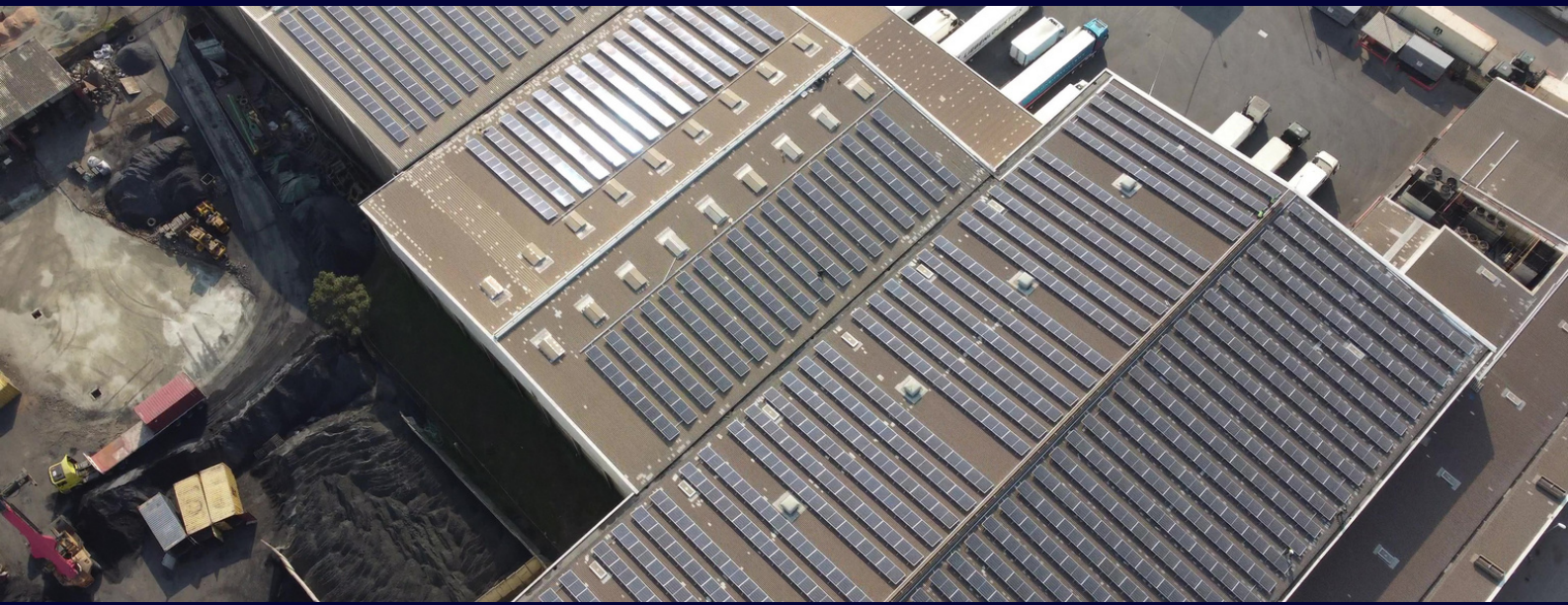




# KHOLD CASE STUDY



## SOLAR SOLUTION CASE STUDY

### »»» INTRODUCTION

**IJIKA SERVICES AND BROADREACH COLLABORATED, IN MARCH 2023, TO PROVIDE A SOLAR POWER SYSTEM AND OFFER ENGINEERING SERVICES TO KHOLD. KHOLD IS A LARGE STORAGE FACILITY IN THE DURBAN HARBOUR, BAYHEAD WHICH BEGAN OPERATIONS IN 2016 AND EXPANDED THEIR OPERATIONS TO BAYHEAD TERMINALS; WHICH IS ONE OF THEIR LARGEST COLD STORAGE FACILITIES. DUE TO THE LOAD-SHEDDING ENERGY CRISIS AND THE EXPECTED INCREASE OF 18,49% IN ELECTRICITY CHARGES, THE KHOLD TEAM DECIDED INCORPORATE SOLAR INTO THEIR ENERGY MIX TO ALSO HELP REDUCE THEIR CARBON FOOTPRINT.**



