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RESIDENTIAL AND COMMERCIAL CASE STUDIES ES ACADEMY NOODBRIDGE STERFLEET HOTEL MALDON SOMERS HEATH SCHOOL KETTERING W: NXTGENENERGY.CO.UK 01268 928 690 INFO@NXTGEN.LTD

2024



CASE STUDY 1 - DUNSTABLE

Residential solar panels case study of an install of a Solar Panel System of 18 TrinaSolar Vertex S+ 435W Solar Panels (7.83 kWp) on the roof of a house in Harlington, Dunstable, UK.

INTRODUCTION

This case study delves into a residential solar panel installation of a 7.83 kWp solar PV system in Dunstable, designed and professionally installed by MCS Certified Solar PV Installers NXTGEN Energy Ltd. We'll explore the technical details, financial projections, and environmental impact of this solar panel system.

PROJECT DETAILS

Installer: NXTGEN Energy Ltd. Location: Dunstable, UK Technology: 18 Trina Vertex S+ 435W Dual Glass N-Type Solar Panels (7.83kWp Solar System) Installation: January 2024



SOLAR SOLUTION

NXTGEN Energy Ltd Solar Specialist Bobby proposed a 7.83 kWp Solar Panel System tailored to the specific needs and roof characteristics of this customers home.

Here's a breakdown of the key components:

SOLAR PV SYSTEM

Powerhouse Panels: 18 Trina Vertex S+ 435W Dual Glass N-Type panels boast superior light capture, high reliability, even in harsh conditions. The white backsheet enhances aesthetics and improves the temperature management of the solar panels.

NXTGEN ENERGY LTD. CASE STUDY 1 - DUNSTABLE

5-STAR CUSTOMER REVIEW



JONATHAN WYNN - DUNSTABLEProbably the best Solar Installer out there!

We have had a wonderful experience with NXTGEN Energy Ltd. From quotation through to installation the service has been slick and professional. The fact they can do the scaffolding and installation in house is a big asset and simplifies the job, no doubt adding savings as well. The price for the job was very competitive compared with other quotations; but I am 100% sure the service was levels above what I would have received via any other contractor. Special thanks to Bobby Barnes for all his help and advice who project managed the job throughout and was very attentive and considerate.

Inverter Brains: The Growatt SPH 6kW Dual MPPT Hybrid Inverter efficiently converts DC (direct current) electricity from the solar panels to usable AC (alternating current) power for your home appliances. Its dual MPPT technology maximizes solar energy harvest by tracking the performance of individual panels, under uneven sunlight conditions.

Battery Backup: The Growatt GBLI 6.5kWh LFP Solar Battery Storage empowers energy independence. Excess solar energy is effectively stored, allowing you to tap into clean power even when the sun sets or hides behind clouds, which happens a lot in the UK.

Solid Foundations: The Fastensol pitched roof solar panel mounting system, specifically designed for concrete tiles, secures the solar panels firmly and reliably, weathering the elements easily.

SOLAR RESULTS

Sun-kissed Savings: This Solar PV Array has an estimated annual energy generation of 6,766 kWh which translates to potential savings of £3,000 in the first year. Over the solar PV system's expected lifespan of 25 years, the financial gains can be substantial.

Payback Period: The initial investment of just over £9,800 is projected to be recouped within 3 years through reduced energy bills. This timeframe makes the system an attractive investment, especially considering the rising cost of Grid-supplied energy.

Smart Export Guarantee (SEG):

This UK government scheme rewards homeowners who export excess solar energy back to the Grid. With an estimated 2,656 kWh of excess solar energy exported annually, you could earn income from your system while contributing to a cleaner energy future in UK.

CONCLUSION

The Solar PV System installed in Dunstable presents a case for harnessing the power of the sun. With its potential for significant financial savings, reduced environmental impact, and energy independence, it's a worthwhile investment for not only the eco-conscious, but for all homeowners in the UK. Consideration of technical specifications, financial projections, and potential challenges helps ensure a successful solar journey with the expert solar energy team at NXTGEN Energy Ltd.

Remember, this case study is just a starting point. Consulting with a qualified solar installer like NXTGEN Energy Ltd. for a personalised assessment and free no-obligation quote on 01268 928 690 or email the solar team at info@nxtgen.ltd for a quote tailored to your property and your needs is crucial before making any final decisions.



CASE STUDY 2 - DILKES ACADEMY

Commercial solar panels case study of an install of a Solar Panel System of 45 TrinaSolar Vertex S 425W (19kWp) Solar Panels at Dilkes Academy School in South Ockendon, Essex.

