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Can she survive - or thrive? Rethinking the utility business model in the age of DERs

The status of DERs in Africa

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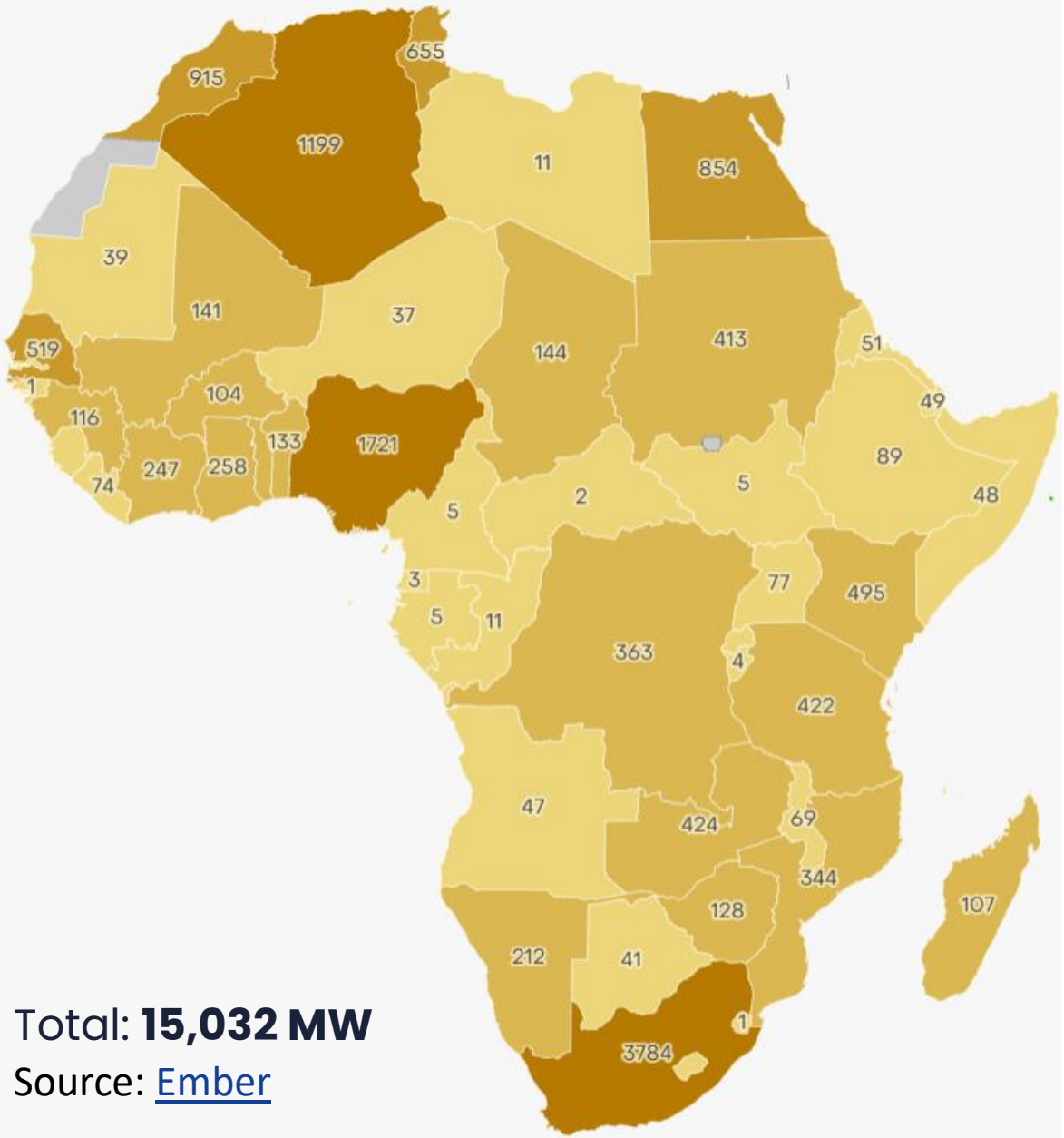
Africa's solar deployment is accelerating



