



Infrastructure Expertise – Case Study

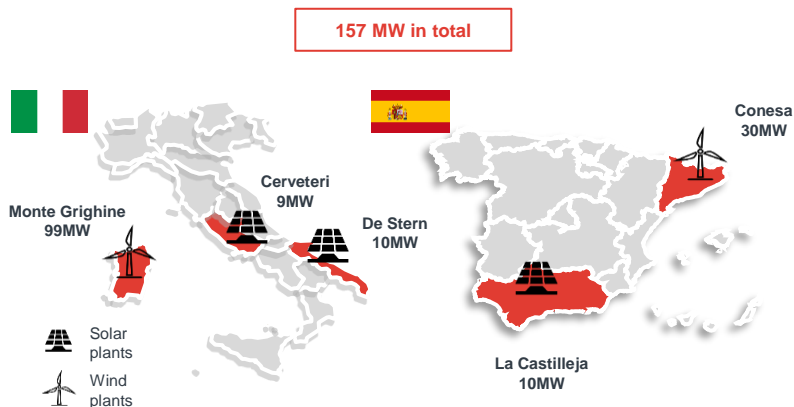
4NEW EXTENDED CASE STUDY

ARDIAN

Asset overview

INVESTMENT BACKGROUND

- › 4NEW is a holding company devoted to investing in wind farms and solar energy projects in Italy and Spain. The total energy capacity is 157MW
- › 4New portfolio was acquired in 2019 from Athena Investments and EDF. Ardian was able to source the opportunity on a bilateral basis thanks to EMS, our asset management service company
- › The portfolio was bought at a discount to the market as it was facing several difficulties: a complex shareholding structure, poor performance of De Stern solar plants due to module inefficiencies, administrative issues and overleverage in some parts of the portfolio
- › Ardian properly acknowledged risks and potential of the portfolio during the acquisition due diligence process



For illustrative purposes only without any binding contractual force. Past performances are not necessarily indicative of future returns
Source: Ardian, as of December 2022.



KEY FIGURES

157 MW

OF WIND (129 MW) and SOLAR (28 MW) ASSETS
(Located in Italy and Spain, and 100% owned by Ardian)

€49.2M

2021 REVENUE

€40.2M

2021 EBITDA

(82% Margin / EBITDA CAGR 19-21: 12% =)

Overview of the key achievements

REPOWERING DE STERN



+60%

ENERGY
PRODUCTION
AT DE STERN

Replacement of PV modules, inverters and structures by more efficient ones with 2022A production exceeding 2,000 eq. hours

REFINANCING AND O&M CONTRACT RENEGOTIATION

€121M OF DEBT RAISED AT ASSETS LEVEL ENABLING MARGIN REDUCTION AND TENOR EXTENSION

SAVINGS COMING FROM RENEGOTIATION OF O&M CONTRACTS | €9M*

PROACTIVE ASSET
MANAGEMENT
STRATEGY LEADING
TO OUTSTANDING
FINANCIAL
PERFORMANCES

SUSTAINABILITY

Comprehensive ESG reporting showing constant improvement over Ardian holding period

100% WASTE
RECYCLED

DIGITAL INITIATIVES

+1.8%

ADDITIONAL
POWER

Nordex improved start-up system on Monte Grighine windfarm

PROJECT OPTA

Better control over the assets with automatic checks of main underperformance issues and capacity to challenge OEMs – monitoring up to 2023

Value creation drivers

Selected opex and capital structure optimization examples

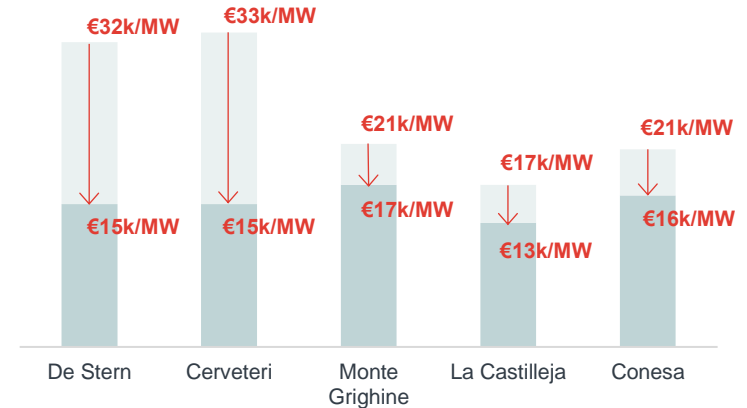
ENHANCING THE CAPITAL STRUCTURE THROUGH REFINANCING

- › In 2019-2020, as anticipated during the acquisition phase plan, Ardian refinanced 4New assets' operational debt to better tailor their capital structure
- › Four refinancing were performed leading to on average a 145-bps margin reduction and 3.5y tenor extension

Plants	Refinanced amount	Margin reduction	Tenor extension	Lenders
Monte Grighine	€43m	165 bps	1y	BNP
Conesa	€22m	115 bps	2y	Banco Santander, Banco Sabadell
De Stern	€24m	90 bps	6y	Intesa
La Castilleja	€32m	180 bps	6y	Caixabank

OPEX OPTIMIZATION THANKS TO CONTRACT RENEGOTIATION

- › Between 2019 and 2021, O&M contracts were renegotiated for all RES plants, leading to significant reduction of annual fees



€9M OF NPV SAVINGS*

*NPV on assets life cycle, assuming a 6% discount rate

ARDIAN REFINANCED THE ASSETS AND RENEGOTIATED SEVERAL O&M CONTRACTS RESULTING IN IMPORTANT COST REDUCTIONS

Value creation drivers

Continuously working on enhancing the production profile

DE STERN

9.7MW
CAPACITY
INSTALLED

€5m
CAPEX SPENT

+60%
PRODUCTION
INCREASE

Authorization of the repowering by the Competent Authority

The impact on energy output was estimated to 2.5 GWh/year of loss due to degradation of the panels

Beginning of work

Decision was made to replace modules, inverters and cables and to implement new tracker solution to increase production



All plant completed and commercial operation achieved

The initiative resulted in a + €1.6m additional revenue p.a.