INTRODUCTION

In the midst of December 2023. amidst festive cheer and chilly winds, Dilkes Academy School in South Ockendon, Essex, UK, took a significant step towards environmental sustainability. Partnering with MCS Certified Solar PV (panels) Installer and MCS Certified Battery Storage Installer NXTGEN Energy Ltd., the school chose to embraced clean energy by installing a robust Solar PV System on its premises. This case study delves into the details of this solar project, exploring its benefits, challenges, and the potential it holds for similar educational institutions in Essex and further afield in the UK.



COMMERCIAL PROJECT DETAILS



DILKES ACADEMY SCHOOL

- Installer: NXTGEN Energy Ltd., 66-72
 High Street, Rayleigh, Essex SS6 7EA
 Tel: 01268 928 690 info@nxtgen.ltd
- Location: Dilkes Academy, Garron Lane, South Ockendon, Essex RM15 5JQ
- Technology: 45 TrinaSolar Vertex S 425W (19kWp) Solar Panels
- Installation: December 2023

SOLAR BENEFITS

Environmental Impact

The 19kWp solar PV system is estimated to generate around 16,000 kWh of clean electricity annually, offsetting roughly 10 tonnes of CO2 (carbon dioxide) emissions. This translates to a significant reduction in the school's carbon footprint and contributes positively to combating climate change in UK.

Financial Savings

Over its lifespan of 25-years, the solar PV system is expected to generate substantial financial savings on electricity bills. These savings can then be reinvested in more educational resources, infrastructure upgrades, or other school priorities.

Educational Value

The solar panels act as a living learning tool, providing teachers and students with a tangible way to understand renewable energy concepts and their practical applications. This fosters environmental awareness and empowers students to become responsible citizens.

CHALLENGES

Roof suitability

Assessing the roof's structural integrity and ensuring compatibility with the chosen solar panel system was crucial. NXTGEN Energy's expertise in evaluating and handling such challenges ensured a smooth installation process.

Weather considerations

Installing during the winter presented logistical challenges due to colder temperatures and shorter daylight hours. NXTGEN Energy's skilled technicians adapted their approach to ensure timely and efficient completion of this solar project.

FUTURE POTENTIAL

Dilkes Academy's initiative sets a positive precedent for other academies, schools, colleges and universities in the UK. As energy costs continue to rise and environmental concerns escalate, solar panels offer a solution for educational institutions to secure their energy independence, reduce costs, and promote sustainability in the UK.

CONCLUSION

The Dilkes Academy and NXTGEN Energy partnership demonstrates the benefits of integrating solar energy into school infrastructure. By harnessing the power of the sun, Dilkes Academy is not only saving money and reducing its environmental impact, but also starting a culture of sustainability and environmental awareness among its students. This project paves the way for broader adoption of solar energy in the educational sector, contributing to a green future for generations to come in the UK.

The Dilkes Academy School is an example of how commercial solar panels can help schools cut energy costs, reduce carbon emissions, and attract ecoconscious parents and students. NXTGEN was able to provide a tailored solar energy solution that met the Dilkes Academy's energy needs and expectations.

Are you an Academy, School, College or University that is interested in going green with commercial solar panels? Get in contact with us today on 01268 928 690 or email info@nxtgen.ltd for a free quote.



CASE STUDY 3 - WOODBRIDGE

Residential solar panels case study of an install of a Solar Panel System of 24 Jinko Tiger Neo 435W Solar Panels (10.44 kWp) on the roof of a house in Rendlesham, Woodbridge, UK.

INTRODUCTION

Richard, a homeowner in Rendlesham, Woodbridge, UK, was looking for ways to reduce his reliance on the National Grid and generate clean, renewable energy for his home. He contacted NXTGEN Energy Ltd. to explore the feasibility of installing a solar panel system on the roof of his property in Woodbridge, UK.

PROJECT DETAILS

Installer: NXTGEN Energy Ltd. Location: Woodbridge, UK Technology: 24 Jinko Tiger Neo 435W N-Type All Black Mono Solar Panels (10.44 kW system) Installation: January 2024



SOLAR SOLUTION

NXTGEN Energy Solar Energy Specialist Bobby proposed a 10.44 kW solar PV system tailored to Richard's specific needs and unique roof characteristics.

