



# CLEAN GROWTH

    SOUTH EAST

## A Final Project Report

October 2021

Kent  
County  
Council



  
Essex County Council

East Sussex  
County Council  




SOUTH EAST  
LOCAL ENTERPRISE  
PARTNERSHIP





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Bradwell Windfarm

Title page image: Thanet Offshore Wind Farm [Source – Vattenfall]



## Chapter 1:

# Introduction

The Clean Growth South East project was piloted between December 2020 to September 2021. This chapter presents an introduction to the project, its aims and the content of this report.



In December 2020, Opergy Ltd. were appointed by Kent County Council (KCC) to deliver the South East LEP (SELEP) Low Carbon and Energy Sector Support Programme. This work was led by KCC working in partnership with Essex and East Sussex Councils and with funding provided by SELEP's Sector Support Fund.

The project was commissioned to address two main areas of work as follows;

1. To provide an in-depth analysis of the supply chain for Energy and Low Carbon Environmental Goods and Services (LCEGS) sectors across SELEP
2. To develop and pilot a 'Clean Growth' Programme to address and overcome significant challenges restricting innovation and economic growth in high opportunity areas of the sector

The overarching aim of this research and pilot programme; branded **Clean Growth South East** at an early stage of delivery, was to identify and recommend viable initiatives that could be pursued by public and private organisations to maximise growth of this high potential sector in the South East into the future.

This project was conceived and awarded funding in early 2019 with delivery planned to take place between October 2019 – September 2020. The following milestones and deliverables were specified at application stage:

- Develop and populate a **comprehensive business database** capturing company level information e.g., competencies and contact information for a **minimum of 6,000 Clean Growth businesses**
- Conduct a thorough **Skills & Productivity Analysis** identifying the issues, challenges and opportunities facing businesses within the sector

- Conduct an assessment of the **Potential Economic Impacts** possible through maximising support to the Clean Growth Sector across the South East
- **Develop & Pilot a Clean Growth Programme**, seeking to build upon the growing opportunities in the sector, and to track **increasing GVA amongst 600 companies** as well as **100 jobs created and safeguarded** across the sector

The ambitious targets outlined, whilst having been met in most delivery areas, were set pre- Covid-19 pandemic which has had significant impacts on business's ability to operate and achieve growth as they would have under business-as-usual circumstances.

In practical delivery terms, the project activity commenced in late December 2020 after competitive tender to award the work, with delivery taking place between January – September 2021. During this time, the impacts of the global pandemic necessitated a tailored approach to delivery, particularly in terms of the pilot programme which was delivered entirely remotely, with all project events and significant company and stakeholder engagement being undertaken online. This approach offered some benefits and dis-benefits as explored in this report.

This final report and associated annexes summarise the work conducted under this commission, the key findings at each delivery stage, and the over arching recommendations for KCC, SELEP and their partners to continue supporting the Clean Growth Sector into the future.

Following project completion, a period of KCC led evaluation will measure the lasting impact of this work, how the recommendations can be adopted across SELEP, and the wider growth of the Clean Growth sector across the South East.



In answer to the brief, this project has taken a systematic approach to addressing the aims and objectives completing a number of in-depth research tasks and extensive stakeholder and business engagement to develop the findings and results summarised in this report.

The key project activities have been as follows:

- To set a clear definition for the Clean Growth Sector, consistent with currently accepted regional and national definitions
- Completed a **sector profile** to establish a detailed picture of the current Clean Growth sector across the SELEP area; identifying the size and value of the sector for the economy (the baseline)
- Conducted a SELEP wide analysis of the **regional carbon footprint**; the driver for pursuing widespread Clean Growth across the region, to identify the sectors contributing the most to the regions emissions profile
- Completed an analysis of the **forecast capital investment in Clean Growth** related projects of national significance, to understand the potential size of the opportunity for growth in the sector in the future
- **Conducted extensive stakeholder and business engagement** to identify key challenges and knowledge gaps for businesses growing in the Clean Growth Sector
- Assessed the **existing business support and funding landscape** offering practical support to the Clean Growth supply chain and businesses working across the sector, delivering innovative clean growth related products and services

- Delivered **two comprehensive reports** detailing the above research and findings; the Clean Growth South East Economic Impacts Report (February 2021) and Supply Chain Assessment & Gap Analysis Report (June 2021)
- Designed and delivered the seven-month **Clean Growth South East Pilot Programme** engaging directly with businesses working in the sector across the region to identify the greatest opportunities and overcome significant challenges currently restricting economic growth and innovation in key opportunity areas in the sector, such as offshore renewables, green hydrogen and nuclear.
- Based on this intelligence, and presented at the end of this report, identified SELEP wide **recommendations to guide future initiatives** to support the regions clean economic growth and capitalise on the opportunities offered by these fast-growing sectors.

All elements of this work sought to cover the whole of the SELEP from Greater Essex (including Thurrock and Southend-On-Sea), through Kent & Medway and across East Sussex geographies. The project team directly engaged with local governments, Growth Hubs, Chambers of Commerce, academic institutions, business groups, and other stakeholders across these counties during delivery.

In delivering this work we closely collaborated with the following partners:



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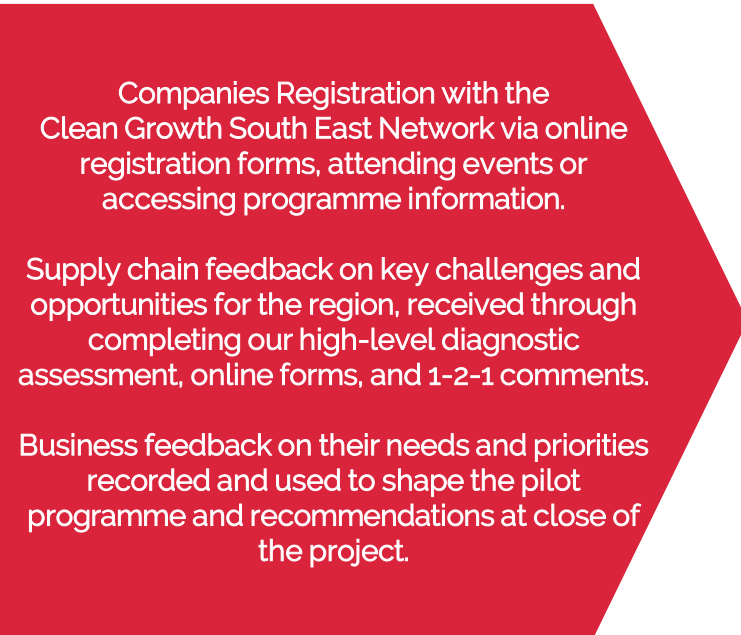


# The Clean Growth South East Pilot Programme



The following graphic summarises the key inputs, activities and outputs of the **Clean Growth South East** pilot programme:

## Inputs



## Activities



## Outcomes



## Timeline



# Project Findings & Achievements

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**CLEAN GROWTH**  
SOUTH EAST

## Research Findings Indicated:

 **£13.8** billion  
annual turnover  
of **low carbon** and **energy**  
businesses across the South East 

Over  
**12,680**  
Businesses working across

**13,360**  
Businesses units

(7% of the total SELEP  
Business Base)

**83,336**  
employees in  
energy and low carbon 

**18,238** Kt/CO<sub>2</sub>  
Carbon Emissions within  
**South East** Local  
Enterprise Partnerships 

**£122** billion  
capital investment  
in **clean growth**  
capital projects across **South East**  
by **2050** 

## Clean Growth South East Delivered:

**438**  
Unique Enterprises  
Engaged

Regular News & Updates  
Distributed to  
**3,732**  
Unique Contacts

**6,273**  
Companies in Database

**3X** in Depth Analysis  
Reports 

Companies directly  
supported created  
 **82**   
new jobs

**16** events/workshop  
sessions delivered





**Chapter 2:**

# **Understanding Clean Growth - Sector Profile**

Building an understanding of the profile of the Clean Growth sector in the South East region, its total size, make-up, economic value, and growth trends in recent years.



A core objective of this commission was to provide an in-depth analysis of the supply chain for Energy and Low Carbon Environmental Goods and Services (LCEGS) sectors across SELEP.

This chapter sets out how this project has defined the Clean Growth sectors across the South East, and presents an **updated sector profile** summarising the size and capabilities of the sector and its growth since the assessment compiled at the outset of the project.

In assessing the sector profile, the first task of this work was to set out a clear definition for the target sector – termed in this study as the Clean Growth Sector – relevant to the latest sector definitions and terminology used in economic, political and statistical terms today. There have been a number of different definitions used in the past. Previously the activities, products and services in this sector have been referred to collectively as the **Low Carbon and Environmental Goods and Services (LCEGs)**. The term LCEGS was used in commissioning this work.

In March 2015 the Department for Business Innovation & Skills (now BEIS) commissioned a report in order to gain a clear understanding of the size and performance of the low carbon economy and its contribution to the UK economy. From this work, an updated terminology and definition was developed; **The Low Carbon and Renewable Energy Economy (LCREE)**. Since 2015, data collected by ONS via a Survey of business within the LCREE definition has been the primary source of official information on

LCREE activity in the UK, and is used by BEIS as the official metric to quantify the Clean Growth economy.

The Office for National Statistics (ONS) also report annually on the **Environmental Goods and Services Sector (EGSS)** framework, adopted under the UN System of Environmental Economic Accounting. The EGSS is made up of areas of the economy engaged in producing goods and services for environmental protection purposes, as well as those engaged in conserving and maintaining natural resources, aiming to quantify the green economy.

For this study we have adopted a definition for the clean growth sector in line with both LCREE and EGSS frameworks, against which to quantify and measure the sector. This definition details subsector categories within the sector, mapped against the relevant Standard Industrial Classification (SIC) Codes covering key business classifications that contain energy, low carbon and renewables activity.

The final definition adopted through this work, detailed on the following page, was agreed and approved by Kent County Council as the lead commissioning body.

A detailed breakdown of the definition used in this study is provided in the appendix to this report, detailing a full description of the sectors and subsectors included as well as the relevant SIC code categories.



# Defining Clean Growth

The table opposite details the key sub-sector activities included within the Clean Growth definition.

As explained, to ensure an inclusive and complete definition, this definition combines economic sectors and activities included within both the LCREE and EGSS definition, where there is some cross-over but some distinct categories included in one but not the other.

Also included are activities within non-renewable energy related sectors. This has been included as there are many companies operating across the energy sector traditionally supplying to the non-renewable energy sector, with hugely relevant services, products and capabilities for renewables industries. These companies are increasingly diversifying into renewables sectors. Inclusion of this category allows for inclusion of these companies within this assessment, but still provides the opportunity to differentiate this sub-sector from the rest of the definition should this be appropriate.

## Low Carbon, Renewable Energy, & Environment (LCREE)

## Environmental Goods & Services Sectors (EGSS)

Sector	Sub-Sector
<b>Low Carbon Electricity &amp; Renewable Heat</b>	Renewable energy
	Nuclear power
<b>Energy from Waste and Biomass</b>	Bioenergy
	Alternative fuels
<b>Low Carbon &amp; Energy Efficiency Products, Equipment &amp; Machinery</b>	Energy-efficient lighting
	Energy-efficient products
	Energy monitoring, saving or control systems
<b>Low Carbon Construction</b>	Low Carbon Construction
<b>Low Carbon Services</b>	Low Carbon financial and advisory services
<b>Low-Emissions Vehicles and Infrastructure</b>	Low-emission vehicles and infrastructure
<b>Water, Waste and Recycling</b>	Waste Management, Reuse & Recycling
	Water Supply & Treatment
<b>Forestry &amp; Woodland Management</b>	Forestry & Woodland Management
<b>Non-Renewable Energy related</b>	Non-Renewable Energy related

# Evidencing Clean Growth across the South East



To understand the size of the Clean Growth sector, its contribution to the regions economy, and to measure its growth in recent years, this report presents an in-depth analysis of the sectors profile. It presents the **latest data on the sectors economic profile**, updating analysis presented earlier in the commission to monitor Clean Growth in the SELEP, as far as possible, throughout the project period.

Clean Growth South East assessed the sector profile in early 2021 presented in the **SELEP Economic Impacts Report** (February 2021), with further details at county level being presented in the **Supply Chain Assessment and Gap Analysis Report** (June 2021).

Whilst this analysis showed the Clean Growth sector saw a consistent and strong growth trend between 2015 - 2020, with employment and number of businesses increasing by approximately 19% in this timeframe, it is well understood that a number of factors have played an adverse role on business growth in recent years. The regions economy has been particularly affected by challenges including Brexit and inevitably the Covid-19 pandemic.

Understanding the size and economic performance of the sector over these years is important to develop both public and private interventions to support Clean Growth, and to direct resources and funds to where they can be of most value.

For the purposes of this final report, and with reference to the latest economic data available, we have repeated the sector profile analysis provided at the beginning of the year. The updated sector profile detailed in the following pages indicates the growth of the sector, despite the challenges facing the wider economy.

The headline figures are as follows:

Over **12,680** Businesses  
working across **13,360** Businesses units



Contributing an estimated average **GVA** of  
**£8.5 billion** and **business turnover** of  
**£13.8 billion** in 2019



**83,336**  
employees in  
energy and low carbon



# Building a Sector Profile

## Methodology



To compile the Clean Growth sector profile we have referenced official UK labour market statistics available through the Office for National Statistics (ONS). Whilst the use of SIC code-based analysis to assess the sectors performance carries some inherent challenges it is a widely accepted, efficient and repeatable method of economic analysis, frequently utilised in economic forecasting.

The following datasets and assumptions have been utilised:

- **UK Business Counts:** quantifying business counts by number of enterprises and number of local units (premises) at UK, Regional, LEP and County geographies to five-digit SIC code level. Figures are taken directly from this source (last published 4<sup>th</sup> October 2021, presenting economic statistics for the years 2015 - 2021) and, with reference to the sector definition, the relevant Clean Growth percentage multiplier is applied to assess the sector specific business and local units counts at SIC code levels.
- **Business Register and Employment Survey (BRES):** providing total employment figures at UK, Regional, LEP and County geographies to five-digit SIC code level. Employment statistics have been taken directly from this source (last published 6<sup>th</sup> November 2021, presenting economic statistics for the years 2015 - 2020) and, with reference to the sector definition, the relevant Clean Growth percentage multiplier was applied to assess the sector specific business and local units counts at SIC code levels.

- **Annual Business Survey (ABS):** providing estimated average GVA (aGVA) and business turnover figures alongside other data on business performance at two- or three-digit SIC code levels. Figures on total aGVA and Turnover at three-digit SIC code level are taken directly from this source (last published 24<sup>th</sup> June 2021, presenting economic statistics for the years 2018 and 2019), averaged according to the number of businesses quoted in the ABS, and multiplied the number of businesses identified at SIC code level by the assessment of UK Business Counts.