Total: **15,032 MW**

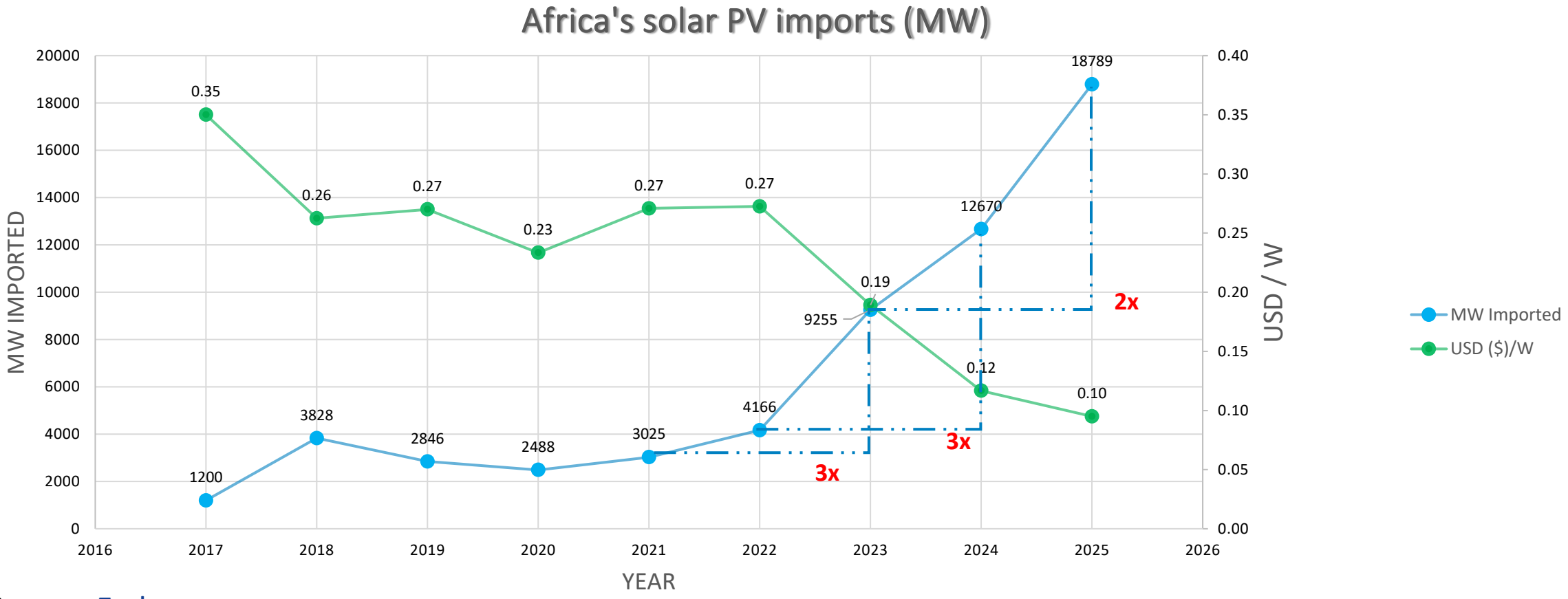
Source: Ember

Imports of solar panels from China July 2024 - June 2025 (MW)

- 25 African countries imported at least 100 MW of solar panels from July 2024-2025.
- These total imports are up 60% from the preceding 12 months.
- Solar PV is the most common (cheapest) DER technology.

This dataset does not make a distinction as to how the panels are used within the countries e.g. utility scale IPP projects or own consumption.