Here's a breakdown of the key components:

SOLAR PV SYSTEM

24 Jinko Tiger Neo 435W N-Type All Black Mono Panels:

These solar panels boast an impressive 21.4% efficiency rating, meaning they convert a larger portion of sunlight into usable electricity. Their all-black design adds a modern aesthetic to Richard's roof.

NXTGEN ENERGY LTD. CASE STUDY 3 - WOODBRIDGE

5-STAR CUSTOMER REVIEW



RICHARD JOHNSON - WOODBRIDGE

After about 2 weeks of internet searching, countless phone calls from Solar companies, we finally came across Nxt Gen and I think as soon as I was on the Phone with Bobby, I was like this is someone who generally knows what he is talking about and knew what would work best for my specific needs and what else can I say except what a Bang on choice I had made!

From start to finish it felt like a breeze, Had Scaffolding up on a Wednesday, Installers came Thursday & Friday, then the Scaffolding came down a couple days later, Even my neighbours was like bloody hell that was fast!

Good communication on the handover so I can get up to speed on how the app and system works and I can already see my electricity use from the grid off my Smart Energy Meter reader is starting to save me money, so I am a Very Happy Customer.

Thank you so much Nxt Gen you are highly recommended

Growatt SPH 6kW Dual MPPT Hybrid Inverter: This

versatile inverter acts as the brain of the solar PV system, converting the DC electricity generated by the panels into AC electricity for his home appliances. Its dual MPPT technology ensures optimal solar energy harvesting even in challenging shade conditions.

Comprehensive Monitoring

System: Richard can keep track of his energy production and consumption in real-time through a dedicated meter and monitoring system. This allows him to optimize his solar energy usage and maximize the benefits of his solar PV system.

MCS Accreditation: The PV system meets the standards set by the Microgeneration Certification Scheme (MCS), guaranteeing its quality and eligibility for UK government incentives like the Smart Export Guarantee scheme.

SOLAR RESULTS

Reduced Carbon Footprint: By generating clean energy, the solar PV system is projected to save Richard about 1,600 kg of CO2 (carbon dioxide) emissions annually. This is equivalent to planting 78 new trees or driving about 6,000 miles in a car.

Financial Savings: With an estimated payback period of 5 years, the solar PV system is expected to save Richard money on his bills over the long term. Additionally, the Smart Export Guarantee (SEG) Scheme payments from exporting excess solar energy to the National Grid will further boost his financial gains.

Increased Energy Independence:

This system provides Richard with a reliable source of clean energy, reducing dependence on the Grid and empowering him to take control of his energy consumption today, tomorrow and in the future.

Email: info@nxtgen.ltd

CONCLUSION

This case study demonstrates the power of a well-designed and installed solar PV system like the one implemented for Richard in Woodbridge, UK. By choosing a reputable MCS Certified company like NXTGEN Energy and opting for high-quality components, homeowners can achieve significant environmental and financial benefits while gaining greater energy independence. Richard's story serves as an inspiration for others to explore the possibilities of solar & join the clean energy revolution.

Remember, this case study is just a starting point. Consulting with a qualified solar installer like NXTGEN Energy Ltd. for a personalised assessment and free no-obligation quote on 01268 928 690 or email the solar team at info@nxtgen.ltd for a quote tailored to your property and your needs is crucial before making any final decisions.

Website: https://nxtgenenergy.co.uk





Nxtgenenergy

Reviews 20 . Excellent



VERIFIED COMPANY







CASE STUDY 4-OYSTERFLEET HOTEL

Commercial solar panels case study of an install of a Solar Panel System of 116 Bluesun 54 cell 425W (50kWp) Solar Panels at the Oysterfleet Hotel & Pub in Canvey Island, Essex.

INTRODUCTION

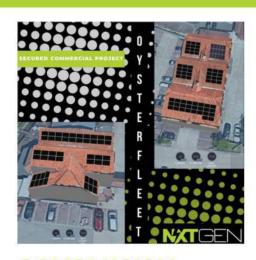
The Oysterfleet is a family-run hotel with 40 rooms, a pub, and a restaurant in the town centre of Canvey Island in Essex, UK. The hotel wanted to reduce its energy costs and CO2 footprint by investing in solar panels. The Oysterfleet contacted NXTGEN Energy, a leading solar panel installer based in Essex, UK.

NXTGEN Energy assessed the Oysterfleet hotel's roof space and energy usage and proposed a 50MW solar PV system with 116 Bluesun 54 cell 425w Solar Panels with a rated efficiency of 21.25% and 3 Solis S5-GC25K Solar Hybrid Inverters. The system would cover about 50% of the hotel's electricity demand and save about 20 tonnes of CO2 emissions per year.