JUNE 2020

DECEMBER 2020

JANUARY 2021

MARCH 2021

MONTE GRIGHINE

Monte Grighine is the second biggest wind farm in Italy with 99MW capacity¹



Digital upgrade

Installation of Nordex improved start-up system on Monte Grighine windfarm aiming at improving wind turbines operation with an increase of production of 1.8% on average

+1.8%

ADDITIONAL
POWER ON
AVERAGE

Value creation drivers

Improvement of ESG performance

ARDIAN PROACTIVE APPROACH TO ESG

- › Diligence during the acquisition phase
- › Throughout holding period, ESG performances have been improved:
 - **40,000 modules were recycled** from De Stern solar plant by the company NIKE
 - **5 hectares of cork trees** were replanted for €25k in 2021
 - **0 non-fatal occupational injuries and 0 incident occurred following significant HSE formalization efforts** including the appointment of a dedicated manager and the extension of monitoring to subcontractors

ZOOM ON SOLAR PANELS RECYCLING

- › De Stern solar plant was revamped between December 2020 and March 2021 in stages to minimize loss of production
- › All the existing panels were recycled with a 95% material recovery rate. Materials were separated during the recycling process and the relevant company was carefully chosen by the management.
- › 188k€ were spent for transportation and recycling, and 45k€ for additional logistics on site.



88.4kt CO₂eq
AVOIDED GHG EMISSIONS
IN 2020
**Annual emissions of
c.17,000 habitants in Italy**

100%
WASTE
RECYCLED

95%
EMPLOYEES
TRAINED ON
BUSINESS ETHICS
TOPICS

Source: PwC Impact Report

Value creation drivers

Operational improvement thanks to the deployment of OPTA

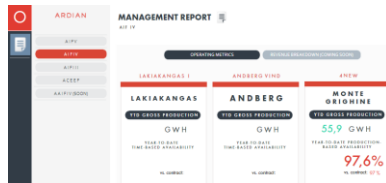
OPTA IS A PIONEERING INITIATIVE LAUNCHED TO OPTIMIZE THE MANAGEMENT OF RENEWABLE ASSETS THROUGH ENHANCED DIGITAL CAPABILITIES.

DATA HARMONISATION

UNIFORMISATION OF AVAILABILITY COMPUTATIONS, REPORTING & CONTRACTS ACROSS THE SITES FOR BETTER VISIBILITY ON PERFORMANCE

SECOND-LEVEL SCADA ONBOARDING & HARMONISATION

4New sites have been onboarded on Greenbyte, a second-level SCADA software, allowing systematic collection and monitoring of live and historical data

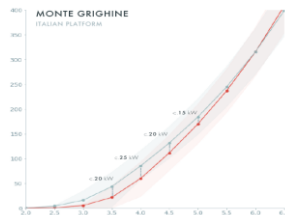


IMPACT

- › 4New sites have **GAINED DIGITAL MATURITY** with a full onboarding on a **BEST-IN-CLASS SECOND-LEVEL SCADA** software
- › This installation allowed the team to **CLOSELY MONITOR THE OPERATIONS OF THE ASSET** and **PRODUCE AUTOMATIC REPORTING**

CHALLENGING OEMS

STATISTICAL ASSESMENTS OF UPGRADES TO CHALLENGE OEMS REPORTS



NORDEX IMPROVED START-UP

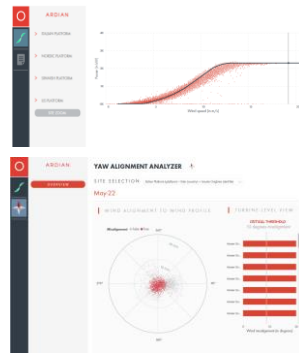
The team has been analyzing the improved start-up upgrade installed at Monte Grighine in 2021 and came to the same conclusion as Nordex with c.1.8% additional power obtained on average

IMPACT

- › By **PROACTIVELY REVIEWING AND CHALLENGING THE UPGRADES** that have been installed on the sites during the holding period of the assets, the team could **CONFIRM WHETHER EACH OF THEM BROUGHT SIGNIFICANT VALUE** enhancement to the asset

OPTA INTELLIGENCE FOR OPERATIONS

AUTOMATIC CHECKS OF MAIN UNDERPERFORMANCE ISSUES



IMPACT

- › Through the deployment of OPTA **OPERATIONAL INTELLIGENCE**, the management teams can **RECEIVE ALERTS AND ACT** whenever the application detects an **OPERATIONAL ISSUE** such as power curve deviations, non-contractual high wind early cutoffs or wind sector management

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