Year-on-year the ABS provides data on the next year of assessment, as well as a re-evaluation of the previous years assessed. In the re-evaluation of the year 2018 data (reported in previous Clean Growth South East reports), as estimated in the most recent ABS publication, aGVA and business turnover have been reduced. For this reason, the latest data set has been assessed for the latest year available, 2019, as well as for the previous year 2018, in order to provide a consistent comparison year on year and to more accurately assess year on year growth.

It is noted that within the data there are some inherent inconsistencies between the data modelled at the different geographical levels. ONS data from these sources, particularly at smaller geographical areas, can be based on models, assumptions and averages resulting in occasional disparity in business, employment and economic performance between data at district and county levels compared to larger regional and national geographies.

# Sector Profile

CHECK ALL FIGURES

**CLEAN GROWTH**  
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The updated analysis providing an assessment of the sectors profile for 2021 indicates that across SELEP the Clean Growth Sector includes **12,685 businesses, working across 13,360 business units** (premises), which represents 7% of the total business base across the SELEP geography.

These businesses employed an estimated **83,336 employees** and, as reported in the initial economic impacts report, represent a significant value to the region's economy, **contributing an estimated average GVA of £8,456 million and business turnover of £13,832 million in 2019.**

When considering the regional breakdown of these businesses and employees, the greater proportion are within Greater Essex and Kent & Medway, owing to the larger size of these counties as compared to East Sussex.

The Clean Growth sector shows considerable growth since 2015 figures, **increasing in both number of businesses and employees by 21% and 14%** respectively. Growth is also seen in most areas on the previous years figures.

Across the SELEP area as a whole, **estimated business turnover grew by 4%** or £506 million between 2018 – 2019, increasing in all geographical locations other than Kent where turnover reduced by an estimated -25% (£1,240 million). Estimated Average Gross Value Added (aGVA) fell marginally across SELEP as a whole in same time period, by £42 million. Reductions in aGVA at the SELEP level were driven by a more substantial reduction in GVA of -15% seen in Kent and of a smaller -2% in Southend-on-Sea.

The following pages explore the business growth rates in recent years in further detail.

	UK	South East LEP	Greater Essex	East Sussex	Kent & Medway
<b>Number of Enterprises (2021)</b>	157,637	<b>12,685</b>	5,882	1,548	5,187
<b>Growth in the Business Base (2015 - 2021)</b>	+23,009 (17%)	<b>+2,222 (21%)</b>	+981 (20%)	+261 (20%)	+957 (23%)
<b>Number of Local Units (2021)</b>	169,780	<b>13,360</b>	6,122	1,618	5,554
<b>Growth in Number of Local Units (2015 - 2021)</b>	+23,425 (16%)	<b>+2,221 (20%)</b>	+944 (18%)	+240 (17%)	+1,038 (23%)
<b>Employment (2020)</b>	n/a	<b>83,336</b>	38,523	8,183	37,097
<b>Growth in Employment (2015 - 2020)</b>	n/a	<b>+10,552 (14%)</b>	+5,792 (18%)	+1,140 (16%)	+4,462 (14%)
<b>Estimated aGVA (2019) (£Million)</b>	£131,994	<b>£8,456.</b>	£3,563	£908	£3,175
<b>Growth in aGVA (2018 - 2019)</b>	+3,445 m (3%)	<b>-£42 m (0%)</b>	+£121 m (4%)	+£59 m (7%)	-£450 m (12%)
<b>Estimated Business Turnover (2019) (£Million)</b>	£252,514	<b>£13,832</b>	4,487	£1,248	£4,227
<b>Growth in Business Turnover (2018 - 2019)</b>	+£13,656 m (6%)	<b>+£506 m (4%)</b>	+£317 m (8%)	+£134 m (13%)	-£1,183 m (22%)

# Sector Profile

Growth in the Clean Growth sectors has remained consistent across SELEP. Between 2015 – 2021, the sector saw a 2,222 increase in the business base (21%), with **number of businesses increasing by 255 (2%) in the last year of available data.**

Growth in number of businesses and local units (premises) in the sector across SELEP was slightly faster than that Clean Growth measured across the UK which increased by an estimated 17% over the same time period. Furthermore, expansion of the Clean Growth sector appears faster than growth in the wider SELEP economy which increased by a lesser 13% in business counts within the same timeframe.

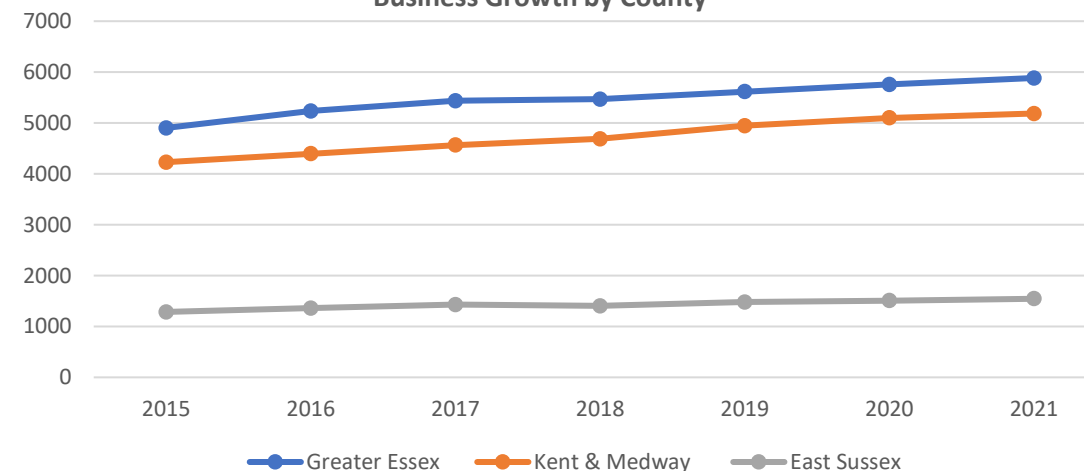
The fastest growth in Clean Growth business counts between 2015 – 2021 was seen in Kent and Medway where business counts increased by 957 or 23%. In the counties of Essex and East Sussex growth of 20% in the business base occurred. **Growth in business counts of 2% was seen in each county across the South East between 2020 – 2021 data.**

Employment in the sectors also grew by 10,552 (14%) between 2015 - 2020, however saw a **decrease of -3,320 or 4% on the previous year of reported data** for 2019.

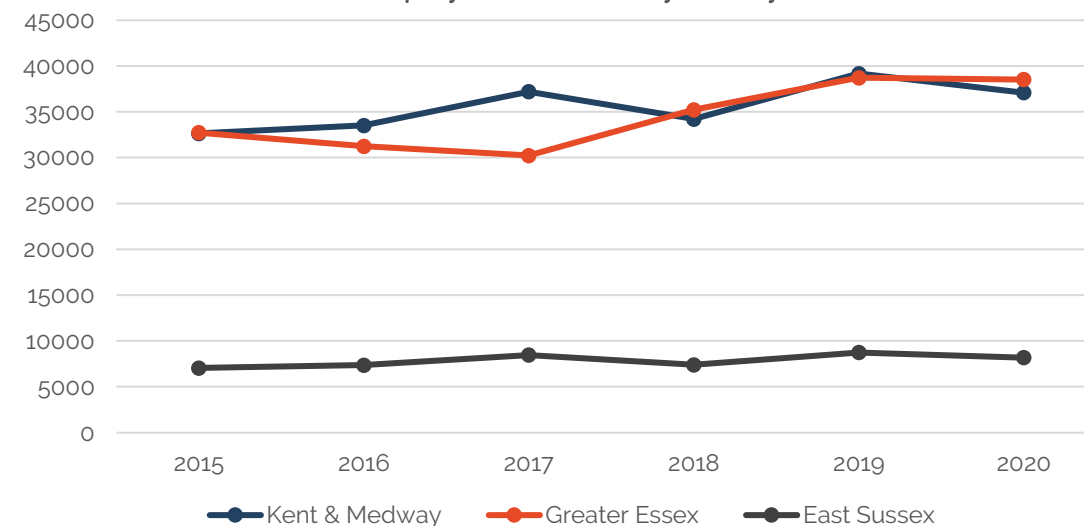
Despite a significant growth in employment between 2015 – 2020 of 5,792 employees (18%) in East Sussex, with the counties of Kent and Medway and Greater Essex experiencing employment growth of 14% and 16% respectively in the same time period, the latest data appears to show a sharp decrease in employment figures in the most recent year of measurement. Between 2019 – 2021, East Sussex and Kent & Medway experienced the sharpest decrease in employment at 6% and 5% respectively, Greater Essex saw a decrease of 1% employment in this period.

This data shows that whilst businesses have managed to stay open in the early stages of the covid-19 pandemic, the sharp fall in employment between 2019 – 2020 may indicate pressures on the clean growth sector during this time period.

Business Growth by County



Employment Growth by County



[Source: UK Business Counts and Business Register & Employment Survey available from ONS, analysis by Opergy Ltd]

When considering the size of the Clean Growth Sector across the SELEP, it is also valuable to consider the particular sector specialisms demonstrated by the economic profile.

Across SELEP, the predominant sub-sectors according to their economic value to the regional economy are as follows:

- **Energy Efficient Products, Equipment & Machinery:** Estimated business turnover of £4,306.43 m
- **Non-Renewable Energy Related:** Estimated business turnover of £3,192.30 m
- **Water, Waste & Recycling:** Estimated business turnover of £3,192.30 m

Whilst the subsector Low Carbon & Energy Efficiency Products, Equipment & Machinery, is also the biggest sector in terms of business counts, number of local units and employment, the data demonstrates how the Non-Renewable Energy sub-sector has considerable current value to the regional economy whilst containing some of the lowest business counts and employment levels.

Conversely, there are relatively high business counts and employment numbers in the sectors of low carbon financial and advisory services, and low-emissions vehicles and infrastructure. This demonstrates that whilst these sub sectors do not offer the highest economic value in terms of turnover and aGVA, they remain significantly important sub-sectors of the SELEP Clean Growth sector.

In terms of growth since the last years annual figures in 2018, the **fastest growth in turnover and aGVA is seen in the sub-sectors Low Carbon Electricity and Renewable Heat, Forestry and Woodland Management, and Water, Waste and Recycling.**

In contrast, **reductions in turnover and aGVA are seen in the sub-sectors Non-Renewable Energy, Energy from Waste and Biomass, and Low Carbon Financial and Advisory Services** in the last year of data.

Detailed data on the size of each subsector within the Clean Growth definition are provided in the table on the following page with the largest three sectors by aGVA and business turnover highlighted. The rate of growth of each subsector in the Clean Growth definition summarised in this table and across the following pages.

 **£13.8** billion  
annual turnover  
of **low carbon** and **energy**  
businesses across the South East  

# Sector Profile

The following table details data on the size of each subsector within the clean growth definition with the largest three sectors by business turnover and aGVA highlighted.

SELEP	Number of Enterprises (2021)	Number of Local Units (2021)	Employment (2020)	Estimated Business Turnover (2019) (£Million)	Turnover growth (2018-19) (£Million)	Estimated aGVA (2019) (£Million)	aGVA Growth (2018-19) (£Million)
<b>Low Carbon Electricity &amp; Renewable Heat</b>	87	117	1,572	£ 655.26	£ 86.19 (15%)	£ 124.39	£ 28.04 (29%)
<b>Energy from Waste and Biomass</b>	83	87	116	£ 84.18	-£ 9.21 (-10%)	£ 18.34	-£ 2.20 (-11%)
<b>Low Carbon &amp; Energy Efficiency Products, Equipment &amp; Machinery (inc. Manufacture &amp; Install)</b>	7,162	7,267	35,260	£ 4,306.43	£ 188.86 (5%)	£ 4,132.32	£ 79.49 (2%)
<b>Low Carbon Construction</b>	855	881	4,050	£ 313.24	£ 19.47 (7%)	£ 510.22	£ 24.96 (5%)
<b>Low Carbon Financial and Advisory Services</b>	1,570	1,623	9,028	£ 816.60	-£ 13.89 -2%)	£ 807.06	£ 20.04 (3%)
<b>Low-Emission Vehicles and Infrastructure</b>	965	1,164	10,792	£ 755.42	£ 66.99 (10%)	£ 662.83	£ 22.01 (3%)
<b>Water, Waste and Recycling</b>	870	1,080	15,060	£ 2,916.89	£ 257.49 (10%)	£ 1,529.15	£ 152.42 (11%)
<b>Forestry &amp; Woodland Management</b>	1,015	1,025	4,720	£ 791.83	£ 158.95 (25%)	£ 305.25	£ 46.99 (18%)
<b>Non-Renewable Energy related</b>	77	116	2,601	£ 3,192.30	-£ 248.77 (-7%)	£ 366.79	-£ 413.51 (-53%)
<b>TOTAL</b>	<b>12,685</b>	<b>13,360</b>	<b>87,382</b>	<b>£ 13,832.14</b>	<b>£ 506.09 (4%)</b>	<b>£ 8,456.35</b>	<b>-£ 41.74 (0%)</b>

# Growth in Business Base by Subsector

When presented by growth in number of businesses, the fastest growing subsectors across SELEP between 2015 – 2021 are as follows:

- **Low Carbon Construction:** growing by 220 businesses or 35%
- **Low-Emissions Vehicles & Infrastructure:** growing by 225 businesses or 30%
- **Forestry and Woodland Management:** growing by 210 businesses or 26%
- **Energy Efficient Products, Equipment & Machinery** and **Water, Waste Management, Reuse & Recycling:** both growing by 22% or 1,311 and 155 businesses respectively.

In the most recent year of data between 2020 – 2021, the fastest growth in business counts was in Water, Waste Management, Reuse & Recycling (7% growth) and Forestry & Woodland Management (5%).

Between 2015 – 2021, there were minor reductions in the number of businesses providing Low Carbon Electricity & Renewable Heat and Energy from Waste and Biomass in this time period of 3% and 5% respectively.

Between 2020 – 2021, the number of businesses reduced in the subsectors Energy from Waste and Biomass (5%) and Low-carbon financial and advisory services (2%).