The solar panel system would also generate income from the Smart Export Guarantee (SEG), a scheme that pays small-scale generators for exporting surplus electricity to the Grid.

NXTGEN Energy installed the system in early 2023 and connected it to the National Grid. The system has been performing well and generating savings for the Oysterfleet Hotel ever since. The hotel is also considering installing electric vehicle (EV) chargers on site to cater to EV-owning guests and staff in the near future.





CONCLUSION

The Oysterfleet Hotel is an example of how commercial solar panels can help hotels (and pubs and restaurants) cut energy costs, reduce carbon emissions, and attract ecoconscious customers. NXTGEN Energy was able to provide a tailored solar energy solution that met the Oysterfleet hotel's needs and expectations.







Nxtgenenergy

Reviews 20 • Excellent



VERIFIED COMPANY





CASE STUDY 5 - MALDON

Residential solar panels case study of an install of a Solar Panel System of 17 Jinko Tiger Neo 435W Solar Panels (7.395 kWp) on the roof of a house in Heybridge, Maldon, Essex, UK.

INTRODUCTION

This case study delves into a residential solar installation of a 7.395 kWp solar PV system in Heybridge, Maldon, for our customer Matthew that was designed and professionally installed by MCS Certified Solar PV Installers NXTGEN Energy Ltd. In this case study we'll explore all the details of this solar panel system.

PROJECT DETAILS

Installer: NXTGEN Energy Ltd.

Location: Maldon, UK

Technology: 17 Jinko Tiger Neo 435W N-Type All Black Mono panels. (7.395 kWp PV System)

Installation: January 2024



NXTGEN ENERGY LTD. CASE STUDY 5 - MALDON

5-STAR CUSTOMER REVIEW



https://nxtgenenergy.co.uk

Highly Recommend NxtGen

To me the main issue was a high quality installation, and they delivered that.

I did my homework, shopped around, many competitors tried to put them down saying they are just a scaffolding company, but the results were excellent.

Try asking this company the really detailed questions about battery, inverter and panel combinations with logical strategy behind it, many floundered beyond the basic specs. Bobby at NxtGen is in a different league, he has a thorough, detailed understanding of what you need. I trusted him and he delivered exactly what he said he would.

Add that to the install team who were polite, friendly, helpful and hard working, I am very happy with the results.

SOLAR SOLUTION

NXTGEN Energy Solar Energy Specialist Bobby proposed a 7.395 kW solar PV system tailored to Matthew's specific needs and unique roof characteristics.

Here's a breakdown of the key components:

SOLAR PV SYSTEM

Solar Panels: 17 Jinko Tiger Neo 435W N-Type All Black Mono solar panels. These high-efficiency, all-black solar PV panels boast a sleek aesthetic and are built for durability in harsh weather conditions.

Hybrid Inverter:

G3 GivEnergy 5kW hybrid inverter. This advanced hybrid inverter converts DC electricity from the solar panels to AC electricity for use in the home, and also seamlessly integrates with battery storage.

Battery Storage:

GivEnergy 8.2kWh LiFePO4 Battery. This lithium iron phosphate solar battery offers long lifespan, safety, and high energy density, allowing for storage of excess solar energy.

Panel Mounting: Fastensol pitched roof mounting system designed for slate roofs. This robust system ensures secure solar panel mounting on the homeowner's specific roof type.

SOLAR RESULTS

Annual Energy Generation: 5,561 kWh, estimated to cover 77% of the homeowner's annual electricity needs with the added battery storage.

CO2 Savings: 1,181 kg per year, equivalent to driving 4,200 miles in a car or planting 54 new trees.

Payback Period: 7 years, with potential cost savings from reduced Grid dependence over system's lifespan of 25-years.

CONCLUSION

This case study highlights the details and considerations presented in the original free no-obligation quote. By analysing all these details, potential homeowners like Matthew can gain a deeper understanding of the proposed solar PV system and its potential benefits for their specific needs, circumstances & budget. With comprehensive information and transparent cost breakdowns. Matthew can make an informed decision about investing in clean energy and reducing his reliance on the National Grid for his energy.

Remember, this case study is just a starting point. Consulting with a qualified solar installer like NXTGEN Energy Ltd. for a personalised assessment and free quote on 01268 928 690 or email team at info@nxtgen.ltd for a quote tailored to your home & your needs is crucial before making any decisions.





