ETHEKWINI MUNICIPALITY

By 2030 eThekwini will be Africa's most caring and liveable city

# Energy Office Solar (EOS) Project

# Durban Climate Change Strategy

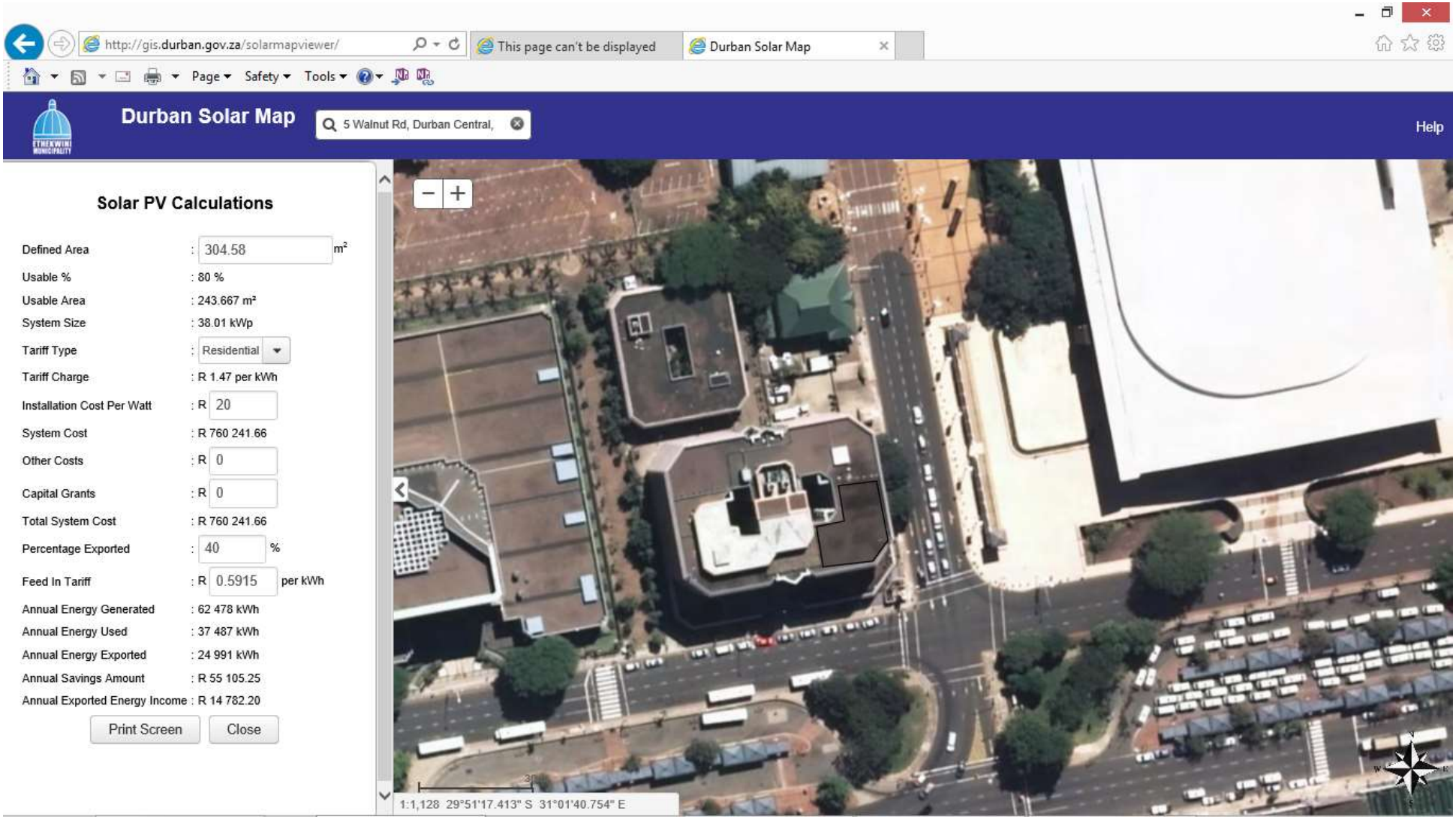
"Objective F.1: 40% of Durban's electricity consumption is supplied from renewable energy by 2030 in line with the national long term mitigation targets."

"F.1.2 Implement viable small-scale renewable energy generation such as micro-hydropower, rooftop solar photovoltaic and anaerobic digesters within municipal assets."

