Lr. Energies

Energy Performance Certification

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Background

- An Energy Performance Certificate (EPC) is an assessment of the energy performance of a building, where an A rating is very efficient and a rating of G is inefficient;
- Implemented properly, EPC mechanisms can provide apowerful market tool to create demand for energy efficient buildings. Many international countries have implemented EPCs, the learnings from which is likely to greatly benefit the South African EPC mechanism.
- South Africa is the world's 14th largest emitter of greenhouse gases. Buildings account for 30 - 40% of emissions globally.
- The proposed Post-2015 National Energy Efficiency Strategy (NEES) requires that state owned buildings reduce their consumption by 50%, and commercial buildings by 37%, by 2030.

What is the Problem?

- In Dec 2020, government made it Law. (DMRE's Regulation 700 of 2020 for the Mandatory Display & Submission of EPCs)
- "energy performance" means net energy consumed in kilowatt hours per square meter per year (kWh /m2 /a) to meet the different needs of a building, e.g., heating, hot water heating, cooling, ventilation and lighting but excluding that consumed by garages, car parks, storage areas and outdoor services;
- The Accounting Officer of an Organ of State, or the Building Owner of all other qualifying buildings must publicly display the EPC at the entrance of the building by 8 December 2022.
- Qualifying Buildings of a specific status, size & classification are required to comply
- Only a SANAS accredited Inspection Body may issue EPCs valid for a 5 year period.
- Non-compliance to these Regulations may result in a minimum of R5 million fine or 5 years in jail (as per National Energy Act).

Beyond Law

- We are currently not meeting the current energy demand in South Africa
- There is a strong unreliability in the supply
- Usual backup in the form of petroleum fuels in now expensive
- There is a continued increase in the cost of energy (COE) and the overall levelized cost of energy (LCOE) with current systems in place
- Operations interruptions have become excessively costly
- User have limited control

Where is the Value in all this?

Your building will be worth more

reliable, persistent energy savings make it more likely that this connection will be recognized with a higher building valuation. Numerous studies demonstrate a sale price premium from 1% - 31% among energy-efficient building

Higher occupancy rates and command for higher rates

certified buildings have fewer vacancies and higher rents when compared to similar buildings. In fact, numerous studies demonstrate occupancy levels up to 10% higher and rental premiums 3% to 16% higher

Opportunity for government occupancy

If you want to lease your space to a federal tenant, your buildings must be ENERGY PERFORMANCE certified. (incoming legislation to make this mandatory aiming for that 50% reduction)

Better Financing Terms

Several studies on commercial funding (local and foreign) find evidence of lower default risk among buildings with labels such as ENERGY STAR. 5 As a result, these properties often secure better loan terms (longer interest-only periods) and lower interest rates (typically about 30 - 35 basis points) than similar non-labelled buildings.

Massive Reduction in Operating Costs through EMOs

Once in operation, EP certified buildings use, on average, 35 percent less energy than similar buildings nationwide. The cost savings can be substantial. For example, EP certified office buildings cost R 78.00 less per square meter to operate than their peers.

So who's included?- (for now)

Size Requirements

Size requirements for both government and private buildings

>1000m2
Government/ Organ of State (used/ owned/ operated)

>2000m2
Held by private operators

Building Status

Buildings that have been operating for not less than 2 years and have not had any renovation work requirements.

If renovation required new plans to be submitted etc, this will not be a qualifying building

Building Classification

Places of Instruction (A1)

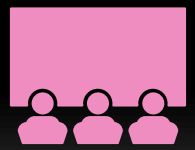
where school children, students or other persons assemble for the purpose of tuition or learning e.g., universities, schools, colleges.

Office Buildings (G1)

where occupancy includes banks, consulting services, medical use, commercial etc.

Entertainment & Public Assembly

where people gather to eat, drink, dance or participate in any other recreation e.g., entertainment hall.



Theatrical & Indoor Sport (A2)

where people gather for the viewing of theatrical, orchestral, choral, cinemas or sport performances e.g., sports facilities.