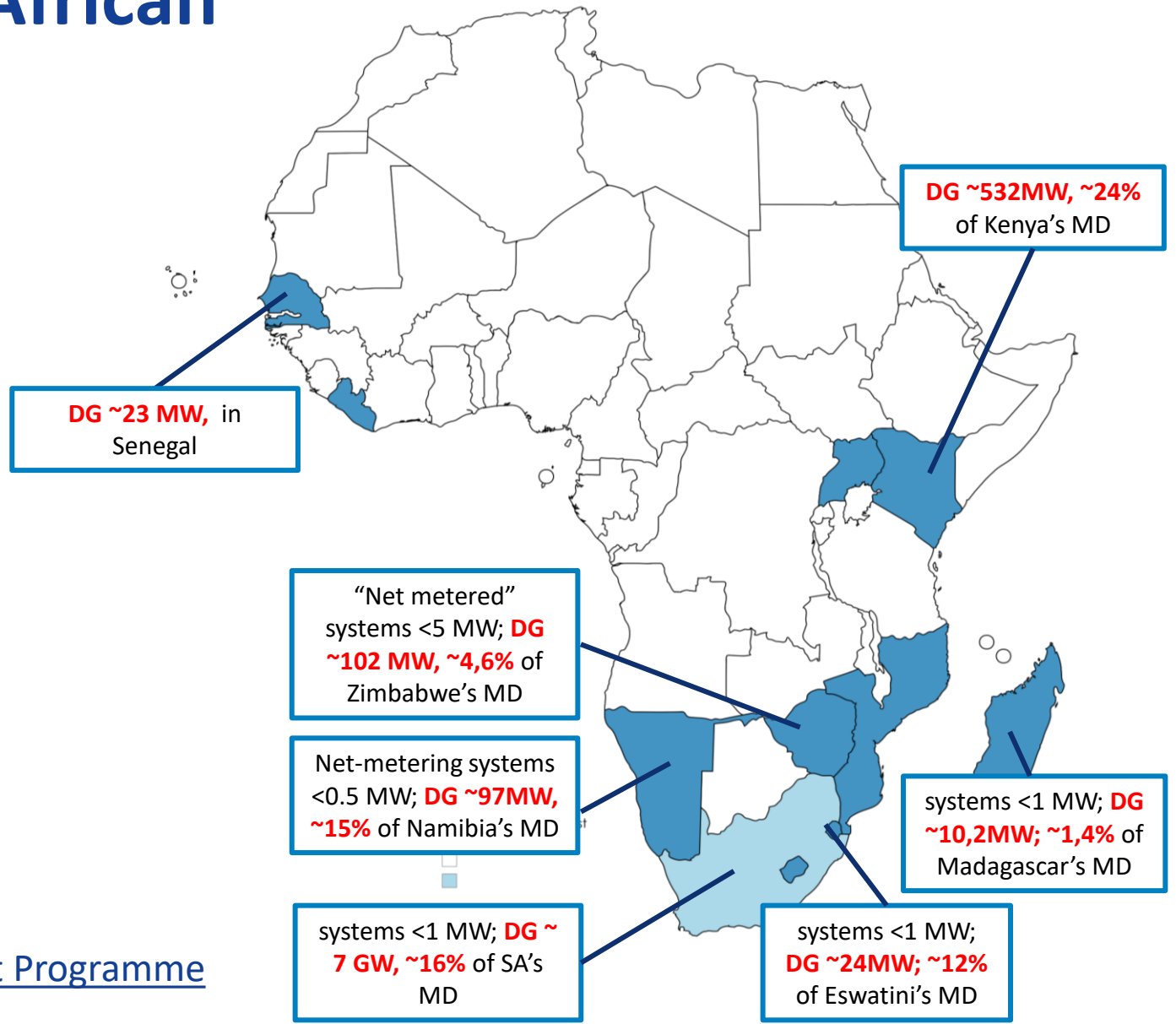
Africa’s solar deployment is accelerating



Source: [Ember]