# Growth in Employment by Subsector

When presented by growth in terms of employment, the fastest growth between 2015 – 2020 has been seen in following subsectors:

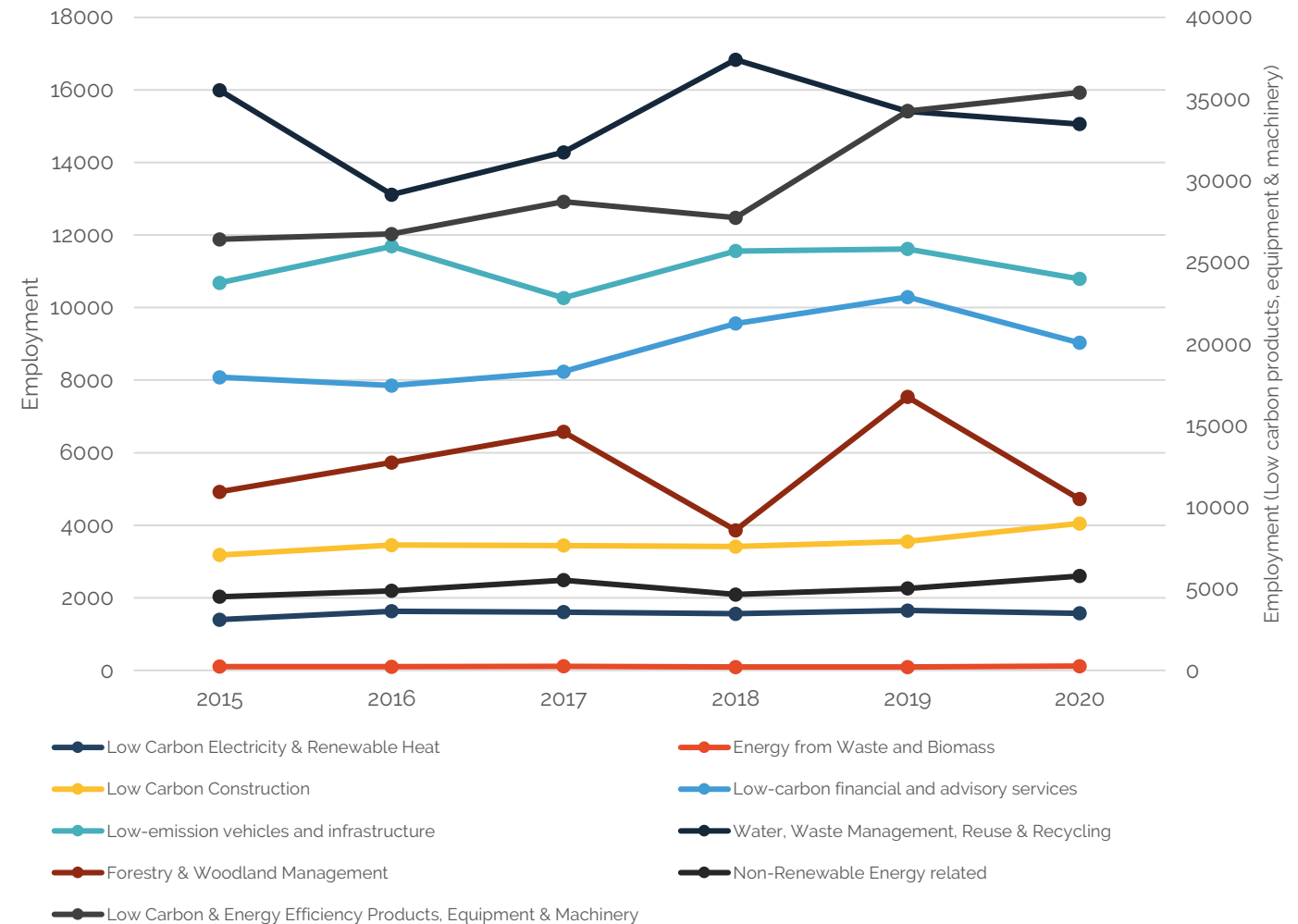
- **Energy Efficient Products, Equipment & Machinery:** growing by 8,991 employees or 34%
- **Non-Renewable Energy related:** despite low total employment counts, grew by 574 or 28%
- **Low Carbon Construction:** growing by 870 employees or 27%

Overall between 2015 – 2021, there were minor reductions in employment in businesses in the Water, Waste Management, Reuse & Recycling, and Forestry & Woodland Management sectors reducing by 6% and 4% respectively.

However, in the most recent year of data between 2019 – 2020, the majority of sub-sectors saw a decrease in employment. The most seriously affected were Forestry & Woodland Management seeing a reduction in 2,815 or 60%, and Low-Carbon Financial and Advisory Services seeing a reduction of 1,261 or 14%.

Between 2019 – 2020, increased employment was seen in 4 sub-sectors; Low Carbon & Energy Efficiency Products, Equipment & Machinery (22%), Non-Renewable Energy related (13%), Low Carbon Construction (12%), and Energy from Waste and Biomass (3%).

SELEP Clean Growth Employment by Sub-Sector



[Source: Business Register & Employment Survey available from ONS, analysis by Opergy Ltd]

# Summary Sector Profile



The updated sector profile shows some signs of resilience within the Clean Growth sector in recent years, despite the challenges facing the wider economy. The data demonstrates continuing growth in business counts, turnover and GVA on the trends presented in earlier. There has been an **increase in the business base of 255 (2%)** since the last assessment on 2020 data, as well as an increase in GVA and business turnover on the last recorded figures. In total the sector contributed an **estimated average GVA of £8,456 million** and **business turnover of £13,832 million** in 2019, representing considerable economic benefits across all counties within SELEP.

Despite this apparent growth, the most recent year of data indicates a decrease in employment metrics across the region and the majority of clean growth sub-sectors. A **decrease in employment of 3,320 (4%)** in total employment was measured between the years 2019 – 2020.

This may indicate some early impacts of the Covid-19 pandemic on the clean growth sector. Businesses appear to have managed to remain open, and in the early stages of the pandemic despite significant disruption to work patterns, staffing and supply chains, with some new businesses created. However, employment levels appear to have suffered and reduced in many sub-sectors.

Whilst growing in most areas of SELEP, aGVA and business turnover has fallen in some distinct geographies, which brings down average growth figures across the region. Despite the growth in number of businesses and employment in Kent, business turnover and aGVA in the county decreased between 2018 – 2019. Turnover decreased by £1,240 million, and aGVA reduced by £475 million. This trend is not reflected in any other local or unitary authority areas in the SELEP. This data represents the estimated economic status of the county between 2018 – 2019 so is noted that this

trend is not likely to be attributable to the impacts of Brexit or Covid-19.

The dominant and fastest growing sub-sectors across the SELEP are:

- **Energy Efficient Products, Equipment & Machinery:** the largest clean growth sub-sector overall and one of the fastest growing in terms of number of businesses across SELEP.
- **Water, Waste & Recycling:** with a significant economic contribution across the South East, as well as being the fastest growing within business counts. This sub-sector also has a dominant impact on the regions overall value and only minimal employment reductions.
- **Non-Renewable Energy Related:** despite the turn in focus to decarbonise the energy system, the sub-sector continues to have a significant economic contribution to the region and saw a significant increase in employment proportionally since 2015.
- **Low Carbon Construction:** also a fast-growing subsector in terms of growth in number of businesses and employees.

Other sub-sectors are also showing signs of continued growth including Low Emissions Vehicles & Infrastructure which has seen high growth in the number of businesses, aGVA and Turnover. Some other sub-sectors affected by reduced employment figures between 2019 – 2020 but seeing growth in other parameters such as Forestry & Woodland Management should be monitored and supported to maintain their workforce over time.

This sector profile presents a snapshot in time and conclusions drawn on the potential impacts of Covid-19 should be monitored and validated over time as more data becomes available. It is recommended that this analysis is repeated in future years to continue monitoring the growth across the Clean Growth Sector.



**Chapter 3:**

# **Understanding Clean Growth - Carbon Emissions Profile**

Summarising updated data on SELEP's carbon footprint; an indication of the scale of the Clean Growth challenge across the region

# Carbon Emissions Across SELEP

In 2020, research by the Tyndall Centre for Climate Change Research and the University of Manchester outlined a 'Carbon Budget' for the UK if we are to make a fair and ethical contribution to the commitment to ensure global temperature rise remains well below 2°C and no more than 1.5°C if possible. According to this research, the South East LEP region has a total **Carbon Budget of 115.4 million tonnes (MtCO<sub>2</sub>) for the period 2020 to 2100**. It was measured that, should CO<sub>2</sub> emission rates in the region continue at business as usual rates as in 2017, the SELEP region would use this entire budget as early as 2027.

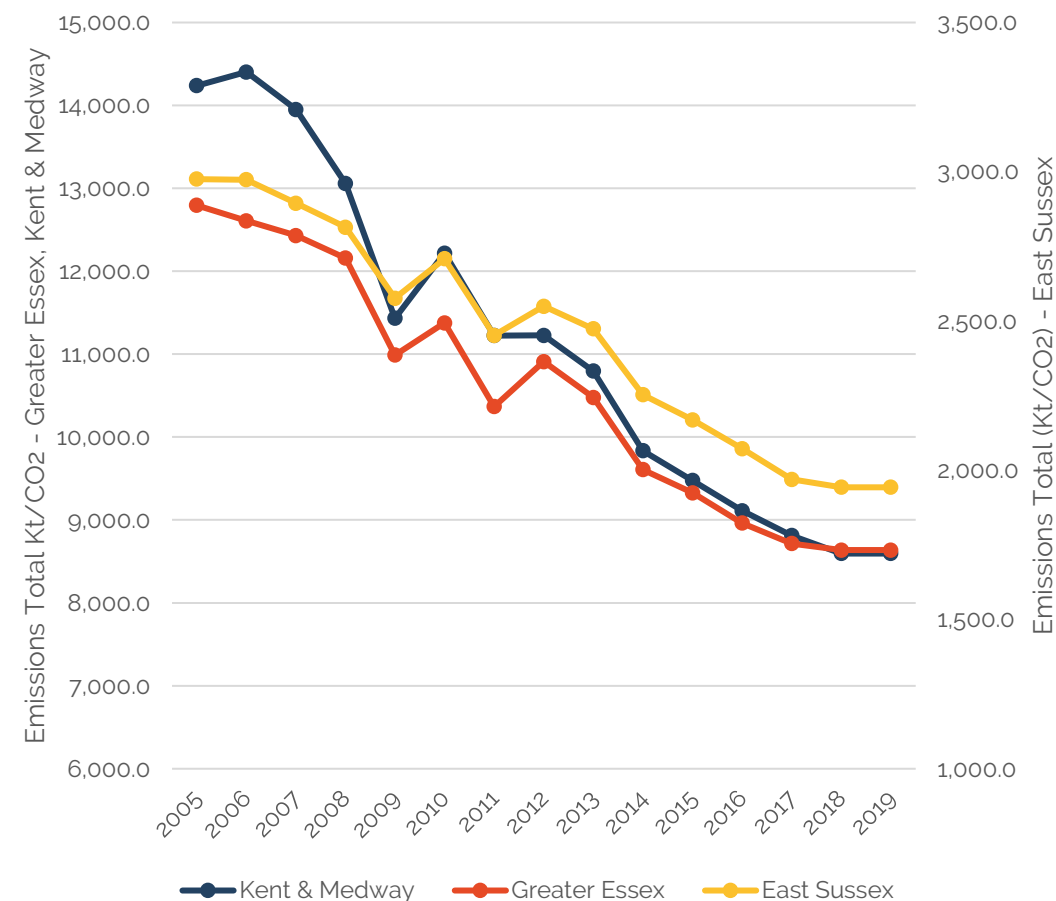
This puts into stark reality, the urgent need to address carbon emissions across the SELEP; a task which goes hand in hand with achieving Clean Growth.

Earlier in this work, referencing data from the National Atmospheric Emissions Inventory (NAEI), the Clean Growth South East project assessed the SELEP carbon footprint. In this chapter we update this carbon footprint according to the latest data publicly available from NAEI, published in June 2021 (an update on the data previously published in project reports).

Whilst outside the original scope of work, this assessment highlights areas of the economy contributing the greatest portions of carbon emissions into the regional footprint. This offers valuable insights into where practical support and achievable interventions to achieve Clean Growth could have the greatest impact on emissions reduction across the region.

According to NAEI, emissions reduced across the **SELEP** area by 11,770 Kt/CO<sub>2</sub> or 39% between 2005 – 2019. **In 2019 the remaining total emissions across the region was estimated to be 18,238 Kt/CO<sub>2</sub>**. The chart opposite indicates the trend of emissions reductions across the three counties across SELEP, observed most steeply in Kent & Medway.

Total Emissions Reduction - South East LEP Region



[Source: National Atmospheric Emissions Inventory, analysis by Opergy Ltd]

# Emissions Categories



This total emissions data can be broken down not only across the counties within SELEP and to individual local authority areas, but also to identify estimated emissions from distinct areas of economic activity.

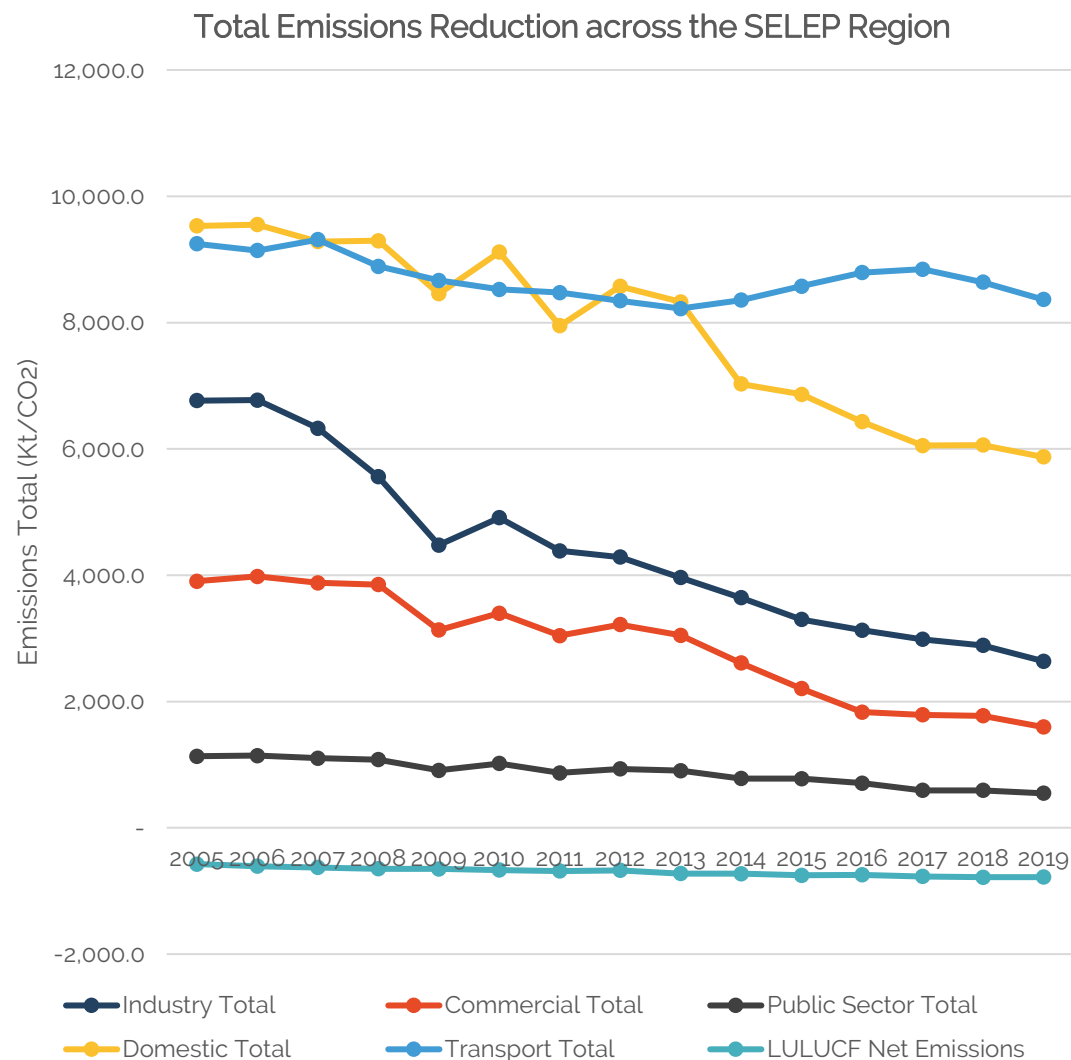
The NAEI breaks down emissions into six categories of emissions that are reported in the following pages; Industrial, Commercial, Public Sector, Domestic, Transport and Land uses such as forestry.

