

Paardevlei Solar Farm in Cape Town, South Africa

Construction of a City-led solar farm with utility scale capacity (70MW)
in the Paardevlei area of Cape Town



Project Sector:
Renewable Energy and
Energy Efficiency



Project Partner:
City of Cape Town



Total investment volume:
50 million EUR



4,772,846

RESIDENTS WILL BENEFIT



2,400

estimated JOB-YEARS
during construction



emission reduction

1,901,225 t

CO₂e over 25 years

In 2020, South Africa amended its national Electricity Generation Act to allow municipalities to produce their own electricity. Paardevlei will be one of the first municipal-owned utility-scale projects in South Africa to do so. As solar power is increasingly integrated into the City of Cape Town's electricity grid, the City reduces its reliance on fossil fuels. This supports the city's energy security, providing subsidised energy tariffs for underserved communities and allowing cost-savings from locally generated solar energy to be passed on to consumers.

BEST PRACTICES The City of Cape Town steered the project roll-out, while CFF provided technical guidance and links to financing support. The project received Strategic Integrated Projects (SIPs) status by the South African Presidency in line with the provisions of South Africa's Infrastructure Development Act and was integrated into the country's National Infrastructure Plan.

Financing Solution

The City of Cape Town is considering different financial options for the delivery of the project, including its own and external funding. Alternatively, a Power Purchase Agreement with an Independent Power Producer is being considered, where the City purchases the energy from a private operator.

“There was so much that we learned from this process, not just in terms of the knowledge, the skills and the capacity that was brought from CFF, but also the opportunities that we got to share with other cities and learn from them. That was one of the highlights for me regarding what CFF brought to the table.”



MARLYN HENDRICKS
Sustainable Energy Markets Department,
Senior Professional Officer



Paardevelei serves as a scalable model for other South African cities planning similar infrastructure investments.

- Grid-connected location enables smooth integration of solar power into the City's energy mix.
- Improves local energy security and reduces reliance on South Africa's main energy provider Eskom.
- Generates co-benefits, such as improved air quality.
- Upscaling potential depends on available land at Paardevelei, local grid capacity and how well new systems can connect with existing power sources, like the Steenbras Power Station.
- Technical studies indicate up to 70 MW of solar capacity could be installed at the site.



The technical and financial feasibility studies laid out a clear business case for the project.

- Included an Environmental Impact Assessment and analysis of South Africa's energy context.
- Helped secure political backing and buy-in from City leadership.
- Highlighted the project's strategic value within the local energy transition.
- Built confidence in the City's ability to deliver a utility-scale project.



CFF supported the creation of a core inter-departmental steering structure within the city administration to run the project.

- CFF provided project management support to define roles, responsibilities, and internal processes, and reflect on lessons learned.
- Delivered 25+ capacity development measures, including technical trainings, study visits, and peer learnings.
- Helped shift mindsets on financing and structuring utility-scale energy projects.
- New knowledge is already being applied to the development of a smaller solar farm (7MW) in Cape Town.



CFF provided political and strategic guidance to strengthen project delivery and stakeholder management.

- Advised on time-saving measures, legislative considerations, and stakeholder coordination.
- Supported identification of key partners.
- Facilitated a peer exchange with Curitiba, Brazil to strengthen the City of Cape Town's capacity to run similar projects and build technical, financial, legal, and organisational know-how for utility scale solar farms.
- Organised an upscaling workshop to share lessons with other South African cities looking to follow a similar model.



KEY CHALLENGES

Navigating external stakeholders and securing the backing of decision-makers was a key challenge. In addition to the solar farm, alternative options for using the Paardevelei land included social housing, industrial development, and environmental conservation. With CFF's support in developing the feasibility studies and business case, the City was able to assess its options and ultimately secure backing for the solar farm.



LESSONS LEARNED

The City of Cape Town learned that early involvement of the inter-departmental steering structure in developing terms of references was a crucial step to ease the project's development. A flexible, inter-sectoral team of engineers, finance advisors, legal advisors, and managers is key. Clear boundaries were also established to avoid conflicts of interest between the project team and permitting authorities, ensuring strong governance and steady progress.



OUTLOOK As one of the first finance-ready projects to take advantage of new national energy regulations, the Paardevelei project has strong potential to serve as a lighthouse project for other municipalities in South Africa.

Implementing agencies



Funding partners