DER penetration in select African countries

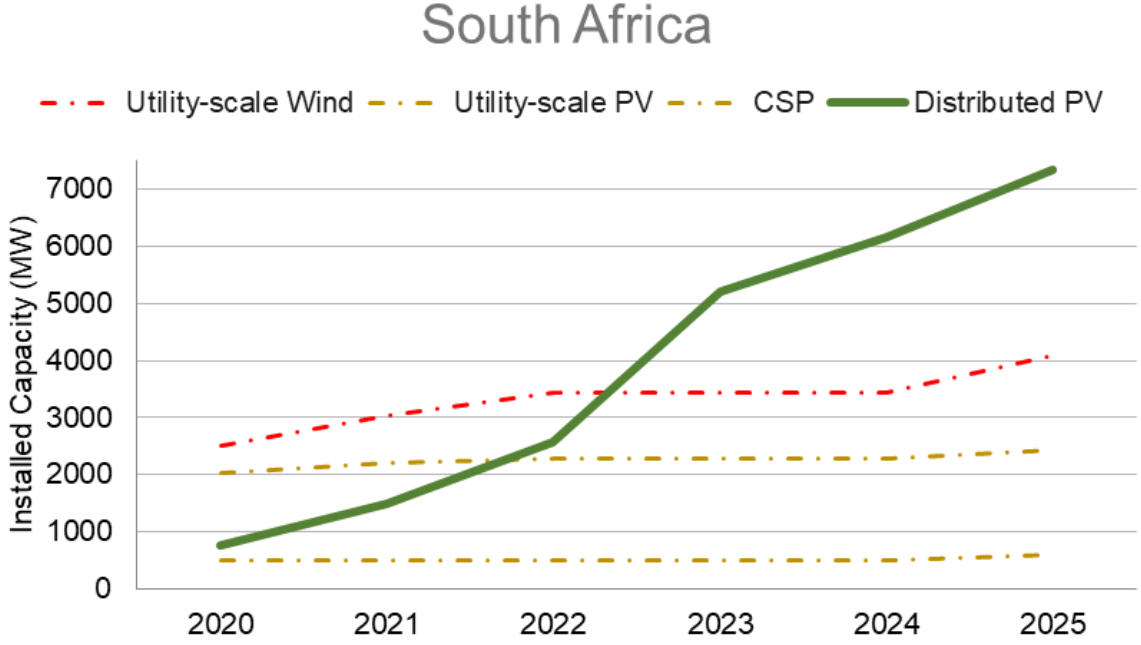
- These penetration levels have mostly happened only over 5-6 years,
- Largely without financial incentives, as is the case in some mature developed markets
- Complemented by battery storage in some markets (e.g. Zim, SA)
- To put into perspective, these are similar penetration levels (as a share of national capacity) we observe in developed markets



Source: DG Support Programme

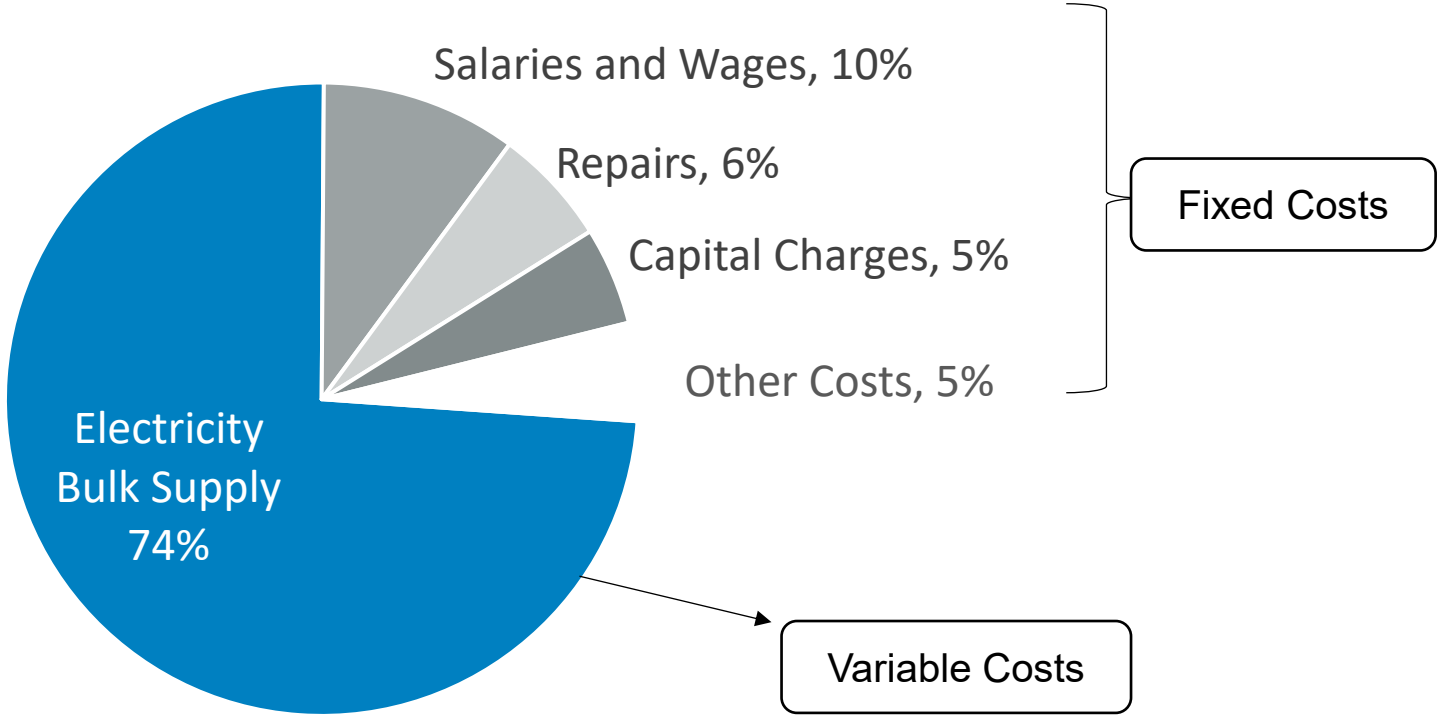
DERs are already bigger than we had thought – A closer look at South Africa