This emissions breakdown presents data in a greater level of detail than reported before through this project, including net carbon emissions and removals from land uses such as Forestry and other green spaces. This recognises the importance of our green spaces and land uses across the South East for carbon sequestration or storage purposes in forests, grasslands and soils.

The following slides explore the regions emissions in some detail, showing first the emissions broken down by economic sectors across the South East, then in further detail at county level. The influence of key larger emitters, or point sources sites of emissions in each county is also highlighted.

A detailed breakdown of this emissions data is provided in the appendix to this report, highlighting where county and local authority areas should focus their emission reductions efforts to have the greatest impact on total emissions at a local level. A full list of all Point Sources are also itemised in this appendix document.

Emissions Category	Description
<b>Industrial Emissions</b>	From large scale industrial installations, Agriculture, and the consumption of Electricity, Gas and other fuels in industrial settings
<b>Commercial Emissions</b>	Calculated from the consumption of Electricity, Gas and other fuels in commercial settings
<b>Public Sector Emissions</b>	Calculated from the consumption of Electricity, Gas and other fuels in public sector settings
<b>Domestic Emissions</b>	Calculated from the consumption of Electricity, Gas and other fuels in domestic settings
<b>Transport Emissions</b>	Emissions from Motorways, A-roads and Minor roads, Diesel Railways and other transport sources
<b>LULUCF Net Emissions</b>	Carbon emissions & removals from Land Use, Land Use Change & Forestry sector, Including net emissions from Forestry Land, Cropland, Grassland, Wetlands, Settlements and Harvested Wood Production



[Source: National Atmospheric Emissions Inventory, analysis by Opergy Ltd]

Emissions reductions across the SELEP region are assessed here in further detail by emissions categories.

The greatest emissions reductions since 2005 proportionally have been seen in **Industrial and Commercial emissions seeing reductions of 61% (4,128 Kt/CO<sub>2</sub>) and 59% (2,309 Kt/CO<sub>2</sub>)** respectively. Public sector emissions have reduced by 52% (587 Kt/CO<sub>2</sub>). A large part of the pronounced decline in Industry, Commercial, Public Sector as well as Domestic emissions can be attributed to the significant increase of low carbon and renewable energy on the grid.

**The largest emissions categories across SELEP are in Transport and Domestic emissions** which have also seen the lowest reductions in emissions since 2005 of 10% and 36% respectively. In the six years **between 2013 – 2019, transport emissions increased by 2% overall**, although trends in the last two years indicate this is now decreasing again. In 2019, transport emissions stood at 8,365 Kt/CO<sub>2</sub> and domestic at 5,872 Kt.CO<sub>2</sub>.

These trends indicate that, despite the decrease seen in emissions across the region over the past decade, considerable action should be taken to achieve further reductions in all sectors of the economy.

Widespread action to decarbonise the transport sector and reduce emissions from domestic properties is required. Public sector investment directed towards supporting further emissions reduction in these areas is likely to have the greatest impact in terms of emissions reductions which could be key to ensuring the region supports local and national targets to achieve net zero.

Additional action should also be taken to support large industry to further decarbonise their emissions and those of their supply chains.

# Carbon Emissions

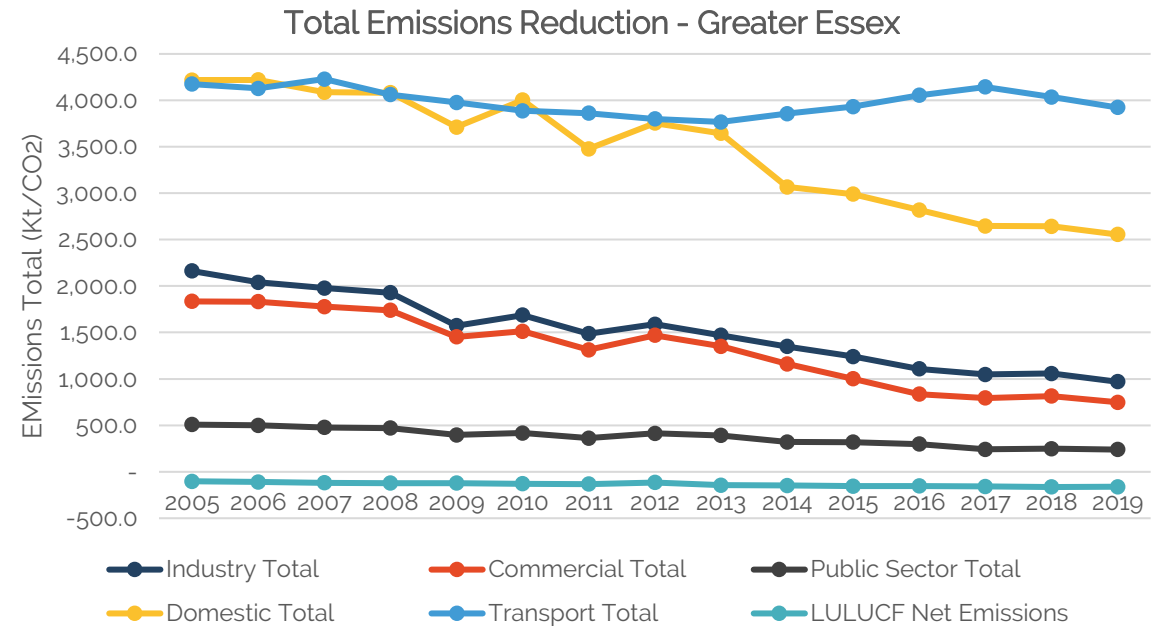
## Focus on Greater Essex

Greater Essex, including Thurrock and Southend-on-Sea, produced the greatest emissions on a county level across the south east in 2019 at **8,276 Kt/CO<sub>2</sub>**. As the largest county by area and population, the emissions total equated to 51 kt CO<sub>2</sub> per km<sup>2</sup>.

Across the county as a whole, total emissions reduced by 35% between 2005 – 2019. The emissions profile by sub-sector of the economy closely mirrors that across SELEP. The greatest emissions reductions since 2005 proportionally have been seen in **Commercial and Industrial emissions seeing reductions of 59% (1,086 Kt/CO<sub>2</sub>) and 55% (1,193 Kt/CO<sub>2</sub>)** respectively. Public sector emissions have reduced by 53% (26g Kt/CO<sub>2</sub>).

The greatest emissions come from Transport and Domestic sources at 3,923 and 2,555 Kt CO<sub>2</sub> in 2019 respectively, together **responsible for 78% of the total county emissions**. Transport emissions, which alone are responsible for almost half of the county's emissions, have reduced by only 6% since 2005, and have increased by 4% across the county since 2013, though again the trend over the last two years of data indicate these emissions are beginning to fall again. Domestic emissions are also falling at a slower rate than other portions of the economy, seeing a reduction of 39% since 2005.

In Greater Essex the influence of individual point source emitters on total carbon emissions is quantified here. The **five largest point source emitters were responsible for 2%** of the county's total emissions. Point source emitters include major power producers, the food & drink industry, mineral and chemical industries, and the processing & distribution of petroleum products, including the likes of Croydon Power Station and Pura Foods processing facility.



[Source: National Atmospheric Emissions Inventory, analysis by Opergy Ltd]



Croydon Power Station  
166 Kt/CO<sub>2</sub> - annum



Pura Foods Ltd.  
116 Kt/CO<sub>2</sub> - annum

# Carbon Emissions

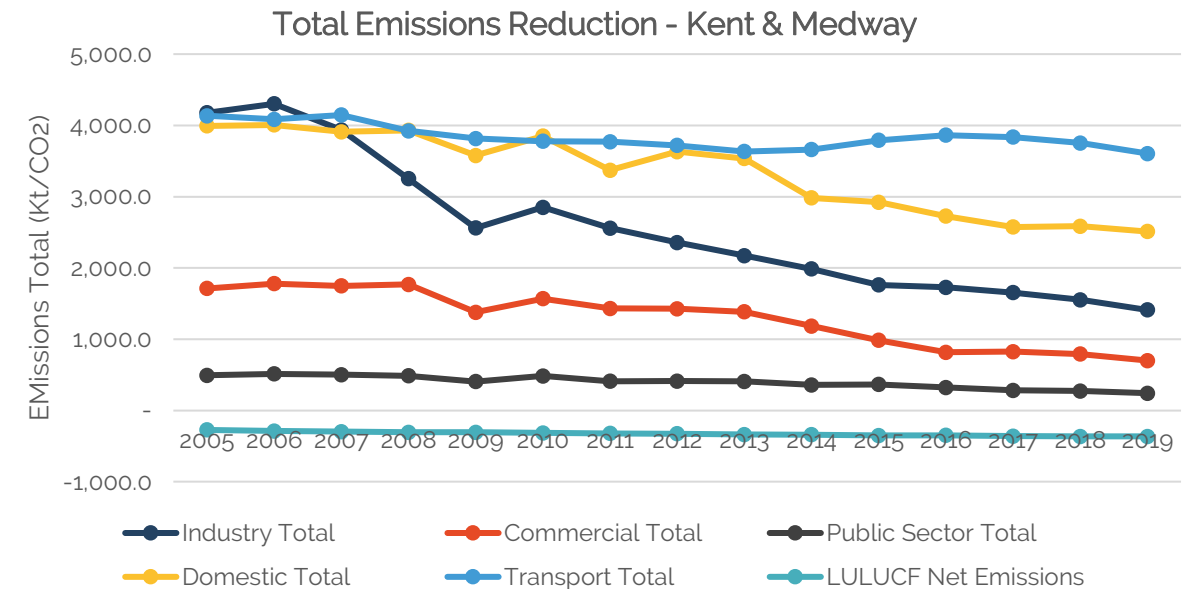
## Focus on Kent & Medway

Kent & Medway, produced **8,106 Kt/CO<sub>2</sub>** in 2019, the second highest across SELEP. The county is marginally smaller by area and population than Greater Essex, with a relative emission total per km<sup>2</sup> estimated at a lesser 36 kt CO<sub>2</sub>.

Across the county as a whole, total emissions reduced by 43% between 2005 – 2019. The emissions profile by sub-sector is again very similar in profile to that across SELEP. The greatest emissions reductions since 2005 proportionally have been seen from **Industrial and Commercial sources seeing reductions of 66% (2,765 Kt/CO<sub>2</sub>) and 59% (1,011 Kt/CO<sub>2</sub>)** respectively. This is a marginally faster rate of reduction than that seen across SELEP as a whole. Public sector emissions have reduced by 51% (250 Kt/CO<sub>2</sub>).

The greatest emissions across the county again come from Transport and Domestic sources at 3,605 and 2,511 Kt CO<sub>2</sub> in 2019 respectively, together **responsible for 75% of the total county emissions**. Transport emissions have reduced by 13% since 2005, but also saw an increasing trend in emissions from this sector between 2013 – 2016 which since then has begun to fall again. Domestic emissions are also falling at a slower rate than other portions of the economy, seeing a reduction of 37% since 2005.

**The five largest point source emitters across Kent & Medway were responsible for a significant 15% of the county's total emissions.** These sources include three major power plants, including the Isle of Grain and Damshead Creek CCGT Power Stations, as well as paper, printing & publishing industries and a waste treatment and disposal site. These larger sources have a huge influence on the county's total emissions profile, and action to reduce emissions from these sources could have a marked impact on associated environmental impacts.



[Source: National Atmospheric Emissions Inventory, analysis by Opergy Ltd]



Isle of Grain CCGT  
543 Kt/CO<sub>2</sub> - annum



Damshead Creek CCGT Power Station  
435 Kt/CO<sub>2</sub> - annum

# Carbon Emissions

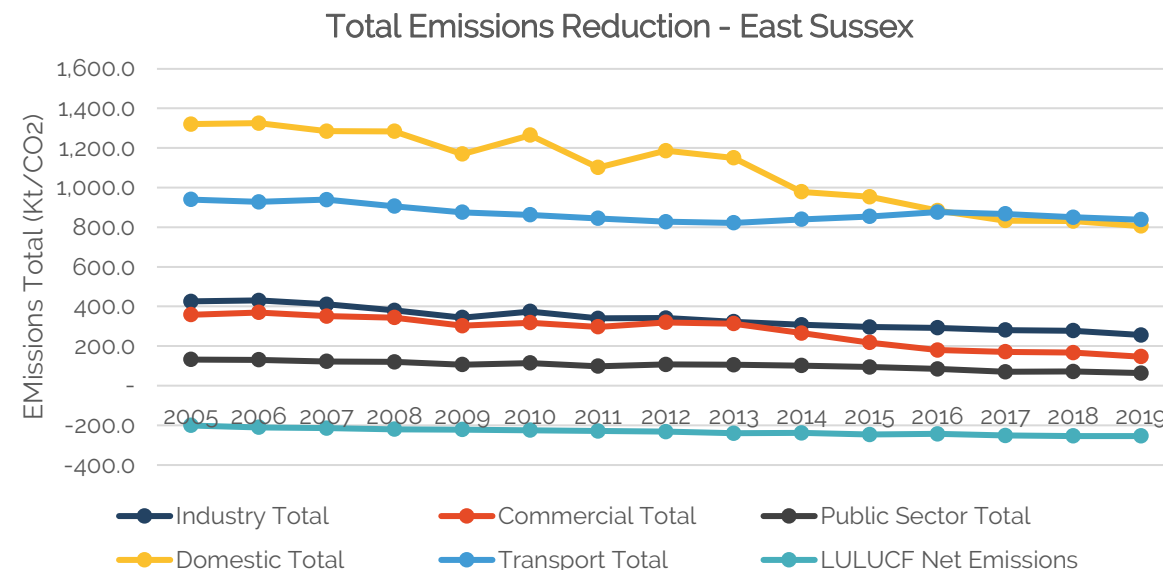
## Focus on East Sussex

East Sussex, produced **1,856 Kt/CO<sub>2</sub>** in 2019. it is the smallest county by area and population in the SELEP, with an estimated emissions total equating to 16.5 kt CO<sub>2</sub> per km<sup>2</sup>, significantly smaller than in Greater Essex and Kent & Medway.

