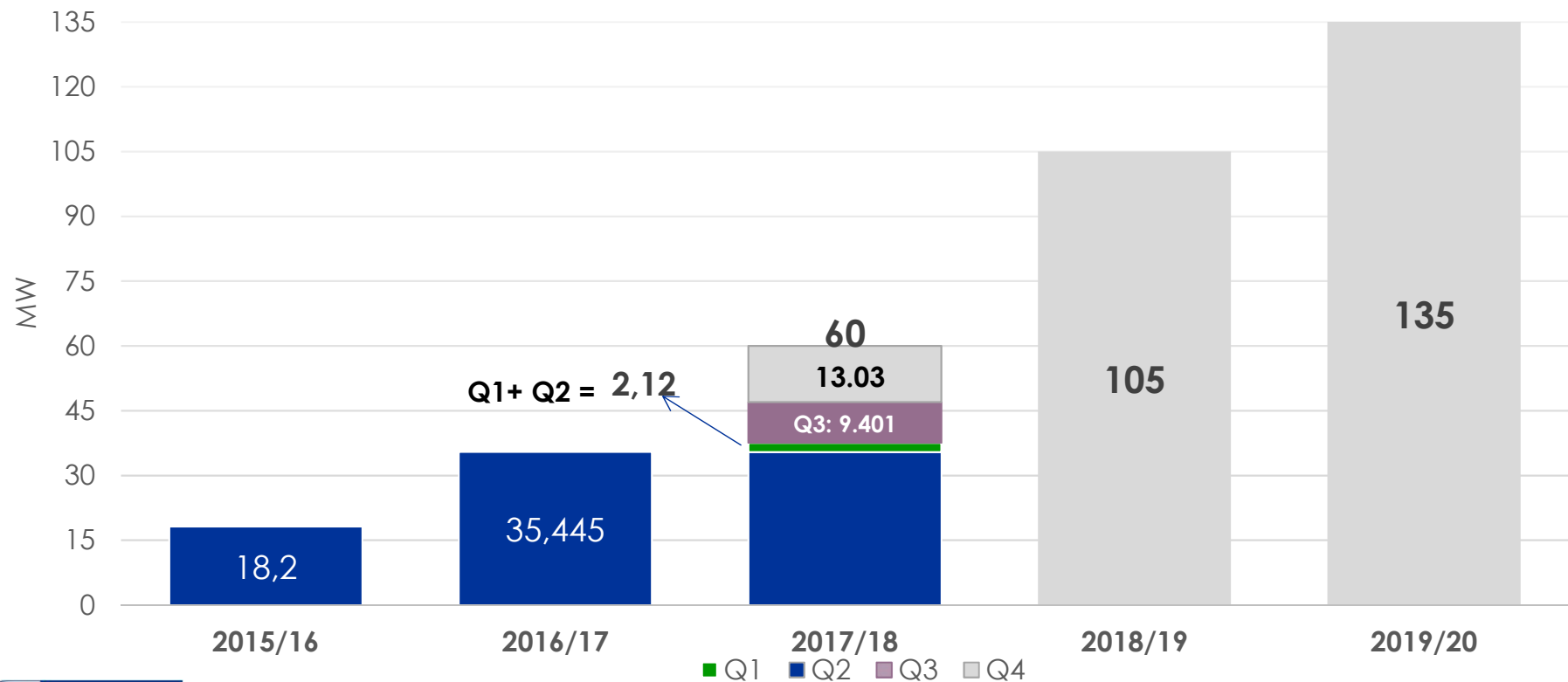
SKILLS DEVELOPMENT:

- Competency test for PV installers offered at various institutions to **improve quality of installations**
- PV Technician Curriculum approved by QCTO
- **PV Green Card** – installers accredited by SAPVIA to ensure quality installations

DEMAND CREATION:

-  **21 businesses engaged** as part of CEO PV Programme with **10 committing** to conduct feasibility for PV installations
- **Customer awareness through communication campaigns**

