

Unlocking Funding: How the City of Cape Town Built a Foundation for Sustainable Energy and Energy Efficiency Projects

1. Problem Statement

There is growing pressure on South African municipalities to promote energy efficiency, implement sustainable and reliable energy solutions, reduce reliance on Eskom, and navigate the complexities of escalating energy costs and price volatility. Additionally, to avoid the risk of economic disruptions due to load shedding, many municipalities are exploring solutions that enhance energy efficiency. However, many municipalities find it challenging to access financing to fund energy projects. Common reasons include fragmented governance, low creditworthiness, poor financial management, and a lack of the necessary skills and capacity.

2. Solution

Building a strong base and doing foundational work play a key role in enabling municipalities to access funding for energy projects. The City of Cape Town municipality (CCT) is exemplary in this regard as it has managed to consistently secure funding to supplement the municipal fiscus in the form of grants, loans, and concessional finance for energy projects, through institutions like IFC, KfW, AfD, and the national Department of Electricity and Energy (DEE)* to mention a few. Additionally, funding or technical assistance has been accessed through implementing agents such as GIZ, USAID linked entities and programmes, Resilient Cities Network, C40, Green Cape, Sustainable Energy Africa, among others. This case study thus examines the prerequisites and institutional enablers for successfully accessing funding for energy projects such as clean audits and good creditworthiness, strong leadership, and the City's Energy Strategy for 2050.

As such, the CCT has established the Sustainable Energy Markets Department (SEM), which is mandated to enhance energy security and supply diversification and drive innovation in energy supply towards low-carbon development. Since its inception in mid-2017, the department has amassed a highly skilled staff who are able to deliver on ambitious energy targets set out by the municipality, in partnership with others across the CCT.

3. Key Role Players

Falling under the Energy Directorate, SEM works closely with the Department of Electricity Generation & Distribution (EGD) and is supported by a host of other departments including Treasury and Corporate Finance, Legal and Procurement, Budgeting and Financial Planning, and the Grants Units. The city manager supports by ensuring administrative independence, while political leaders such as the mayor provide top-down support and visibility across the spectrum. Figure 1. shows and highlights the roles of the main actors, within the energy directorate.

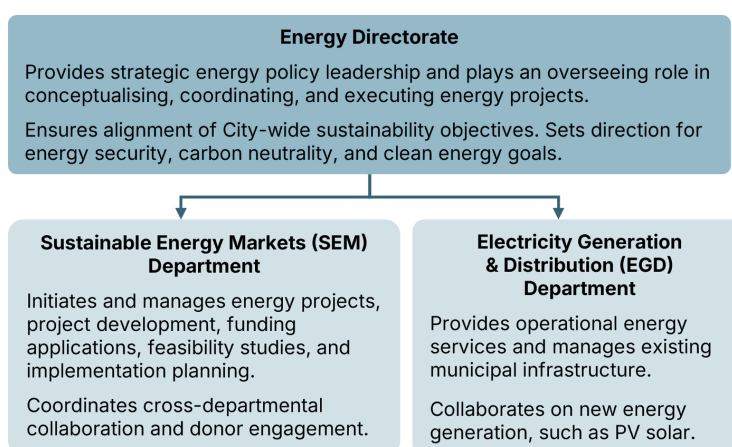


Figure 1. An overview of the key actors responsible for enabling and preparing the City of Cape Town to access energy project funding.

* Formerly known as the Department of Mineral Resources and Energy

4. Achievement, Impact and benefits

This case study examines three successful project streams: 1. Municipal Energy Efficiency Retrofit Projects, 2. Rooftop Solar PV on Municipal Buildings and 3. Utility Scale Solar PV and Battery Energy Storage System (BESS) Projects. It highlights the foundational work and institutional enablers that have played a role in CCT's ability to access funding for energy projects.

4.1 Municipal Energy Efficiency Retrofit Projects

Due to a strong foundation based on sound financial management principles and good governance, the CCT has consistently been able to access the national Energy Efficiency Demand Side Management (EEDSM) grant over multiple cycles. CCT implemented a multi-year programme to retrofit municipal infrastructure for enhanced energy efficiency, which was co-funded through the municipal budget and EEDSM grants. Figure 2 gives an overview of the multi-year project, the prerequisites, institutional enablers, and achievements thus far.

City of Cape Town's Municipal Energy Efficiency Retrofit Projects

Project overview

The City of Cape Town implemented a multi-year programme to retrofit municipal infrastructure with energy-efficient technologies, particularly in buildings, street lighting, traffic lights and Heating, Ventilation, and Air Conditioning (HVAC) systems. The programme has delivered measurable savings and enhanced energy efficiency in the City. It was co-funded by the City and the EEDSM grant.