Across the county as a whole, total emissions reduced by 38% between 2005 – 2019. The emissions profile as shown in the chart opposite, follows similar trends as across the SELEP, however the distinct difference that historically has been a greater influence of emission from domestic sources as a proportion of total county emissions. The greatest emissions reductions since 2005 proportionally have been seen from **commercial and public sector sources seeing reductions of 59% (211 Kt/CO<sub>2</sub>) and 52% (68 Kt/CO<sub>2</sub>)** respectively. Industrial emissions have reduced by 40% (170 Kt/CO<sub>2</sub>) which is a slower rate of reduction than seen in this sector across the SELEP as a whole.

The greatest emissions across the county again come from Transport and Domestic sources at 838 and 806 Kt CO<sub>2</sub> in 2019 respectively, together **responsible for 89% on the total county emissions** with both sectors contributing approximately equally to this. Transport emissions have reduced by only 11% since 2005, and have increased by 3% across the county since 2013, though again the trend over the last two years of data indicate these emissions are beginning to fall again. Domestic emissions are also falling at a slower rate than other portions of the economy, seeing a reduction of 39% since 2005.

As in Greater Essex, the influence of individual point source emitters on total carbon emissions is less significant for East Sussex. The **five largest point source emitters were responsible for 3% of the county's total emissions**. Point source emitters include waste treatment and disposal, mineral industries, and public administration (such as NHS facilities).



[Source: National Atmospheric Emissions Inventory, analysis by Opergy Ltd]



Newhaven EfW Plant  
35.5 Kt/CO<sub>2</sub> - annum



Robertsbridge Gypsum Works  
10.7 Kt/CO<sub>2</sub> - annum

# Summary of SELEP Carbon Emissions



An understanding of regional and local emissions trends, and point source emissions across the SELEP geography, is vital to design a prioritised approach to achieving Clean Growth that achieves meaningful emissions reductions alongside supporting economic growth.

Emission data clearly demonstrates that there have been significant reductions in emissions across SELEP, predominantly achieved through decarbonising emissions from Industrial, Commercial, and Domestic sectors since 2005. **From 2005 – 2019, emissions in these economic activities across SELEP have reduced by 10,085 Kt/CO<sub>2</sub> or 50%.**

However, this pronounced decline in emissions is largely the impact of the national shift from fossil fuels to renewables and the large scale decarbonization of the energy system and transmission network overall. The decline seen in emissions here cannot be wholly attributed to carbon reduction initiatives at a SELEP or local level.

Furthermore, despite the overall decline in emissions in each county, transport emissions have increased by average of 2% across SELEP area over the last six years of availability. This recent increase in emissions is most pronounced in Greater Essex where transport emissions between 2005 – 2013 have increased by an overall 4%, in some local areas increasing by as much as 15%. Whilst data from the years 2018 – 2019 indicate this trend is beginning to shift back towards emissions reduction, significant focus should be put towards achieving meaningful emissions reduction from our transport system.

Across all three counties the most significant emissions remain from the transport and the domestic sectors at an average of 44% and 30% of

emissions respectively.

Strategic investment is required across the South East to develop the appropriate infrastructure for a shift towards a greener transport system. This may include but is not limited to the upgrade of transport systems; from roads, railways, airports and seaports, and vehicles themselves. It will also include the development of appropriate refuelling and associated infrastructure enabling the widespread supply and use of alternative fuels, for example investment in grid infrastructure to ensure it can support electrification projects and charging facilities, and infrastructure for the supply and refuelling of hydrogen.

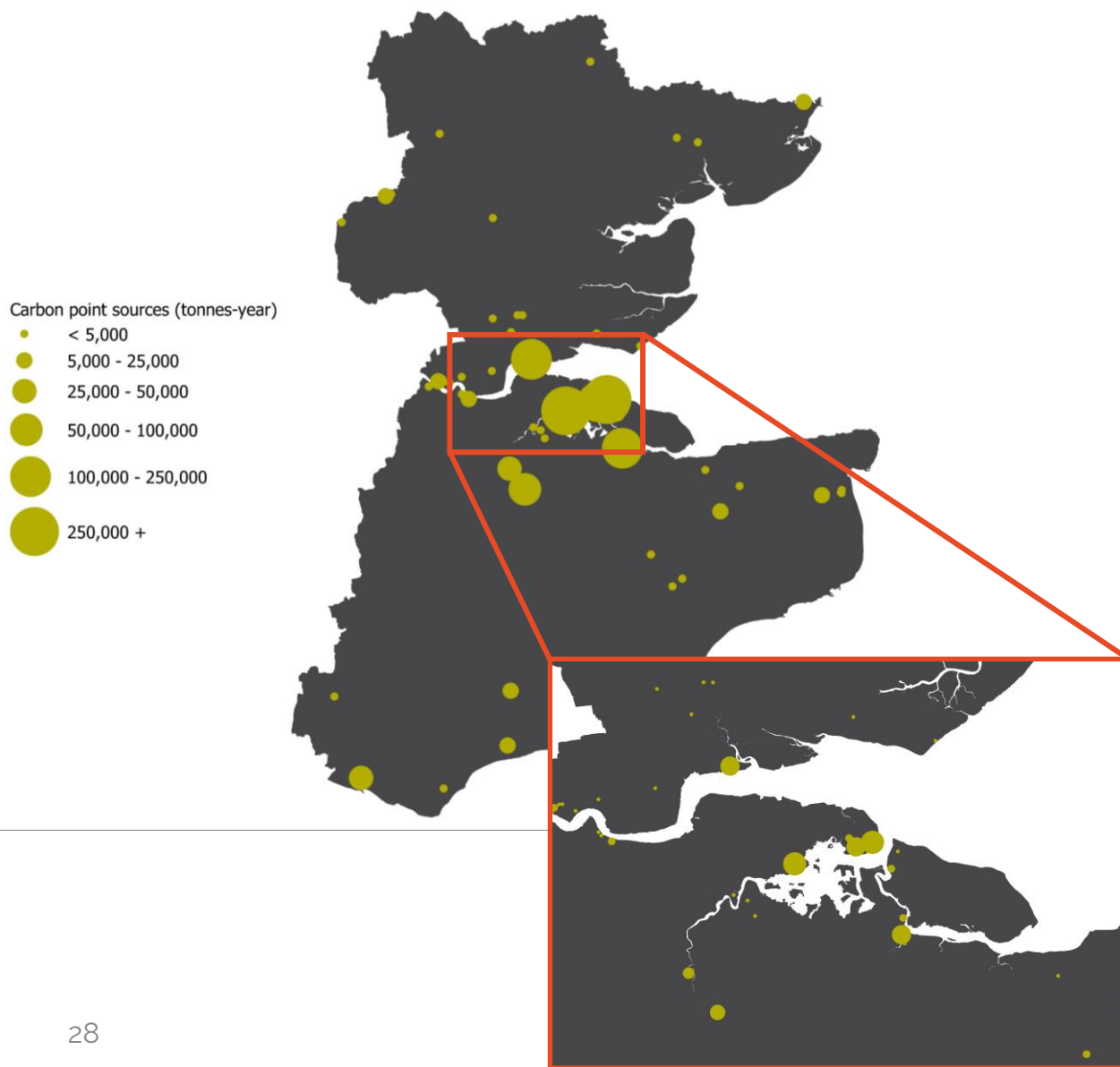
Projects supporting the decarbonisation of the domestic sector should continue to maximise the impact of initiatives to incentivise home retrofit solutions improving energy efficiency and installing power generation. New housing developments must be brought forward with the highest standards of energy efficiency as possible.

**18,238** Kt/CO<sub>2</sub>

Carbon Emissions within  
**South East** Local  
Enterprise Partnerships



# Summary of SELEP Carbon Emissions



Finally, point source emissions have a significant influence on the total emissions levels across SELEP. In 2018, carbon point source emitters producing greater than 1,000 tonnes of CO<sub>2</sub> emissions collectively accounted for 9% of the total emissions in the South East. Their contribution is particularly high in Kent & Medway where the top 5 point sources account for 15% of the county's total emissions.

Greater focus on ensuring reduction of emissions from these significant point sources should be strongly considered across SELEP, including on how existing business support and carbon reduction projects such as LoCASE could be realigned to provide support, through their supply chains, to assist with the decarbonisation of these large emitters.

Local Authority areas are encouraged to use the emissions data presented in this chapter, and in the appendix provided, to pinpoint activities, investments and interventions to reduce GHG emissions impacts locally, creating local roadmaps to move towards net-zero by 2050 if not sooner.

Through recommendations later in this report, we highlight how activities, initiatives and investments by both the public and private sectors aimed at achieving clean growth can also contribute to widespread emissions reduction across the South East.



**Chapter 4:**

# **Defining Future Clean Growth Economic Opportunities**

Exploring the current and future economic opportunities in the Clean Growth sector across the South East, presenting a pipeline of significant infrastructure investment out to 2050

# Mapping Economic Opportunities

The updated sector profile indicates a strong and consistent trend of growth across the Clean Growth Sector in the South East, which in many areas outstrips the growth seen across the wider economy as a whole.

A key element of this project has been to identify and present an assessment of the key opportunities afforded to the SELEP region within the clean growth sector in the short- and longer-term future. This will allow an assessment of **Potential Economic Impacts across the region** possible through maximising support and securing suitable levels of investment into the Clean Growth Sector in the coming years.

Renewable energy has been a huge success story across the UK in recent years. Between 2009 – 2019, **renewable capacity across the UK grew by a huge 473%**. With government support to drive down the carbon impact of our energy infrastructure, and industry investment, technology improvements have been achieved rapidly and increased deployment of renewable power projects has seen significant growth across all vectors.

Renewable energy production has also been resilient to the Covid-19 pandemic, and as explained, is seen as key sectors under the Government's Green Industrial Revolution.

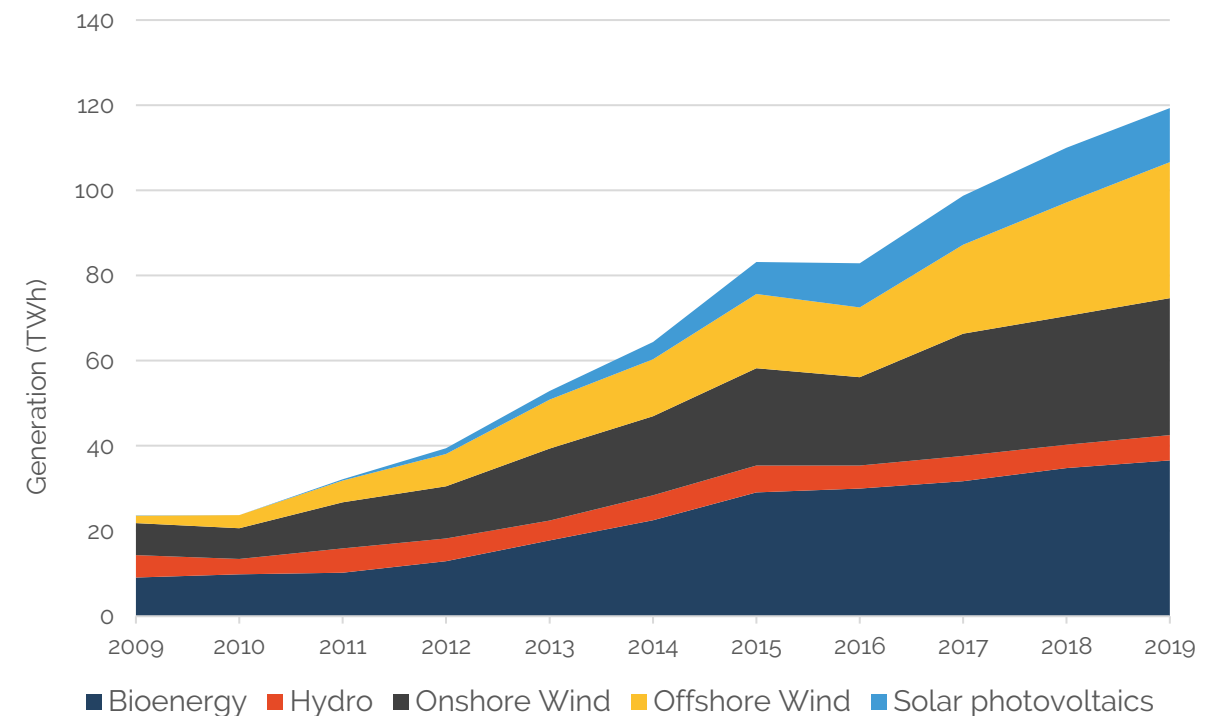
Significant investment has also been seen in critical transport infrastructure as well as in the construction sectors.

In this chapter, we outline updated research conducted within the project into the current renewable energy generation capacity across the SELEP region, as well as into the future pipeline of future energy and infrastructure investment expected in the region in the short-, medium- and longer-term

future.

Further detailed analysis of the capital investment forecasts presented here can be found in the earlier **Clean Growth South East Economic Impacts Report** (February 2021).

Growth in Renewable Energy Generation Across the UK



# Existing Renewable Energy Projects

## In the South East

The South East is already a major generator and supplier of renewable energy, with a diverse mix of energy generation projects already supplying energy to the National Grid and offering business and employment opportunities across the region.

With reference to the *Renewable Energy Planning Database* (last updated March 2021) providing details of all live and operational energy projects across the UK, we assess and present the size of the onshore renewable energy industry across the South East, including those in the construction pipeline and awaiting planning permission awards. This source does not capture existing offshore renewable energy generation projects such as offshore wind.

In assessing the current renewable energy generation capacity across the South East, we have identified and mapped **266 existing projects**; 122 in Essex, 116 in Kent, and 28 in East Sussex.

The highlights of this data are as follows:

- **1.3 GW of operational or under construction renewable energy** capacity generated from 104 projects across the South East; 63 in Essex, 58 in Kent, and 16 in East Sussex
- An additional **1.6 GW of renewable energy capacity is in the short-term pipeline** from 63 projects. 41 of these projects have planning permission granted and are awaiting construction
- Battery storage and solar photovoltaics are emerging as increasingly significant renewable energy generation technologies
- 73 unsuccessful renewable energy projects were identified across the South East where planning permission was refused, or the projects were otherwise abandoned or postponed



# Existing Renewable Energy Projects

## Operational & Under Construction

This table details the total Operation and Under Construction renewable energy generation projects by county within the South East.

Of the onshore renewable generation across the regions, the greatest capacity by a significant portion are located in Greater Essex.