# Support mechanisms

- Electrical embedding process
- Minor Building Works application
- Residential feed-in tariff

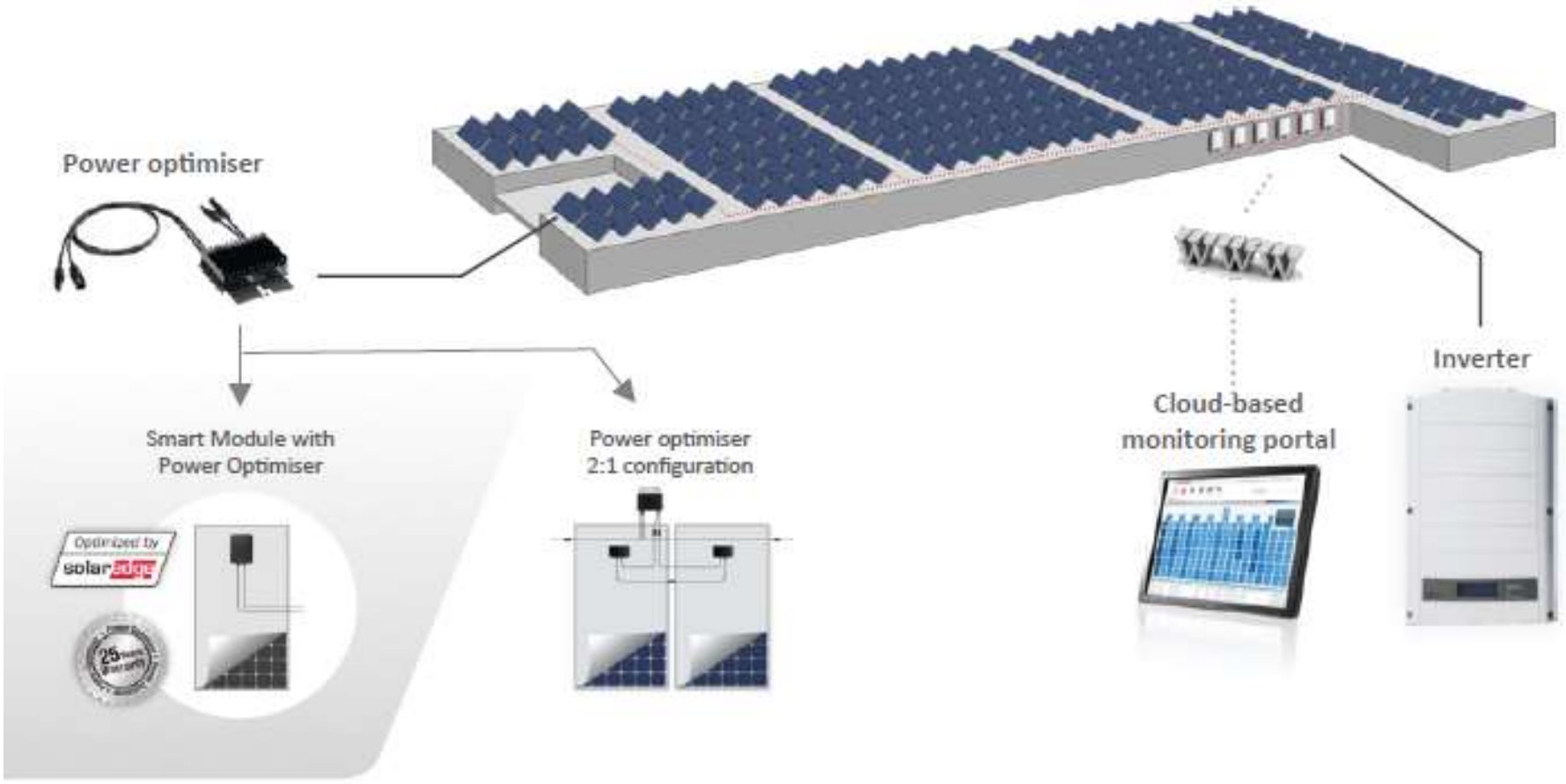
# Durban Solar Map



# Processes at Inception stage

- Site visits for building assessment
- Load profile generation
- Conceptual and detailed designs
- Minor Building Works applications
- AMAFA application for heritage sites
- Electricity Department for grid code applications
- Architecture Department for approval of structural and other building-related designs from Consulting Engineers