Installed Rooftop PV Capacity in WC: 47 MW at Dec 17



SSEG in the Municipal Space

CURRENT & FUTURE SOLAR PV TRENDS

- Solar PV prices will continue to fall and level out around R8 000 – R10 000 per kWp
- Grid parity with Eskom prices is less than a year away
- Solar will be one of the cheapest sources of energy in South Africa
- Solar PV uptake will continue to increase

POTENTIAL IMPACTS ON MUNICIPALITIES

- If Municipal Electricity prices increase at the same rate as Eskom, off-grid systems become more realistic for customers due to improved business case
- Without enabling environment for rooftop PV installations, actual installations will continue to exceed approved legal installations
 - Dangerous for staff and constituents
 - Damaging to municipal business

Support to Municipalities on SSEG

GUIDANCE ON SSEG SYSTEMS

- Provision of standardised application / permitting procedures incl:
 - Rules and regulations
 - By-laws (recommendations & examples)
 - Tariffs (guidelines & design principles)
 - Customer application forms and municipal check list
 - Supplemental Contracts and forms

TRAINING

- SALGA and GIZ offering rooftop PV training

DESIGNING FEED-IN TARIFFS

- Design and modelling support can be provided by GreenCape and Provincial Treasury



For more information, go to <https://www.green-cape.co.za/content/focusarea/smart-electricity> Source: GreenCape, 2017

The collage includes several key documents:

- REQUIREMENTS FOR SMALL-SCALE EMBEDDED GENERATION**: A document detailing the conditions and application process for becoming a solar PV embedded generator in a municipality.
- CONTRACT FOR EMBEDDED GENERATION**: A legal agreement between a customer and a municipality for the connection of a small-scale embedded generation (SSEG) system.
- SMALL-SCALE EMBEDDED GENERATION COMMISSIONING REPORT**: A report detailing the project name, account holder details, installer details, and SSEG details (inverter manufacturer and model, AC rating, phase, serial number, and blocking method).
- APPLICATION FORM FOR THE CONNECTION OF SOLAR PV EMBEDDED GENERATION**: A form for requesting a connection, including fields for project name, system type, and account holder details.