- Mostly organic growth from private capital
- C&I making up most of Distributed Generation installed capacity (also true in many countries)
- Residential DGs (high end) often paired with battery storage where power outages are high
- Lots of systems still unregistered

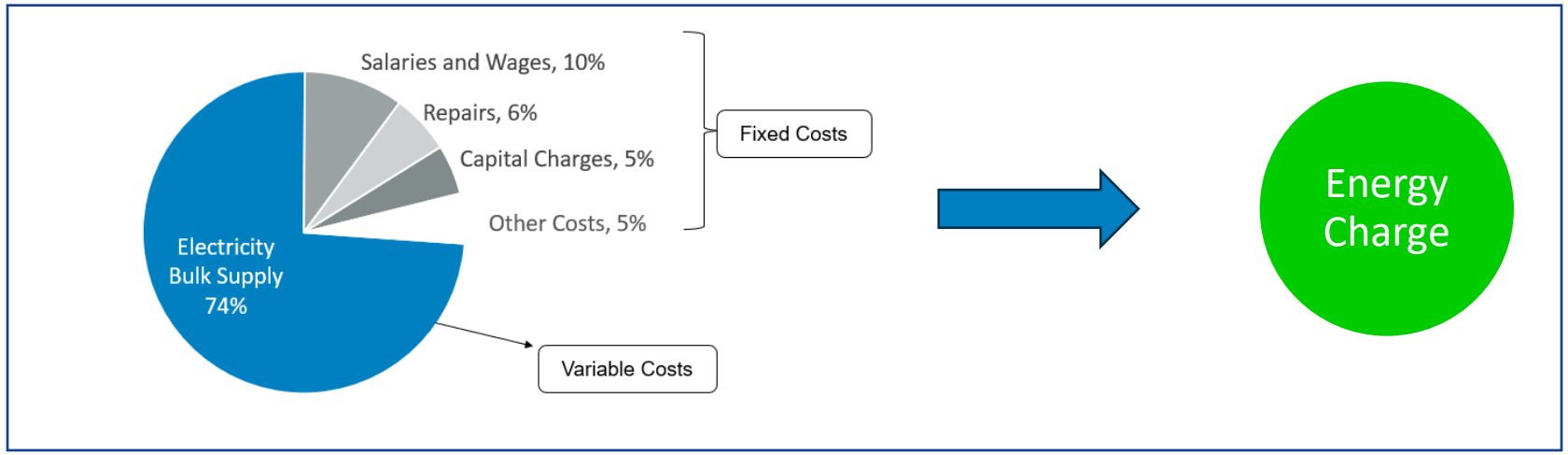


Source: Eskom and CSIR data

Typical costs of distribution utilities



Typical-historic cost recovery of distribution utilities



Typically, especially in *domestic* and *small commercial* categories, these costs are recovered through a single bundled variable charge (c/kWh)