Nxtgenenergy

Reviews 20 · Excellent











CASE STUDY 6 - SOMERS HEATH SCHOOL

Commercial solar panels case study of an install of a Solar Panel System of 138 Trina Vertex S+ 435W (60kWp) Solar Panels at Somers Heath School in South Ockendon, Essex.

INTRODUCTION

In the midst of February 2024, amidst unending rain and chilly winds, Somers Heath School in South Ockendon, Essex, UK, took a significant step towards environmental sustainability. Partnering with MCS Certified Solar PV (panels) Installer and MCS Certified Battery Storage Installer NXTGEN Energy Ltd., the school chose to embraced clean energy by installing a robust Solar PV System on its premises. This case study delves into the details of this solar project, exploring its benefits, challenges, and the potential it holds for similar educational institutions in Essex and further afield in the UK.



COMMERCIAL PROJECT DETAILS



SOMERS HEATH SCHOOL

- Installer: NXTGEN Energy Ltd., 66-72
 High Street, Rayleigh, Essex SS6 7EA
 Tel: 01268 928 690 info@nxtgen.ltd
- Location: Somers Heath School, Foyle Dr, South Ockendon, Essex RM15 5LX
- Technology: 138 TrinaSolar Vertex S+ 435W (60kWp) Solar Panels
- Installation: February 2024

PROJECT SCOPE

Site assessment

NXTGEN's team conducted a thorough evaluation of the school's roof space, including size, orientation, and structural integrity, to determine suitability for solar panel installation.

System design

A customized solar PV system was designed, considering the school's electricity consumption patterns, roof characteristics, and budget constraints. Ensuring optimal energy production.

Project management

NXTGEN oversaw the entire project lifecycle, from obtaining permits to coordinating with relevant stakeholders, ensuring a smooth and efficient execution.

Installation

The team from NXTGEN, with safe access provided by Next Generation Scaffolding Ltd., installed the solar panels, inverter and electrical wiring, adhering to strict safety regulations and industry best practices.

Commissioning and testing

Upon completion, the system underwent rigorous testing and commissioning to verify performance and ensure it meets all safety standards.

PROJECT BENEFITS

Financial savings

The solar panels are anticipated to generate a substantial portion of the school's energy requirements, leading to cost reductions on their energy bills over the system's lifespan. This financial benefit can be reinvested in other educational resources or school improvement initiatives.

Reduced carbon footprint

By harnessing clean and renewable solar energy, Somers Heath School is contributing to mitigating climate change. The solar power translates to a lower reliance on fossil fuels and a smaller carbon footprint.

Educational value

The solar panel installation serves as a valuable educational tool, offering students first hand exposure to renewable energy technology and its environmental benefits. This can inspire future generations to embrace sustainability practices.

Increased property value

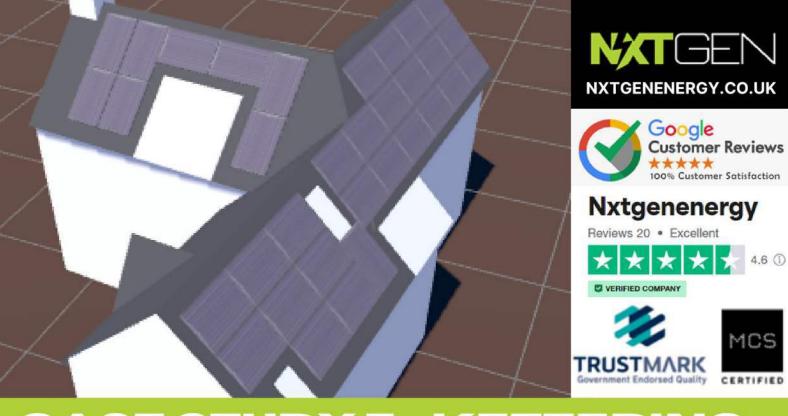
Studies suggest that buildings with solar panels can command a higher market value. This potential increase in property value is an added benefit for the school.

CONCLUSION

The Somers Heath School and NXTGEN Energy partnership demonstrates the benefits of integrating solar energy into school infrastructure. By harnessing the power of the sun, Somers Heath School is not only saving money and reducing its environmental impact, but also starting a culture of sustainability and environmental awareness among its students. This project paves the way for broader adoption of solar energy in the educational sector, contributing to a green future for generations to come in the UK.

The Somers Heath School is an example of how commercial solar panels can help schools cut energy costs, reduce carbon emissions, and attract ecoconscious parents and students. NXTGEN was able to provide a tailored solar energy solution that met the Somers Heath School's energy needs and expectations.