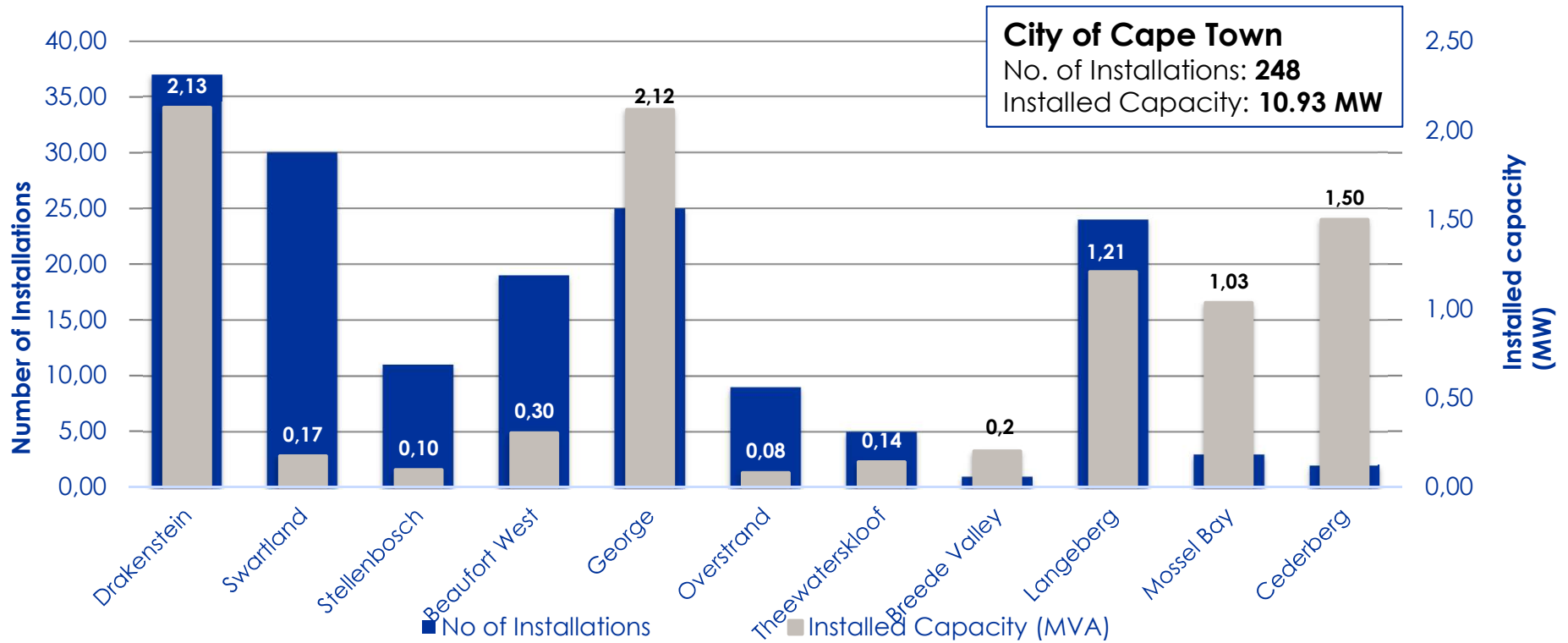
Good Progress in creating an enabling Environment for PV in Western Cape Municipalities but **Eden District Lagging**



#	Municipality	Allow SSEG	SSEG tariffs	SSEG policies
1	Beaufort West	Yes	Yes	Council Resolution signed
2	Bergrivier	Yes	No	In progress
3	City of Cape Town	Yes	Yes	Yes
4	Drakenstein	Yes	Yes	Yes
5	George	Yes	Yes	Yes
6	Mossel Bay	Yes	Yes	Yes
7	Oudtshoorn	Yes	Yes	Yes
8	Overstrand	Yes	Yes	Yes
9	Stellenbosch	Yes	Yes	Yes
10	Swartland	Yes	Yes	Yes
11	Theewaterskloof	Yes	Yes	Yes
12	Langeberg	Yes	Yes	Yes
13	Breede Valley	Yes	Yes	Yes
14	Saldanha Bay	Yes	Submitted to NERSA	Yes
15	Witzenberg	Yes	In progress	Interim policy
16	Prince Albert	Yes	Council Resolution signed	Council Resolution signed
17	Laingsburg	Yes	Council Resolution signed	Council Resolution signed
18	Cederberg	Yes	Yes	In progress
19	Cape Agulhas	Yes	No	Yes
20	Kannaland	Yes	Submitted to NERSA	In progress
21	Hessequa	Yes	Submitted to NERSA	In progress



Installed Capacity in WC Municipalities with Feed-in Tariffs



Note: George includes a 1MW Biomass plant
 Source: Municipal Electricity Services

Creating an Enabling Environment for Electric Vehicles

WCG has created an EV Task Team to:

- Facilitate the rapid uptake of EVs in the WC
- Maximise benefit of EV uptake for green energy (local manufacture, EV charging infrastructure roll-out plan, link with renewable energy)

Members of the EV Task Team:

- Province and City, Eskom (national & regional), GreenCape, EV manufacturers, Electric Vehicle Industry Association (EVIA), uYilo eMobility Technology Innovation Programme
- CCT to investigate opportunities & challenges for combining EVs & renewable energy
- Sub-Committee established to look into EV charging infrastructure roll-out
 - **There is a proposal to create an “EV-highway” from Joburg to PE, then via the Garden Route to Cape Town. The Task Team will support this process.**

Thank you