Prerequisites

The City has consistently maintained **clean audits and financial discipline**, making it eligible for grants and loans.

This financial health is cemented by the City's **high revenue collection** abilities, which allows the City to rely on internal funding or secure more favourable concessional loans.

Strong **political and administrative stability**, including backing from the City Manager and Council. The little disruption at these levels has helped ensure that supporting decisions are carried through over multiple years.

A **track record of implementation** demonstrates delivery capacity and creates funder confidence.

Institutional Enablers

Strategic planning and clear **energy policy** provided guidance to which the programme could align.

Projects were **identified and scoped in advance** using energy audits, feasibility studies and other capital planning tools.

Similarly, term contracts were pre-arranged and lighting and HVAC contractors were pre-procured, **enabling immediate implementation** when grants were approved.

SEM acted as the **project champion**, coordinating across departments, managing funding, and overseeing implementation. SEM also had the capacity to identify and engage funders, as well as to initiate and develop proposals for technical assistance and funding scopes.

Key milestones

50% of all streetlights have been retrofitted to energy-efficient lighting
100% of traffic lights have been retrofitted to LED
201,000+ MWh energy saved from 2007–2018. Energy saved in 2024 was ≈ 1800 MWh
R 230+ million invested has resulted in significant electricity bill reductions
Saved the City ≈ R 8 million in 2024

The replacement of energy-intensive equipment contributes to lower greenhouse gas emissions and supports the City's net-zero targets

Figure 2. An overview of the City of Cape Town's multi-year project to retrofit municipal infrastructure for energy efficiency.

4.2 Rooftop Solar PV on Municipal Buildings

While the CCT has shown the ability to access grants and loans, it prefers to use its own funding supplemented by grants. This is done to reduce the debt burden and the payable interest rates. However, it is important to note that where a project has a direct pay-back, it is preferable not to crowd out other projects that need rates or grant funding more. The rooftop solar photovoltaic (PV) on city-owned municipal buildings and facilities project shows how CCT has been able to complement its own budget with other sources of funding to achieve energy generation goals (see Figure 3)*.

Rooftop Solar PV on City of Cape Town Municipal Buildings

Project overview

Small-Scale Embedded Generation (SSEG) on selected municipal facilities for Renewable Energy solutions. CCT has mounted rooftop solar PV systems on a selection of municipal buildings for embedded generation.

Blended funding sources

Municipal Capital Budget (CAPEX): The City allocated capital from its own budget for installations on City-owned buildings. Projects had to be motivated through business cases, showing return on investment and alignment with energy and climate goals.

Grant Funding (e.g., from GIZ, UK PACT, and others): This funding was used primarily for feasibility studies, design standards and procurement guidelines, and capacity building and training. Using grants in this way helps lower the cost and risk associated with early-stage project preparation.

Rates-funded Operational Budget (OPEX): Used for consulting, legal, research, and planning costs that supported the rollout of the rooftop PV program.

Institutional Enablers

- **Strategic planning** and screening of municipal sites for potential development.
- Undertaking **pre-feasibility, feasibility, and specialist studies** to confirm the technical and economic business cases for the selected sites.
- Utilisation of the pilot sites to **build up institutional knowledge and capacity** to deliver for a larger programme
- Setting up of a **term contract** and appointment of a **competent contractor** for the delivery of Phases 2 and 3 of the programme.
- Development and implementation of **City-wide guidelines for the implementation** of SSEG projects to ensure **standardisation** of approach to development, execution, operations and reporting of all installations in municipal facilities.
- Sustainable Energy Markets remains the **champions for the development and delivery** of SSEG projects on municipal facilities and acts as a **centre of excellence** for the rest of the organisation.

Key milestones

- **Phase 1:** Pilot sites chosen; 3 sites completed and generating power
- **Phase 2:** 9 sites to be completed
- **Phase 3:** 5 sites to be completed
- 15 MW of new generation capacity from SSEG PV solar installations at municipal facilities will be completed by 2028.

Figure 3. Project overview, funding sources, and key milestones of the rooftop solar PV on city-owned buildings.

* While there are more than 100 CCT facilities with some form of Solar Small-scale Embedded Generation (SSEG) installed, this example is only referring to the SSEG projects of SEM.

4.3 Utility Scale Solar PV and BESS Projects

The ambition to increase City-owned embedded energy generation has culminated in one of CCT's biggest projects to date, the 7 MW grid-connected ground-mounted solar installation, known as the Atlantis PV Project. A good track record of implementation and financial maturity played a significant role in CCT's ability to secure funding for this project and a 5 MW Battery Energy Storage System (BESS) to be implemented alongside it. The CCT is finalising the development phase of its second utility scale PV solar project of up to 70 MW.