Currently there is 1.3 GW of operational or under construction renewable energy capacity generated at 137 onshore renewable energy generation project sites across the South East.

The greatest current capacity (635.1 MW) is produced from **Solar Photovoltaics which accounts for 76% of the onshore renewable energy capacity** generated across the region. 635.1 MW is generated from 79 projects across the county. The majority of these projects are grounded solar installations, however, a small portion (five projects) are roof mounted on large commercial building and superstores across the region.

There is also significant renewable generation capacity in **Onshore Wind (171.9 MW)** across 12 projects, **Battery Storage (218.9 MW)** across seven projects, and **Energy from Waste Incineration (119.2 MW)** across three projects in the region.

	South East LEP		Greater Essex		East Sussex		Kent & Medway	
	No. of Projects	Total Capacity (MW)	No. of Projects	Total Capacity (MW)	No. of Projects	Total Capacity (MW)	No. of Projects	Total Capacity (MW)
<b>Anaerobic Digestion</b>	5	8	3	4.80	0	0.00	2	3.20
<b>Battery</b>	7	219	4	89.00	0	0.00	3	129.9
<b>Biomass</b>	3	84	1	43.00	0	0.00	2	41.00
<b>EfW Incineration</b>	3	119	0	0.00	1	18.30	2	100.90
<b>Landfill Gas</b>	26	98	17	68.60	3	11.50	6	17.60
<b>Sewage Sludge Digestion</b>	2	2	1	1.20	0	0.00	1	1.10
<b>Solar Photovoltaics</b>	79	635	30	228.50	11	65.40	38	341.20
<b>Wind Onshore</b>	12	172	7	83.00	1	7.50	4	81.40
<b>TOTAL</b>	<b>137</b>	<b>1337</b>	<b>63</b>	<b>518.10</b>	<b>16</b>	<b>102.70</b>	<b>58</b>	<b>716.30</b>

# Renewable Energy Projects

## Awaiting Construction

This table details the total renewable energy generation in the construction pipeline and currently awaiting planning permission awards by county within the South East.

In addition to the operational and under construction projects, there is 1.9 GW of renewable energy capacity in the short term development pipeline; having received planning permission or submitted an application, across the South East.

The most significant additional renewable energy capacity planned in the region will come from:

**Battery Storage projects with 976.6 MW (51%)** of capacity expected to be developed across 21 regional projects currently awaiting construction.

**Solar Photovoltaic projects** with a development pipeline of **735.1 MW across 27 new projects (38%** of new capacity pipeline). All except one of these projects have received planning consent. Energy from Waste Incineration is also set to contribute a significant generation capacity of 182.6 MW (9%).

Significant amounts of this renewable generation capacity are in the planning pipeline in Kent & Medway and Greater Essex.

	South East LEP		Greater Essex		East Sussex		Kent & Medway	
	No. of Projects	Total Capacity (MW)	No. of Projects	Total Capacity (MW)	No. of Projects	Total Capacity (MW)	No. of Projects	Total Capacity (MW)
<b>Advanced Conversion Technologies</b>	1	10	0	0	0	0	1	10.4
<b>Battery</b>	21	977	12	382	1	0	8	594.3
<b>Biomass</b>	1	9	1	9	0	0	0	0
<b>EfW Incineration</b>	4	183	3	107	0	0	1	75.
<b>Solar Photovoltaics</b>	27	735	16	352	2	9.5	9	373.6
<b>Wind Onshore</b>	1	15	0	0	0	0	1	15
<b>TOTAL</b>	<b>55</b>	<b>1,929</b>	<b>32</b>	<b>850.9</b>	<b>3</b>	<b>9.5</b>	<b>20</b>	<b>1,068.3</b>

To further understand the economic opportunities of the Clean Growth sector, beyond the short-term pipeline of onshore renewable energy projects, Clean Growth South East assessed the energy and engineering capital investment forecasts in the SELEP region.

Drawing on a range of data sources, more than **1,389 projects** have been mapped across the UK. Those identified within or accessible to South East businesses total at a combined capital investment of **£122 billion**.

The headline findings are as follows:

- **£15.4 bn planned capital investments in major energy and infrastructure projects in the South East and East of England to 2025, accumulating to £33.5 bn to 2030**
- **A total of £122 bn investments planned in regional projects in the longer term to 2050**
- **A further £874 bn investment in England and across the UK to 2050**

Those with the highest level investments include: **Offshore Wind, Nuclear, and Transport**

Those with the highest numbers of projects include **Onshore Wind, Solar, and Energy Storage**

The methodology for this assessment is provided in Box 1. opposite.

## BOX 1: Capital Investment Forecasts Methodology

In early January 2021, through desk-based research with reference to The Clean Growth South East project team mapped *large scale* capital investments planned in energy infrastructure, ports and transport-related projects in the immediate future from 2025-30 and the longer term to 2050, meeting the following investment criteria:

1. **Projects in the South East and East of England with a capital value (CV) >£5m**
2. **Projects in England with CV > £15m**
3. **Projects in the UK with CV > £25m**
4. **Projects in N.W. Europe with CV > £75m**

**£122** billion  
capital investment  
in **clean growth**  
capital projects across **South East**  
by **2050**

The following industries were mapped and quantified:

- Oil & gas exploration and production
  - Onshore & Offshore
- Oil & gas decommissioning
- Carbon capture & storage / direct air capture
- Wind
  - Onshore & Offshore
- Marine
  - Wave & Tidal
- Hydrogen
- Power generation
  - Nuclear
  - Gas
  - Bioenergy (e.g. Biofuels, Biomass, AD, Biomethane)
  - Solar
  - Storage e.g. Batteries
- Power transmission and distribution
- Transport
- Ports

# Forecast Investment Plans

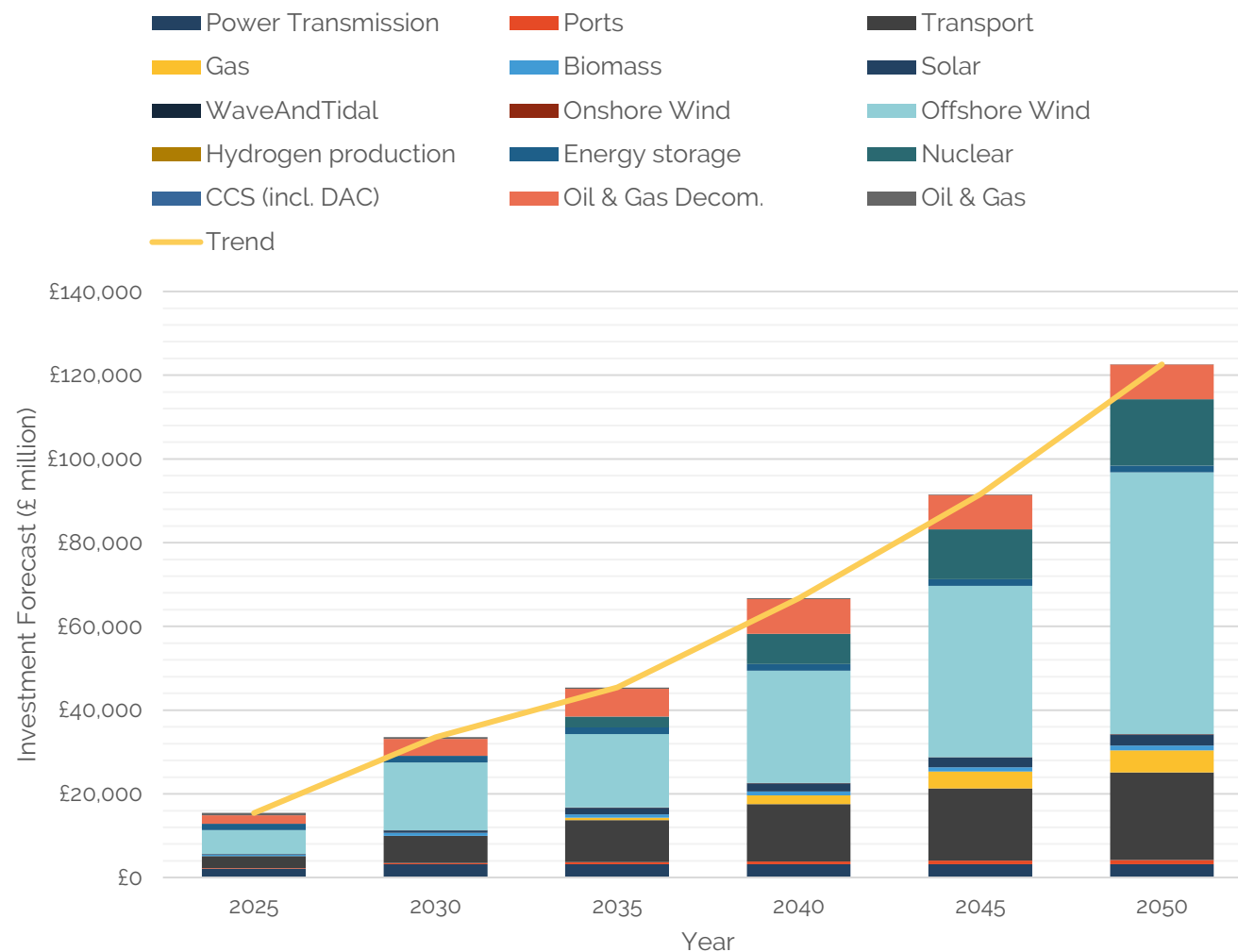
The following chart indicates the cumulative forecast capital investment in the South East and East of England in the short, medium and long term as far as 2050.

The greatest predicted capital investments in the Clean Growth sector in the **short term** are expected to be in **Offshore Wind receiving £5,642m investment (37%)** and **Transport sectors receiving £2,880m (19%)** investment to 2025.

In the medium term out to 2030, the greatest cumulative investment areas are again in Offshore Wind and Transport sectors, where significant further investment is anticipated. **Offshore Wind is anticipated to receive £16,191m (48%)** and **Transport £6,479m (19%) investments by 2030.**

In the longer term, looking ahead to 2050, the three most significant investment categories are **Offshore Wind at 52% with the investment forecast of £62,525m.** Then **Transport** with a forecast of £20,876m by 2050 (17%) closely followed at 13% with **Nuclear** with the 2050 prediction of £15,926m.

When considering this investment in terms of number of distinct project sites out to 2050, the greatest number of project are expected to be developed in **Onshore Wind where 300 different projects (22%) are mapped.** Significant number of projects are also forecast in **Solar Photovoltaic** with 259 (19%) and **Energy Storage** with 242 new developments (18%) mapped.



[Source: Opergy Ltd. February 2021]

# Summarising Future Clean Growth Opportunities



As summarised in this chapter, and further detailed in previous project reports, Clean Growth South East has assessed investment in over 1,500 current and future clean growth projects and mapped a significant pipeline of Clean Growth investments expected in the South East of England in the short, medium and longer term.

In the short to medium term out to 2030, Opergy's own capital investment forecast modelling for the energy and engineering sectors, supported by research from numerous data sources including the National Renewable Energy Planning Database, indicates significant investment in the sub-sectors of renewable energy generation and transport. In this timeframe the most significant investments in the sector are expected to be in Offshore wind, Transport infrastructure (including major road infrastructure and port development projects), and in the development of regional Nuclear Power sites. Investment also expected in power transmission, Oil & Gas Decommissioning, Energy Storage and Solar Photovoltaics.

In the longer term out to 2050, cumulative capital investments of £122bn are foreseen in the Clean Growth Sector with the largest investments being made in Offshore Wind, Transport and Nuclear projects. Smaller but still significant investment categories include Oil & Gas Decommissioning, some remaining gas exploitation, Solar Photovoltaics and Energy Storage.

**Offshore Wind, Transport and Nuclear represent consistent and significant opportunity areas for the SELEP region** and opportunities for public sector collaboration with industry to support and encourage investment in these areas could support Clean Growth across the region at

a large scale. The assessment also shows support should be offered where possible to the **continued growth in the areas of Oil & Gas Decommissioning, Solar Photovoltaics and Energy Storage** where continuing and increasing levels of investment are being noted in this forecast of regional opportunities.

It is noted that this modelling includes solely the initial capital investment in development of energy sector project sites, or in the construction of transport infrastructure projects of national significance. The assessment does not include the ongoing investments related to these new and existing developments for instance spend necessary in maintaining transport infrastructure and in operating and maintaining renewable energy projects. In the offshore wind sector alone, operations and maintenance of projects located in the East and South East of England is expected to incur a total cumulative cost in the region of £30bn.

It is also noted that hydrogen developments have not been included for the purposes of our investment forecast analysis due to the limited published information sources giving a certain picture of hydrogen investment in the region and across the UK at the time of this assessment. However, there are significant plans to develop hydrogen production facilities in the region in the planning pipeline.

These caveats on the assessment provided indicate that the Clean Growth Opportunity for the region and its supply chains may be even more significant than the investment forecasts suggest.



Chapter 5:

# Piloting the Clean Growth South East Programme

How this project developed and delivered a 'Clean Growth' Programme to identify and address significant challenges restricting innovation and economic growth in high opportunity areas of the sector

# Mapping the Clean Growth Sector



A key task of this commission, and an initial step in developing the Clean Growth South East programme, was the development and population of a **comprehensive business database** capturing company level information e.g. business names, sectors classifications, competencies, and contact information for a **minimum of 6,000 businesses** active on the sector across the region.

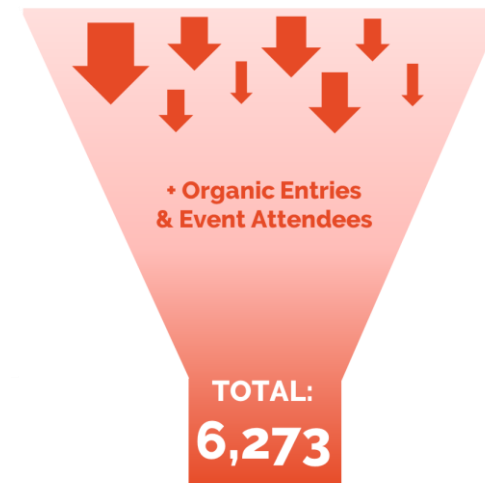
This mapping exercise was completed with reference to a number of data sources and publicly available business listings:

- Business databases provided by Kent Country Council and relevant project partners across the SELEP area; including businesses engaged in regional projects and programmes targeting clean growth sectors
- Publicly available membership databases from organisations and accreditation bodies operating in the sector
- Outreach and direct engagement with regional businesses who were invited to register for the Clean Growth South East project network, and participate in project activities
- Reference to publicly available data downloadable from companies house listing active businesses across the region with relevant SIC codes
- Significant desk-based research of company's active in the sector across the South East

Each company identified was added to the developing Clean Growth South East database, which was fully checked to remove all duplication of entries. All listings were verified by the project team to check their status as active within the Clean Growth sector, to categorise them by subsector, and to identify their most recent website, address and contact details.