# System Technology Selection



# System Technology Selection

PV Panel Technology recommended for EOS

- Polycrystalline

  Longer proven track record than thin-film

  More cost-effective than monocrystalline

Inverter Technology recommended for EOS

- Solar Edge

  98% maximum efficiency

  Built-in communication hardware

# System Technology Selection

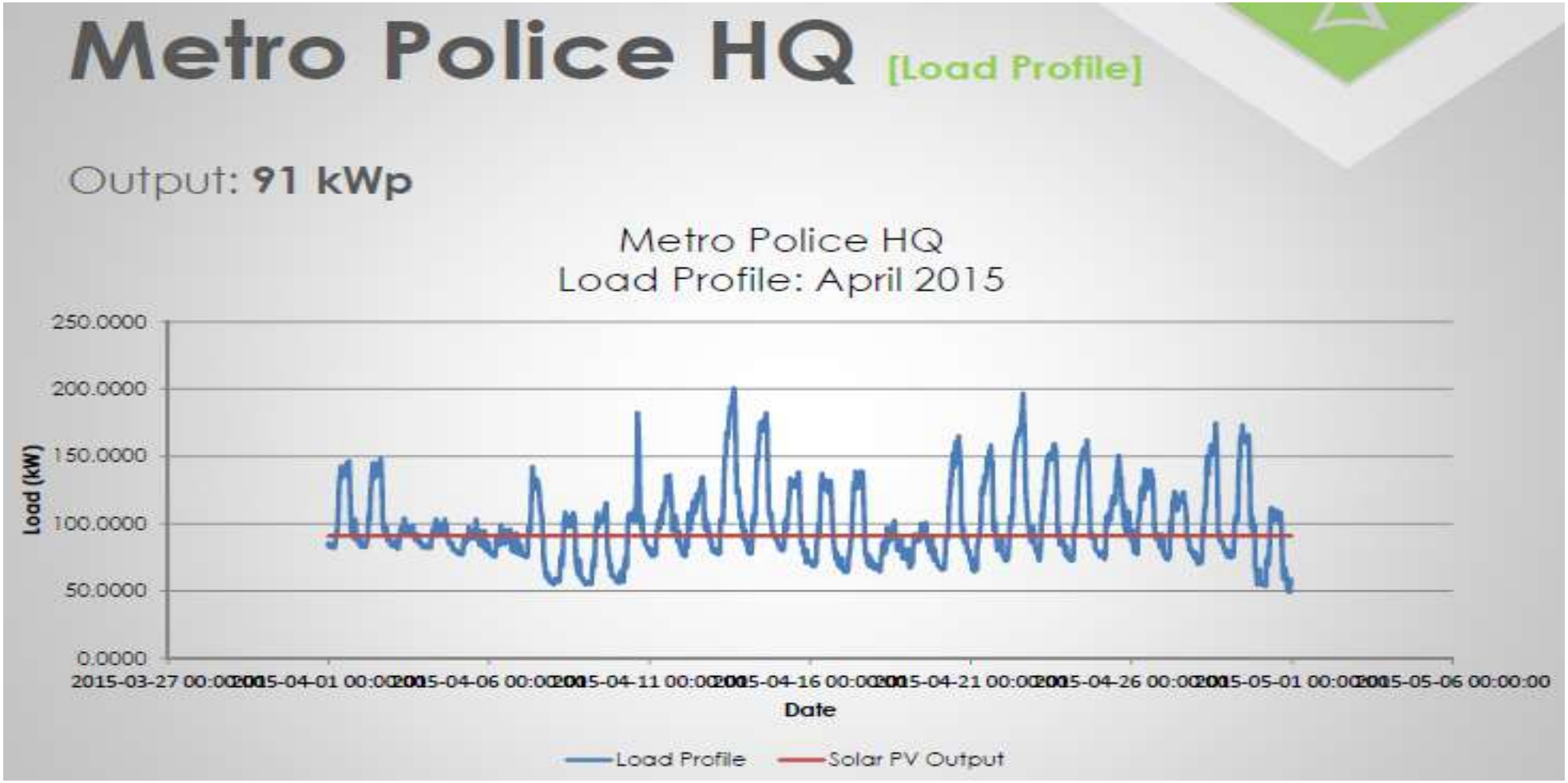
- Use of power optimisers for safety and optimal power output

- ABB Technology recommended for the People's Park Restaurant to compare the technology with SolarEdge for future projects.

# Energy Savings

| Building | Usage | Energy saved due to PV | Building energy saved | Projected Rands savings per 1st year |
|---|---|---|---|---|
| | MWh/Year | MWh/Year | % | ZAR |
| Metro Police | 890.17 | 137.40 | 15.44% | R105 000.00 |
| Sky Car | 4869.31 | 6.84 | 00.14% | R12 000.00 |
| People's Park | 255.69 | 40.43 | 15.81% | R65 000.00 |
| Ushaka Marine | 25150.96 | 165.40 | 00.66% | R120 000.00 |
| Water & Sanitation | 1657.42 | 76.68 | 04.63% | R60 000.00 |

# Load Profile Analysis



# SYSTEM PERFORMANCE

Plant Performance

- Solar Edge :https://monitoringpublic.solaredge.com/solaredge-web/p/kiosk?guid=4d95fd3e-52a4-48a4-bc5e-35179f3b594d&locale=en_US
- ABB : https://easyview.auroravision.net/easyview/?entityId=10766601&lang=en

# END

# Thank you