These projects contribute to CCT's energy security goals outlined in the City's Energy Strategy 2050. Figure 4 gives an overview of the project, showing how improvements are being made in incremental phases. This stage gate process employed in this project has been critical to project development maturity in the City.

The gates act as checkpoints where the project's progress, viability, and alignment with City goals are evaluated before moving to the next phase. This structured approach helps manage risk, improve decision-making, and increase the likelihood of successful project completion.

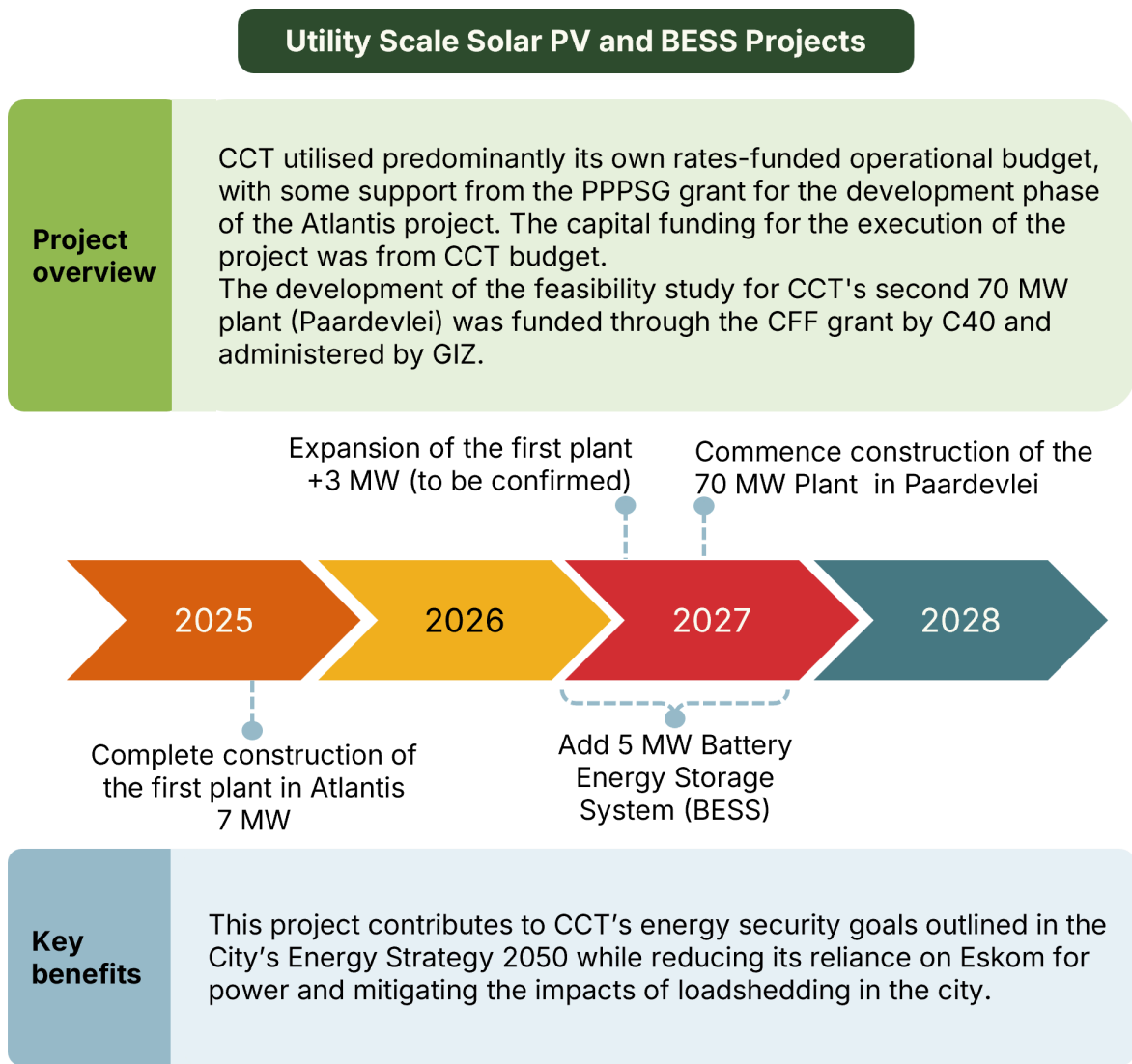


Figure 4. An overview of the Utility-Scale Solar PV Project, its development milestones, and benefits.