The initial research and collation of data from each source resulted in a long list of 183,061 businesses/individual contacts gathered from the sources provided. Following de-duplication and verification of these company listings, the complete database at the time of finalising this report contained a total of **6,273 Clean Growth Businesses** located or operating within the sector in the South East.

The complete business database is provided in the appendix to this report, including an index of companies within the sample, and a second list including all individual contacts and their details.



Database of  
**6,273**  
Clean Growth  
Businesses  
Developed

# Mapping the Clean Growth Sector



The table opposite details the key data sources provided to support population of the Clean Growth South East Sector contacts database, including the initial number of companies contained within each original data source when received, and the number remaining from that source, and included within the final business database after verification took place.

Of the data provided or identified through independent research, it was found that a considerable amount of the companies/individual business listings were either no longer trading, were not relevant to the sector, were duplicated within the same source or across multiple sources, or otherwise could not be found or identified.

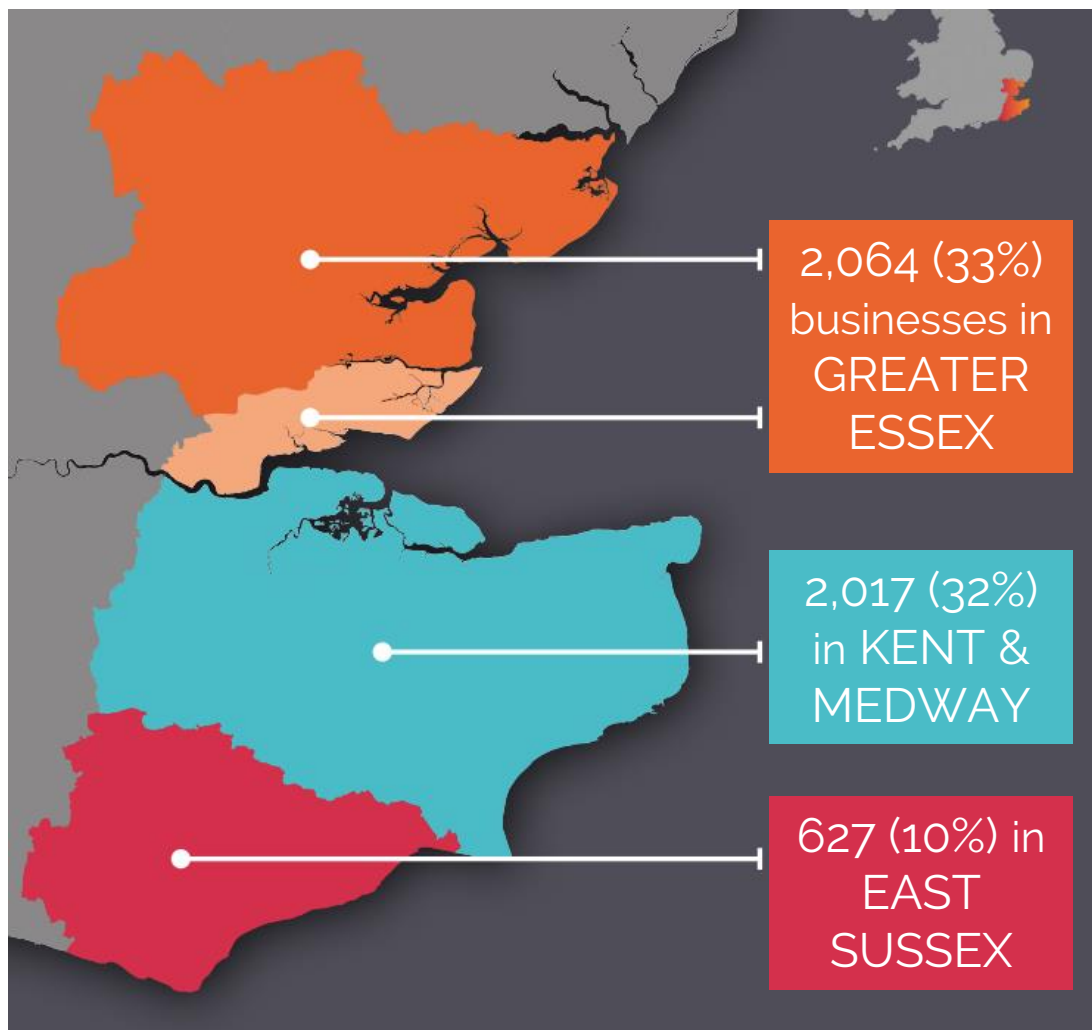
This highlights a well understood challenges in compiling business databases of this kind. Unless carefully curated, shared across relevant partners, and managed by a responsible resource on an ongoing basis to update data over time, much of the data gathered can quickly become out-of-date.

In building this database, containing individual contact information for employees or self-employed individuals as well as generic company information, the project team developed and approved a policy addressing the General Data Protection Regulations (GDPR) and how the database would be stored, managed and used over time. The GDPR policy developed for this project and applying to the database developed is provided in full in the Clean Growth Business Database appendix.

Source	Companies/ contracts included	Total companies from this source after verification
<b>KCC Provided Companies Database</b> (Companies/individuals registering interest in the LoCASE project and joining regional Low Carbon Homes event in 2021)	1384	572
<b>SELEP Business Database</b> (A historic list of companies from all sectors approaching SELEP to access business support/advice)	10,293	313
<b>Opergy's own database of South East companies</b> (Inc listings from the Inn2POWER Supply Chain Directory)	342	296
<b>North Essex Energy Group Database</b> (An historic company database developed for the NEEG)	363	342
<b>University of Brighton</b> (LCREE Business Network held by the UoB)	115	103
<b>Independent Research into businesses registered with relevant organisations</b> (Inc. find an Installer, MCS, membership bodies, etc.)	564	528
<b>Companies House Publicly Available Downloads</b>	170,000	2,601
<b>Independent / Organic Entries</b>	-	1,518
	<b>183,061</b>	<b>6,273</b>

*Note: ITT Committed provision of 2,500 Business Contacts who had 'expressed an interest to become involved', of which 1,250 were provided during project delivery*

# Mapping the Clean Growth Sector



The Clean Growth South East Business Database developed thorough this project provides a sample of the total number of businesses operating within the sector across the region. The following chapter details the size and characteristics of the wider sector across the south east, with reference to nationally available data sources.

The sample of business provided, and the wider sector contains companies and independent individuals that are working in the relevant sector and located within the region, as well as those that are located outside of the region but supplying goods or services within the boundaries of the SELEP geography.

The sample contained within the Clean Growth South East business database includes a total of 6,273 business listings, distributed across the region as indicated on the graphic opposite and listed below:

- No of Enterprises in **GREATER ESSEX**: 2,064 (33%)
- No of Enterprises in **KENT & MEDWAY**: 2,017 (32%)
- No of Enterprises in **EAST SUSSEX**: 627 (10%)
- No of Enterprises in **OTHER or UNKNOWN REGIONS**: 1565 (25%)

In targeting Clean Growth for the South East, authorities should not hesitate to engage with companies located outside of the regions geographic boundaries as these companies may have a material economic impact on the developing regional Clean Growth supply chain.

# Developing a Programme Pilot

A core objective of this commission was then the development and delivery of a **Clean Growth South East** pilot programme offering support to the region's businesses to identify new clean growth and net zero opportunities in the coming months.

The programme and its content were developed and informed by early research during the project, feedback direct from over 120 invited delegates from across the Clean Growth business community at three facilitated Clean Growth focused workshops, and extensive stakeholder consultation across the SELEP. During the ten-month delivery, business feedback and industry trends continued to inform the development of programme materials, as did feedback from stakeholders including during regular progress meetings with Kent County Council, Essex County Council, the SELEP Clean Growth Working Group and the LoCASE Steering Group,

The Clean Growth South East Pilot programme engaged with businesses and self-employed individuals through the following approaches:

- 1. One-to-One Business Support:** providing information, insights and coaching companies on the opportunities for their businesses to achieve Clean Growth
- 2. One-to-Many Initiatives:** including interactive workshops and briefing events, information updates, resources and online materials on key topics in the Clean Growth Sector
- 3. Regular Business Focussed Newsletters:** circulated to the growing network of businesses active in the clean growth supply chain across the region

This chapter elaborates on the activities and materials developed and delivered by the Clean Growth South East pilot programme, key trends emerging from businesses engaged in terms of the greatest challenges and opportunities they see offered by the Clean Growth Sector

## We delivered:

**438**

Unique Enterprises  
Engaged

Regular News & Updates  
Distributed to

**3,732**

Unique Contacts

**6,273**

Companies in Database

# Engaging Businesses & Stakeholders

## Shaping programme priorities & content

In addition to baseline research in the early stages of work, this project conducted extensive business and stakeholder engagement at an early stage to gain feedback on the key opportunities and challenges of the Clean Growth Sector from the perspective of supply chain companies.

Continuing engagement to date has been through:

- Workshop events; three held in late February 2021, one focussed towards each SELEP country, Kent & Medway, Greater Essex & East Sussex.
  - Over 120 individuals registered, **78 attended** in total.
- Online surveys and feedback provided virtually
- 1-2-1 business discussions engaging individual businesses

Early consultations included engagement with supply chain companies as well as public sector representatives and academic stakeholders. Care was also taken to engage with stakeholders across all three SELEP counties; Greater Essex, Kent & Medway, and East Sussex, to ensure priorities and perspectives in each region were gathered.

In the first three months of the programme the project team engaged and received **contributions from over 200 businesses and stakeholders** which shaped the development of the Clean Growth South East Pilot Programme in terms of the content covered and the events and materials created.

**HAVE YOUR SAY**  
ON THE CHALLENGES AND OPPORTUNITIES  
FOR YOUR LOW CARBON BUSINESS

**CLEAN GROWTH SOUTH EAST**

**Business & Stakeholder Workshop**  
ESSEX - February 2021

**Clean Growth South East**

This Business Review will help us to understand the challenges and opportunities for your business in 2021.

Your responses will directly influence the design and delivery of support programme(s), events, and the promotion of new opportunities to help businesses across Kent, East Sussex, and Essex to grow within the low carbon and renewable energy economy across the South East and beyond.

# Programme Activities

Based on research and feedback gathered, the **Clean Growth South East** pilot programme planned and facilitated the following activities and outputs:

- Developed the **Clean Growth South East business network including 6,273 businesses** operating in the clean growth sector across the South East (at the time of compiling this report) to share relevant news, best practice, events, funding opportunities, and information on upcoming clean growth projects and how to access them
- Engaged a wide variety of businesses and stakeholder from the public, private, voluntary and education sectors to gather views on the priorities, opportunities, challenges, and support required to realise clean growth and deliver net zero across the South East region
- Planned and facilitated a **series of 16 x events** covering different topics across the Clean Growth sector
- Designed and distributed **5 x newsletters**, reports, and other digital and online materials available via dedicated project webpages to distribute content, industry information, news and updates
- Established a **Clean Growth South East social media** presence via a linked in page for the project to share relevant clean growth postings, having 64 followers at time of reporting
- Supported business across the South East to identify new Clean Growth related opportunities through these regular events, updates and information sharing
- Identified gaps in the business support and funding provision available to the Clean Growth Sector across the South East, referred businesses to existing schemes where appropriate
- **Worked 1-2-1 with individual businesses** to diagnose their key challenges and make recommendations to support their continued Clean Growth in the sector
- Compiled recommendations of future initiatives and programmes supporting development of the Clean Growth sector across the South East, further elaborated in Chapter 6 of this report



Example materials delivered by Clean Growth South East

# Clean Growth South East Events Series



The following table summarises the series of online events and workshops planned and facilitated during delivery of the **Clean Growth South East** pilot programme.

Session Title / Topic	Registered Attendees	Registered Companies
Programme Launch: Business & Stakeholder Workshops 3 x Workshops   February 2021	135	127
Managing Environmental Impacts for Small Businesses 6 <sup>th</sup> May 2021   14:00 – 16:00	30	27
Steps to Environmental Management Workshop 21 <sup>st</sup> May 2021   9:30 – 13:30	10	8
Greener Homes and Retrofit Solutions 25 <sup>th</sup> May 2021   14:00 – 16:00	44	37
Greener Buildings - Improving the Built Environment 8 <sup>th</sup> June 2021   14:00 – 16:00	37	31
Offshore Wind and supply chain opportunities across the South East 24 <sup>th</sup> June 2021   14:00 – 16:00	43	40
Local Authority Workshop: Building your Roadmap to Net Zero 28 <sup>th</sup> June   13:00 – 16:00 (by invitation only)	48	15
Solar Power Supply Chain Opportunities across the South East 29 <sup>th</sup> June 2021   14:00 – 16:00	23	20
Opportunities in Onshore Wind & Battery Storage 1 <sup>st</sup> July 2021   14:00 – 16:00	33	27
Circular Economy and Managing Your Business Waste 8 <sup>th</sup> July 2021   14:00 – 16:00	23	18
The Opportunity of Hydrogen in the South East 13 <sup>th</sup> July   14:00 – 16:00	33	30
Net Zero Communities 15 <sup>th</sup> July   14:00 – 16:00	23	19
Tackling Carbon Emissions through Green Transport 29 <sup>th</sup> July   14:00 – 16:00	22	20
Introduction to the Nuclear Sector and Supply Chain Opportunities 9 <sup>th</sup> September   14:00-16:00	53	48

# Results & Future Business Requirements



Through the course of this programme we have engaged extensively with the business across the Clean Growth supply chain as well as with stakeholders throughout the South East. In total the programme engaged with 438 unique businesses during delivery of the programme, gathering their views and offering support.

At its interim stage, the project published the **Supply Chain Assessment & Gap Analysis Report** (June 2021) highlighting the core opportunities and challenges for growing the sector into the future from the perspectives of businesses. This report highlighted recommended steps by businesses to drive Clean Growth across SELEP, highlighting the following areas for action:

438  
Unique  
Enterprises  
Engaged

- The **built environment** offers huge opportunities but also challenges for the regions supply chain
- There is a considerable opportunity to reduce carbon emissions and support uptake of **green travel** and transport across the South East
- Businesses requested further support and finding to help them achieve net zero
- Calls for **sector specific support** to improve visibility of opportunities, and access to customers, in particular energy and infrastructure sub-sectors such as offshore wind, nuclear and transport
- The **need for education** on the imperative to address climate change as well as career opportunities in Clean Growth sectors
- The **importance of SELEPs Natural Capital** and preservation of the

natural environment

- Local Authorities across SELEP encouraged to **maximise Clean Growth opportunities** for the regions businesses through their influence on planning policy and individual planning decisions, regional transport planning and policy, in the management of public estates, through their procurement decisions as commissioning authorities and through business support and funding schemes offered locally.