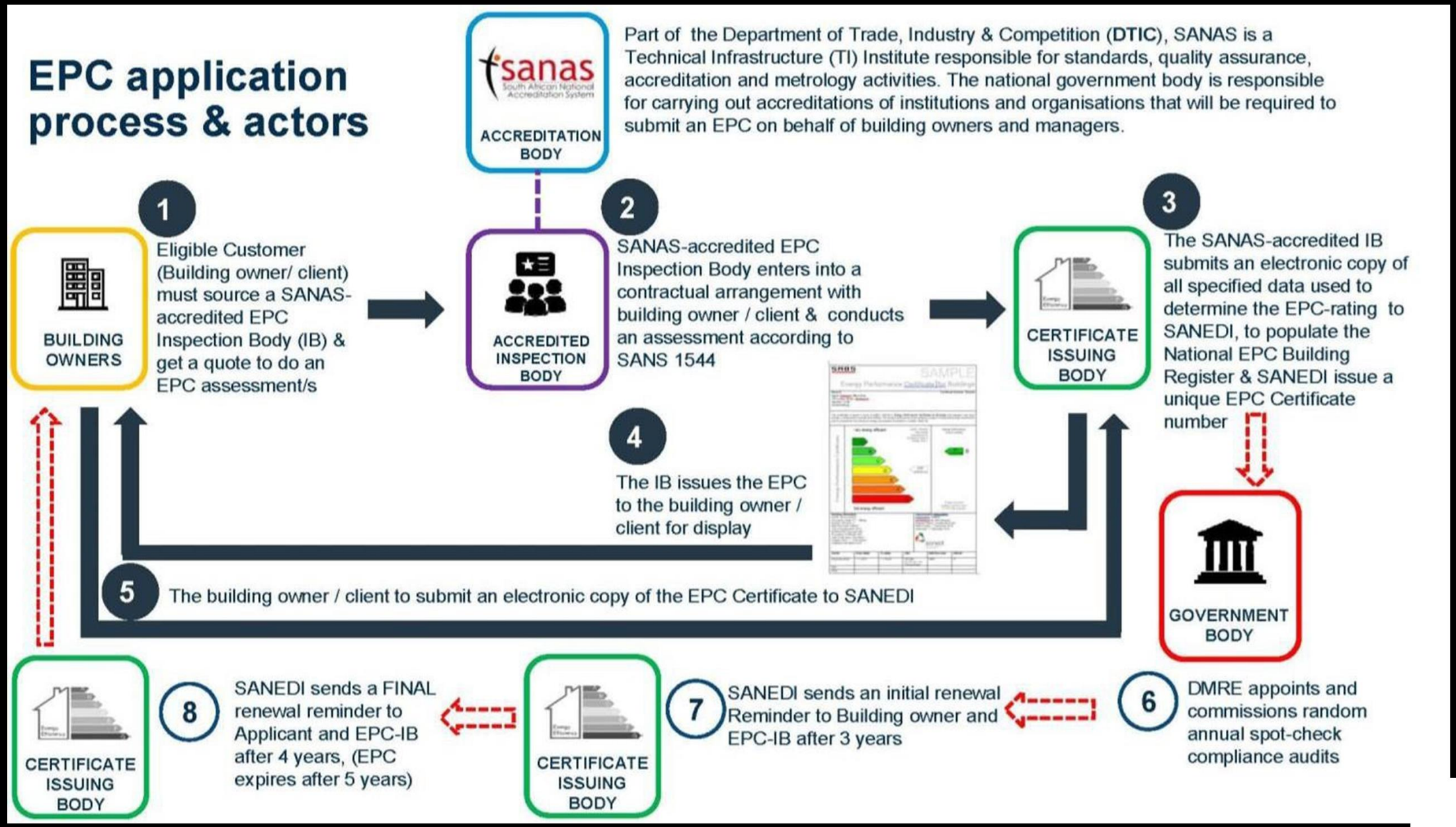
Who doesn't qualify?- (for now)

- A4 : Worship
  A5 : Outdoor Sport
- B1-B3 : High to low risk commercial service
- C1 : Exhibition Hall
  C2 : Museum/Gallery/Library
- D1-D4 : High to low risk industrial
- E1-E4 : Places of Detention & other institutions. Hospitals, Healthcare Facilities
- F1-F3 : Shops & Wholesalers Stores
- H1-H5 : Hotel, Hospitality, Dormitary, Domestic Residences
- J1-J3 : High to low risk storage
  J4: Parking Garage