5. Challenges and Lessons

Challenge	Lesson(s)
Long procurement lead times that can eclipse the financing period.	<ul style="list-style-type: none"> Start project planning well ahead of budget cycles. Determine your procurement strategy early. The CCT plans and budgets for projects in a three-year rolling cycle to ensure sufficient time for procurement processes that could take between 18 and 24 months to complete. This ensures rapid and efficient project implementation once the budget becomes available, while maximising impact.
Regulatory bottlenecks (e.g. MFMA)	<ul style="list-style-type: none"> Build strong institutional knowledge of regulatory frameworks for municipality financing to ensure compliance. Section 33 of the Municipal Finance Management Act is frequently misinterpreted to mean that projects cannot be funded beyond three years. This is not true as municipalities can enter into contracts beyond a 3-year period, but it places additional requirements on projects that are funded beyond three years.
Complex and onerous funding application processes	<ul style="list-style-type: none"> Build internal technical and administrative capacity to prepare robust applications supported by strong pre-feasibility studies. Understanding the impact on tariffs and ongoing OPEX costs are also important.
Strict compliance and reporting burdens	<ul style="list-style-type: none"> Assess the administrative costs and efforts early in the development process as the administrative burden could potentially outweigh the financial benefit. It is important to conduct cost-benefit analyses before committing to complex finance instruments.
Lengthy processes	<ul style="list-style-type: none"> The process of “getting your institutional house in order” is long and needs to be designed in a way that ensures long-term administrative continuity despite changes between political terms of office. It will not happen overnight; the transformation will take time.



Good financial management and project management, coupled with excellent and timely delivery, lead to more opportunities for greater financing in a cyclic fashion. Smaller municipalities that want to use the CCT model and its learnings can bridge capacity gaps by using support structures from regional technical hubs or provincial support, such as [Sustainable Energy Africa](#), [South African Local Government Association](#), [Green Cape](#), [C40 Cities Finance Facility](#), [Western Cape Project Finance Facility](#). The depth and capacity of the CCT and its internal structures, which facilitate the undertaking of energy projects, provide a blueprint that other municipalities can learn from or adapt to their own structures. No municipality will ever be able to do it all at once. However, long-term goals can be achieved one project at a time.

6. Key Takeaways

Accessing funding is not just dependent on the economic viability of the energy project; it requires financial management maturity, capacity, and good financial management and project governance systems to be in place. The following checklist, grouped under three themes, is a good starting point to build a good financial foundation and system.

Planning


- Anchor projects within a clear long-term strategy and multi-year plan.
- Conduct pre-feasibility studies and risk assessments to ensure implementation readiness.
- Prioritize and sequence projects based on impact, feasibility, and funding potential.

Technical capacity

- Build internal expertise or partner with third parties for project development and management.
- Develop procurement strategies early and establish efficient delivery mechanisms in advance.
- Secure diverse funding sources (grants, loans, etc.) for each stage of the project lifecycle to minimize municipal budget strain.

Governance and Financial Management

- Ensure strong leadership, institutional commitment, and clear accountability.
- Foster cross-departmental coordination (energy, finance, procurement, legal) for smooth execution.
- Maintain financial credibility through clean audits, strong creditworthiness, and sustainable revenue models - this is critical for loan approvals.
- Uphold a strong track record of performance to build funder confidence.



The key to accessing loans is a clean audit and proper revenue management, including the ability to recoup service costs and repay loans on time.

The South African German Energy Programme (SAGEN) collaborates with South African partners to support the country's transition to a reliable, affordable and clean energy future. SAGEN is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), co-funded by the Swiss State Secretariat for Economic Affairs (SECO) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in cooperation with the Department of Electricity and Energy (DEE), the National Treasury (NT), Eskom, the South African Local Government Association (SALGA) and the South African National Energy Development (SANEDI).

Contact information

For further information please contact:

City of Cape Town Metropolitan Municipality:

Sustainable Energy Markets
[Submit your energy enquiry online](#) |
sustainableenergymarkets.enquiries@capetown.gov.za

Published and commissioned by:

[Sustainable Energy Africa](#), 30 June 2025
 Simisha Pather-Elias | simisha@sustainable.org.za

Authors: [The Green House](#)

Liisa Shangheta | liisa@tgh.co.za
 Bianca van Zyl | bianca@tgh.co.za
 Yvonne Lewis | yvonne@tgh.co.za

For more information on funding energy projects visit: [Municipal Energy Management Systems](#)
<https://memsresources.org.za/category/financing/>

Disclaimer: This document is meant for informational purposes only. Though the accuracy and validity of information and recommendations given have been checked thoroughly, GIZ and the authors cannot be held liable for the content of this document.