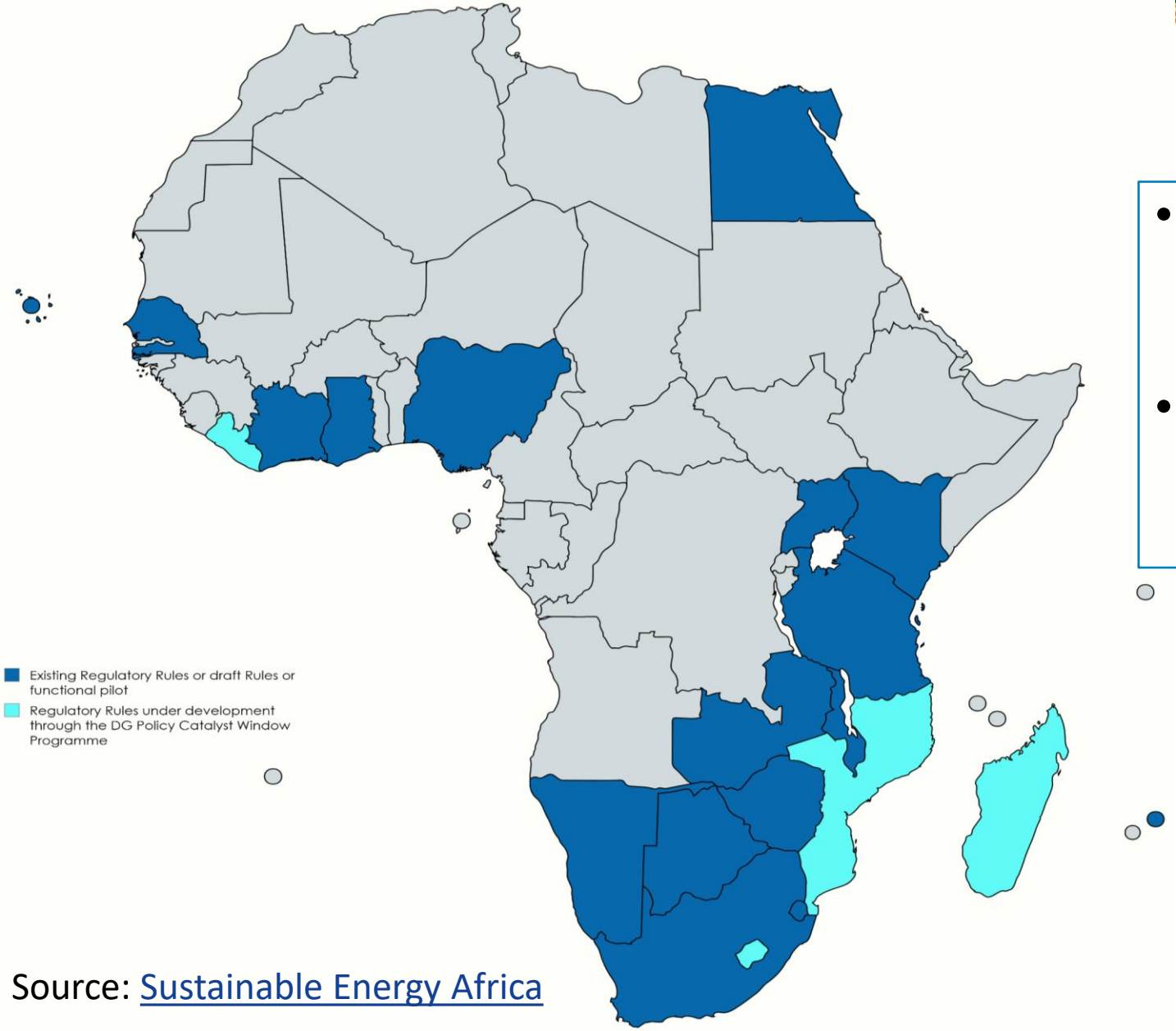
- With decreasing consumption due to DERs, less of these costs can be recovered.
- A natural response to recover the costs is to increase the cost-per-kWh.
- This leads to “reverse cross subsidization”, where those without DERs disproportionately bear the costs.
- The customers without DERs are likely to be those on lower income bands.

The role of the Regulator

Ensure that the conditions are fair for utilities to exist as a going concern.

Ensure that the value provided by DERs is fairly captured and compensated.

DER regulation at a glance.



- At least 20 African countries have either published Regulatory rules, draft Rules or functional pilots.
- Existing rules may need to be re-vised to fully capture the value from DERs.

Source: Sustainable Energy Africa

Thank you for your attention

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