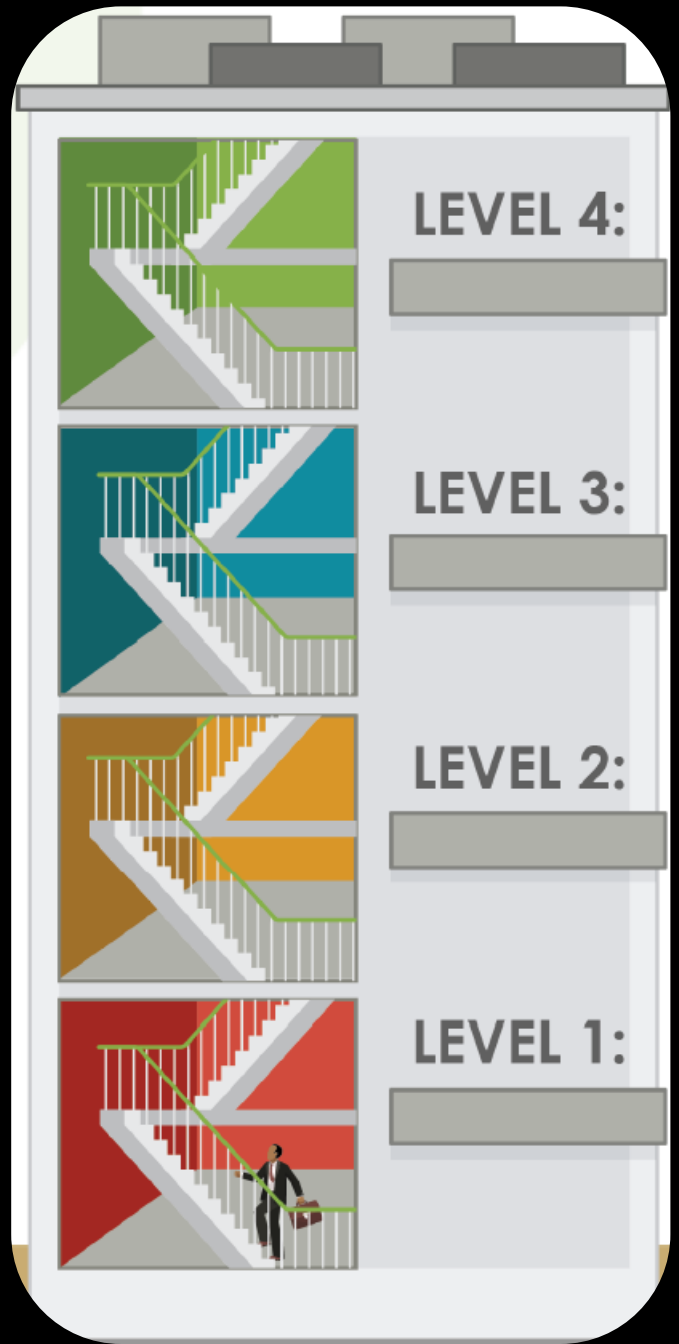
In the pipeline in the short-term

In the pipeline in the med-term

The Process


EPC application process & actors
ACCREDITATION BODY
Part of the Department of Trade, Industry & Competition (DTIC), SANAS is a Technical Infrastructure (TI) Institute responsible for standards, quality assurance, accreditation and metrology activities. The national government body is responsible for carrying out accreditations of institutions and organisations that will be required to submit an EPC on behalf of building owners and managers.
1
BUILDING OWNERS
Eligible Customer (Building owner/ client) must source a SANAS-accredited EPC Inspection Body (IB) & get a quote to do an EPC assessment/s
2
ACCREDITED INSPECTION BODY
SANAS-accredited EPC Inspection Body enters into a contractual arrangement with building owner / client & conducts an assessment according to SANS 1544
3
CERTIFICATE ISSUING BODY
The SANAS-accredited IB submits an electronic copy of all specified data used to determine the EPC-rating to SANEDI, to populate the National EPC Building Register & SANEDI issue a unique EPC Certificate number
4
The IB issues the EPC to the building owner / client for display
5
The building owner / client to submit an electronic copy of the EPC Certificate to SANEDI
GOVERNMENT BODY
6
DMRE appoints and commissions random annual spot-check compliance audits
7
SANEDI sends an initial renewal Reminder to Building owner and EPC-IB after 3 years
CERTIFICATE ISSUING BODY
8
SANEDI sends a FINAL renewal reminder to Applicant and EPC-IB after 4 years, (EPC expires after 5 years)
CERTIFICATE ISSUING BODY

Our Energy Performance Certification



Level 4: Certificate Generation and Approval

Once we have completed your EPC report, all that is left to do is for us to issue you with an Energy Performance Certificate. This is the certificate that you are required by law to publicly display at the entrance of your building. YOU must submit certificate to SANEDI- however, since we promise to help you till the end, we will take care of this to make sure that all of your compliance obligations are fulfilled.

Level 3: Detailed Calculations and Reporting

SANS 1544 requires the energy performance data of your building to be displayed in a specific way. The purpose of our EPC Report is to lay all of this data out for you in a way that makes sense to you as building owner. After all, the purpose of this exercise is not only to comply with the law, but to turn such compliance into an opportunity for your building to improve on the way it uses energy.