# »»» PROJECT SCOPE

THE SOLAR INSTALLATION PROJECT WAS ON A 10 318 METERS SQUARED ROOF WHICH HOLDS 1218 TIER ONE SOLAR PANELS INSTALLED BY IJKA SOLAR SOLUTIONS. THESE SOLAR PANELS, WITH THE CAPACITY OF 665W EACH FEED 7 SUNGROW INVERTERS WHICH CAN PRODUCE UP TO 770KWP (AC). THE TYPE OF SOLAR STRUCTURE USED WAS A FIXED TILT SYSTEM AT 15 DEGREES.



## »» PROJECT APPROACH

THE PROJECT DESIGNING AND ENGINEERING OF THIS SOLAR INSTALLATION PROJECT WAS CARRIED OUT BY INTERNAL IJKA ENGINEERS WITH THE ROOF STRUCTURE BRING AUDITED AND APPROVED BY EXTERNAL STRUCTURAL ENGINEERS.

BEFORE PROJECT COMMENCEMENT IJKA SUBMITTED THEIR NETWORK STUDY TO ETHEKWINI MUNICIPALITY AND RECEIVED PERMISSION TO PROCEED WITH THE INSTALLATION.

ON THE 23RD OF MARCH 2023 THE PROJECT BEGAN WITH LUNGA TONJENI (PROJECT MANAGER) AND MVELO NDLOVU (SITE MANAGER) AS WELL AS A TEAM OF 16 DC INSTALLERS AND 4 AC INSTALLERS.

HEALTH AND SAFETY PROTOCOLS WERE ENFORCED BY PHILILE RADEBE THE DIRECTOR OF HEALTH AND SAFETY AT IJKA SERVICES. THE IJKA TEAM WERE DETERMINED TO DELIVER A HIGH-QUALITY PROJECT IN A RECORD TIME OF 3 MONTHS, WHICH THE CLIENT WAS VERY PLEASED WITH.



➤➤➤ DURING THE PROJECT A COUPLE CHALLENGES CAME TO LIGHT SUCH AS THE DELIVERY OF MATERIALS, BASED ON MARKET HIGH DEMAND AND SHORT SUPPLY DYNAMICS, WHICH THE TEAM WAS ABLE TO GET AROUND AND MEET DEADLINES.

“THE BIGGEST CHALLENGE DURING THE PROJECT WAS RIGGING OF PANELS ONTO THE 12M UPPER ROOF. TO DO THIS A DOUBLE STEPPED RIGGING APPROACH HAD TO BE IMPLEMENTED. WITH STEP 1 BEING FROM GROUND LEVEL TO THE LOWER 6M ROOF USING A SCISSOR LIFT AND THEN EVENLY STACKING THE PANELS ON THE 6M ROOF, FOLLOWED BY THE USE OF A PV LIFT LADDER FROM THE 6M LEVEL UP TO THE 12M UPPER ROOF.” SAYS WAYNE LEHMKUHL (ENGINEERING DIRECTOR)

THANKS TO THE ADVANCEMENT IN RIGGING TECHNOLOGY AND THE ENERGETIC IJKA LABOUR FORCE THE PROJECT WENT ACCORDING TO PROGRAMME.

PONTINS EARTHING INSTALLED FENAL LIGHTENING PROTECTION WHILST THE IJKA TEAM INSTALLED TYPE 1&2 SURGE ARRESTORS AND ALL PV EARTH BONDING. “WE USE A CLOUD-BASED PLATFORM CALLED ISOLARCLOUD TO MONITOR PERFORMANCE OF THE SYSTEM AND PANELS” SAID JON HODSON (IJKA OPERATIONS MANAGER)