Are you an Academy, School, College or University that is interested in going green with commercial solar panels? Get in contact on 01268 928 690 or email info@nxtgen.ltd for quote.



CASE STUDY 7 - KETTERING

Residential solar panels case study of an install of a Solar Panel System of 33 Jinko Tiger Neo 435W Solar Panels (14.35 kWp) on the roof of a house in Kettering, Northamptonshire, UK.

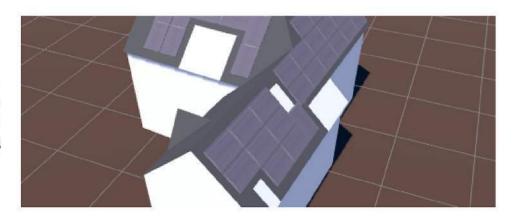
INTRODUCTION

This case study delves into a residential solar PV installation of a 14.35 kWp solar PV system in Kettering, UK, designed and professionally installed by MCS Certified Solar Panel Installers NXTGEN Energy Ltd. We'll explore all the technical details, financial projections, and the environmental impact of this solar panel system.

PROJECT DETAILS

Installer: NXTGEN Energy Ltd. Location: Kettering, UK Technology: 33 Jinko Tiger Neo 435W N-Type All Black Mono Solar Panels (14.35 kWp)

Installation: February 2024



SOLAR SOLUTION

NXTGEN Energy Ltd Solar Specialist Bobby proposed a 14.35 kWp Solar Panel System tailored to the specific needs and roof characteristics of this customers home.

Here's a breakdown of the key components:

SOLAR PV SYSTEM

Solar Panels: 33 Jinko Tiger Neo 435W N-Type All Black Mono solar panels, known for high efficiency & sleek design. Solar Inverter: Fox G10 10kW Single Phase Solar Inverter (3 MPPT), capable of handling the output and maximizing energy production.

NXTGEN ENERGY LTD. CASE STUDY 7 - KETTERING

5-STAR CUSTOMER REVIEW



JONATHAN WYNN - DUNSTABLE Probably the best Solar Installer out there!

We have had a wonderful experience with NXTGEN Energy Ltd. From quotation through to installation the service has been slick and professional. The fact they can do the scaffolding and installation in house is a big asset and simplifies the job, no doubt adding savings as well. The price for the job was very competitive compared with other quotations; but I am 100% sure the service was levels above what I would have received via any other contractor. Special thanks to Bobby Barnes for all his help and advice who project managed the job throughout and was very attentive and considerate.

Battery Storage: GivEnergy All in One AC Coupled System with Gateway Hybrid Inverter, integrating seamlessly with the system and allowing for selfconsumption of generated electricity.

Mounting System: Fastensol pitched roof mounting system, specifically designed for slate roofs and ensuring secure panel installation.

Additional Equipment: Bidirectional meter, cables, connectors, isolators, and other components for safe and efficient system operation.

SOLAR RESULTS

Energy Generation: About 10,600 kWh annually, potentially covering a significant portion of the client's energy needs each year. CO2 Reduction: About 2,250 kg annually, equivalent to offsetting the carbon emissions of driving about 8,000 miles in an average family petrol car.

Financial Savings: About £3,200 in the first year, with a payback period of approx 9 years.

Potential for additional income through Smart Export
Guarantee (SEG) payments.

Environmental Impact: Reduced reliance on fossil fuels like oil, gas and coal and contribution to a cleaner energy future.

SOLARIMPACT

Reduced electricity bills:

Lower bill costs and increased financial independence from high energy bills in the UK.

Increased energy security:

Reduced reliance on the National Grid & potential for energy independence with battery storage expansion.

Positive environmental contribution: Active participation in the transition to renewable energy and combating climate change in the United Kingdom.

CONCLUSION

The Solar PV System installed in Kettering presents a case for harnessing the power of the sun. With its potential for significant financial savings, reduced environmental impact, and energy independence, it's a worthwhile investment for not only the eco-conscious, but for all homeowners in the UK. Consideration of technical specifications, financial projections, and potential challenges helps ensure a successful solar journey with the expert solar energy team at NXTGEN Energy Ltd.

Remember, this case study is just a starting point. Consulting with a qualified solar installer like NXTGEN Energy Ltd. for a personalised assessment and free no-obligation quote on 01268 928 690 or email the solar team at info@nxtgen.ltd for a quote tailored to your property and your needs is crucial before making any final decisions.