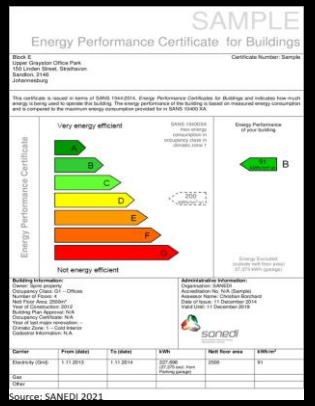
Level 2: Detailed Inspection

If the data that you provide is extensive enough for the purposes of your building, then our Inspection Team can start with further analysis and verification of the information that you have provided. If, however, the data provided to us is insufficient for purposes of a SANS 1544 Energy Performance Certificate, we will need to do something about that.

Level 1: Consultation and Data Collection

The idea of starting the process off with a consultation is to ensure that all parties understand their roles and responsibilities from the outset. A major part of this consultation is data request. The first inspection activity that forms part of our EPC process is the analysis of the relevant data, being data relating to the size, occupancy class and energy consumption of your building.

Expanded View



EPC Close

Submission

Project Close

Final Review & Certification

Information (Ready for Submission)

EPC Leg Work

Data Collection

Data Treatment & Management

Data Management

EPC Audit Planning

In-depth Energy Audit

Info-Packet Handling

EPC Ground

Onboarding (Portfolio System)

Project Planning

Benchmarking & Contracting Processes

Review Processes

Application/ Sourcing

Data Packets

BUILDING INFORMATION

- Building specifics e.g., owner details, location, site representatives, health & safety risks;
- Configuration e.g., floor plans, single line / reticulation diagrams, equipment and metering locations;
- BAS or BMS schematics
- Maintenance logs of building systems

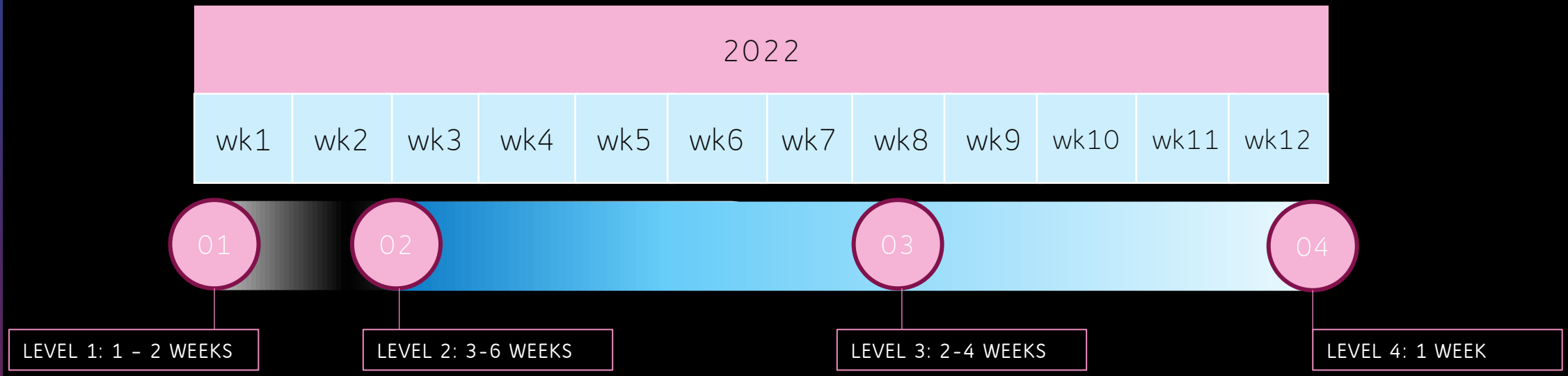
ENERGY INFORMATION

- Energy carriers use – utility / self-generating / gas / liquid / solid;
- Consumption information for a 12-month period, and for a pre-Covid period if applicable;
- Major energy consuming equipment – location, accessibility, identification, operating hours, energy rating/wattage;
- Metering and sub-metering equipment – location, accessibility; identification; calibration status.

TENANT & OCCUPANCY INFORMATION

- Occupancy certificates or similar – tenant name, occupancy rate, classification;
- Exclusions- operating hours, energy data, floor area;

PROJECT TIMELINES



** This timeline is developed from experience (with consideration for the delays in required information and subsequent correspondence) with other the relevant stakeholders. Project can be shorter or accelerated depending on circumstances.

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