In September 2021 at the close of the Clean Growth South East programme, the project team approached businesses again directly with the launch of a new survey. This sought to test how they had fared over the last 12-18 months, establish their business goals and potential opportunities and challenges they see in achieving these in the next 12 – 18 month period.

Through a combination of independent online completion and in person interviews of the phone, we surveyed 37 businesses reaching across all subsectors of the Clean Growth definition. The survey reached businesses in all counties of the SELEP, with 54% located in Kent, 24% in Greater Essex, and 5% located in East Sussex.

Combining this feedback with the previous business engagement, and this new survey we have assessed and summarised in the following pages, the current and future challenges for businesses regionally, and their requirements for future financial and business support to address these.

It is recommended that this new survey, provided in appendix to this report, is continued and publicised by KCC, SELEP and partners through their evaluation period of this programme to further assess the growth potential and aspirations of businesses across the Clean Growth supply chain.

# Business Growth and Key Goals

## For the next 12 – 18 months

The survey sought to gage a clearer idea of how businesses in the clean growth sector have fared over the past 12 – 18 months, their key goals and expectations for the next 12 – 18 months in terms of growth potential.

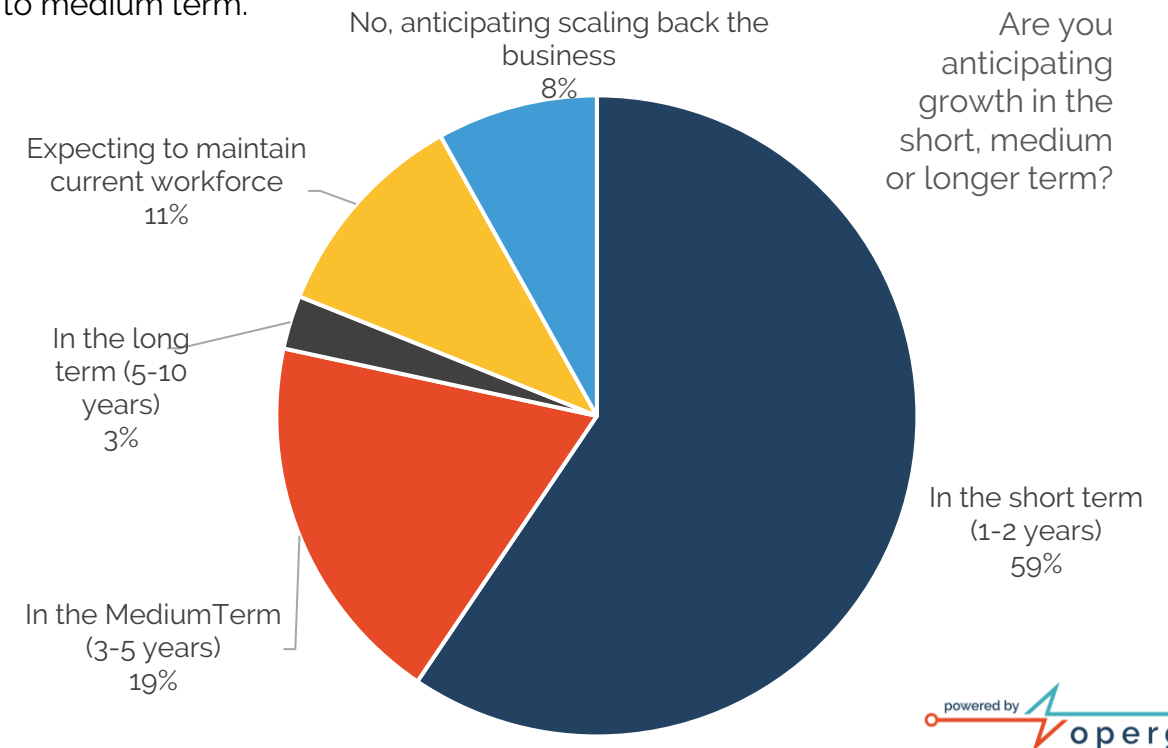
To examine the level of business growth amongst the sample of businesses interviewed we asked about workforce and business turnover growth in the last 12-18 months. Whilst a few businesses indicated using the governments furlough scheme to support maintaining their workforce during the Covid-19 pandemic, only a minority of three respondents indicated they had reduced their employee headcount. The majority, 50%, indicated they had maintained employment levels in this time, but significantly **15 individual businesses**, or 40% of the businesses interviewed, indicated they had taken on more staff or increased use of sub-contractors to support operational delivery. Of those businesses, a total of **82 new staff have been employed** in this timeframe; including 57 full time and 25 part time positions. Furthermore, 56% (21 business respondents) indicated their turnover had increased over the last 12 – 18 months. 30% indicated falling turnover and 13% that their turnover had not changed, indicating some businesses in the sector have struggled to achieve business growth.

When asked to consider their business key goals and expectations for growth in the next 12 – 18 months, the majority of respondents gave a positive response, 15 of the businesses interviewed indicated they are developing their business and targeting growth in this timeframe. Several respondents specifically mentioned scaling up operations, increasing employee headcount and business turnover. Others were more specific about their growth plans indicating aspirations to diversify into new sectors for example Nuclear, expand into new European markets and to acquire

new companies into their group structures.

A variety of other business goals were mentioned including increasing investment in research and development, developing business and marketing strategies to strengthen business reputations as specialist low carbon providers in their fields, and supporting customers and communities to decarbonise.

Looking forward to their anticipated growth plans, 78% of respondents indicated an expectation to take on new staff in the short to medium term. Only 2 businesses indicated their goal was to survive or sell the company, and none indicated they expected to decrease their workforce in the short to medium term.



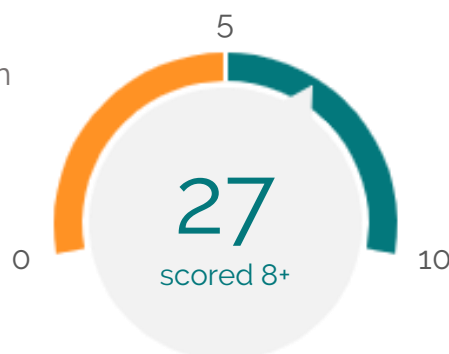
# Business Opportunities for Clean Growth



Businesses interviewed were asked about their recognition of the opportunities of Clean Growth across the South East, and to rate their own understanding of the topics of climate change and net zero.

In terms of the understanding of environmental issues within their business, most people expressed being fairly well informed to well informed with **27 people rating their knowledge between 8-10 out of 10**. 9 respondents scored between 5-7 out of 10 and only 1 person rated their knowledge a 3 out of 10 suggesting little understanding of the topic area.

How informed is your business on the topics of climate change, net zero, low carbon, renewable energy and environmental challenges?



In terms of the opportunities offered by the Clean Growth Sector, businesses interviewed raised several opportunity areas already highlighted throughout programme delivery. Companies highlighted they saw significant opportunities for themselves to grow within particular Clean Growth sub-sectors including in the provision for electrical infrastructure for electric vehicles, and to add services to offer advice and installation of domestic energy efficiency measures into their portfolio of services. One company mentioned a need for more regional investment and for

initiatives such as the government renewable heating incentive, to support investment in the efficiency of domestic housing stock across the region.

Throughout the survey answers there was a significant **emphasis on upcoming opportunities within the specialised markets**. Increasing expansion of the energy sectors was also highlighted with Nuclear projects such as Bradwell B and Sizewell C being mentioned, as well as the growth of transport and infrastructure projects increasing connectivity across and outside of the region. The Lower Thames Crossing, HS2 rail and the rollout of Fibre broadband were considered to offer huge opportunities for clean growth.

Several respondents mentioned an increasing imperative to address the causes and impacts of climate change, with many recognising that greening their operations would save costs, improve reputation and give them an edge over competition in an increasingly environmentally conscious society. Many highlighted their own **environmental priorities**, for instance, expanding conservation activities and switching to electric fleet vehicles. Several indicated a continued need to advice and funding to support their business make these changes, including an interest to attend energy management courses for staff.







# Prioritising the 10 Point Plan











In the previous **Supply Chain Assessment & Gap Analysis Report**, based on feedback from regional companies asked to re-prioritise the 10 points from the governments 10 point plan for a green industrial revolution (Nov. 2020), the 10 priorities were reordered according to businesses views on the greatest Clean Growth opportunities for the SELEP region.

Feedback from this survey supports the priorities as set for the South East, with Greener Buildings, the Shift towards Zero Emission Vehicles, and Green Finance and Innovation moving up the list as top priorities according to the Clean Growth supply chain.

## Order in the governments 10 Point Plan:

-  **Point 1:** Advancing Offshore Wind
-  **Point 2:** Driving the Growth of Low Carbon Hydrogen
-  **Point 3:** Delivering New and Advanced Nuclear Power
-  **Point 4:** Accelerating the Shift to Zero Emission Vehicles
-  **Point 5:** Green Public Transport, Cycling and Walking
-  **Point 6:** Jet Zero and Green Ships
-  **Point 7:** Greener Buildings
-  **Point 8:** Investing in Carbon Capture, Usage and Storage
-  **Point 9:** Protecting Our Natural Environment
-  **Point 10:** Green Finance and Innovation

## Re-prioritised for the South East:

- 1  (7)
- 2  (4)
- 3  (10)
- 4  (1)
- 5  (2)
- 6  (5)
- 7  (9)
- 8  (6)
- 9  (3)
- 10  (8)



Businesses surveyed were asked to comment on the key challenges for achieving Clean Growth across the SELEP.

Whilst recognised as an opportunity area for businesses, the pressure to green their operations was also seen as a challenge for some, especially when facing financial strains and requirements to meet environmental regulations. Companies also found it challenging to balance investing in improvements with managing healthy cash flow, as well as several companies highlighting finding it difficult to successfully market their green credentials in increasingly competitive markets. Some companies have found it difficult to successfully communicate the benefits of their products and convince customers to buy-in to this.

As reported through feedback earlier in the project, some companies continue to find it difficult to navigate the supply chain in larger markets with complicated and competitive supply chains for instance within the energy sectors. For some small businesses, obtaining a seat with key potential clients and demonstrating their ability successfully is challenging.

Many cited a lack of consistent governmental support to be a key challenge for seeking to grow, including the closure of some government schemes that businesses have found they are relying on. This was mentioned in relation to specific areas of the supply chain including support schemes for the domestic energy efficiency market, as well as general business support provided in reaction to the Covid-19 pandemic such as business loans and the furlough scheme.

Covid-19 itself has had a significant impact on regional businesses with many businesses still being concerned about the impacts on their operations, especially on continuing impacts which may occur in upcoming months.

Other political challenges were also mentioned including the practical impacts of Brexit on small business in the South East. Several businesses interviewed explained detrimental impacts on their operations, including supply issues in the sourcing of raw materials and the ability to export goods manufactured in the UK. Feedback indicates that dealing with manufacturers within Europe has become challenging for some, and that the costs of importing and exporting goods have risen.

One company expressed their particular frustration with the changes that Brexit has brought upon their business. Manufacturing their product at their premises in South East for supply to Ireland and elsewhere, the company has been forced to look at the options of buying third party products to ship on to customers; a significant change in operational structure due to the accelerating costs. *"Every one of these small steps adds to our carbon footprint. [We were recently advised] it would be cheaper and more efficient to manufacture the products in Romania and then ship them to NI but we're proud to have a product made in the UK so ideally want to avoid this."*

Another company is fearful they might have to stop importing full stop due to Brexit, *"We need to think about what to do with our manufacturing hub as it was in Germany, but they don't want to deal with the UK anymore, so we're now having to deal through Ireland, however, this is very expensive and takes a lot of time. Therefore, we may be unable to import."*

One company expressed their concern regarding labour and equipment shortages due to the recent issues with lorries, *"There have been severe difficulties with lorries, so moving timber to the mill has been a major issue."*

# Requirements for Business Support & Funding



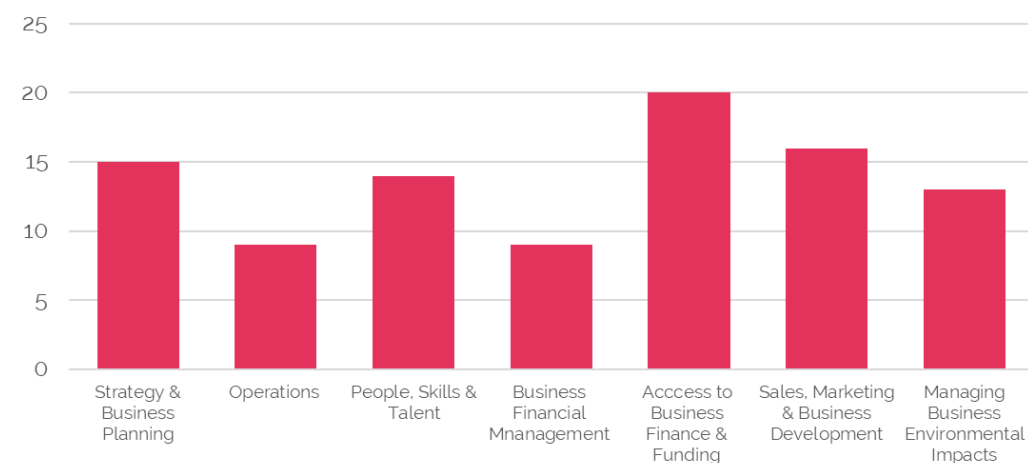
Companies were asked to consider the existing provision for business support and funding they have come across to support their Clean Growth, and whether any further support would be beneficial across the South East.

The majority of businesses interviewed indicated they had previously contacted regional support organisations such as **SELEP**, their **County Council(s)** or **Growth Hub(s)** to seek business advice, support or grant funding. Twenty-four of those who had engaged with previous programmes were most familiar with **LoCASE**, indicating the profile of this flagship regional project is good across the target area. Twenty-one businesses interviewed also remembered engaging with **Clean Growth South East**. Other regional business support programmes were less well recognised supporting findings reported earlier in this work that the landscape for business support in this field is crowded and programmes require significant marketing and promotional effort to be recognised widely across the region. KEEP+ and The Green Growth Platform were the two that scored the least points (mentioned by 3 and 4 respondents respectively).

Businesses identified several areas where they saw gaps in the provision of business support. Feedback indicated that businesses have found the availability of funding and subsidies inconsistent over time and over geographies, that the visibility of suitable schemes for them is poor or insufficiently communication, and that the process to find schemes and apply can just take too long. One company said, ***'It can a take a lot of work and effort and finding that extra time is difficult.'***

Whilst some contributors were unsure of the grants and business support that were available, others in particular sectors such as Tech companies found the schemes they had been offered weren't suitable for their company. It's clear that some funding or business support schemes were more successful than others, for instance, one company said ***'LoCASE was very good and simple to use...they were a pleasure to work with. Southeast Business Boost however, was a very convoluted process, we wasted hours filling things out to get nowhere and probably lost money in the end.'***

The areas in which most businesses said they further support would be beneficial in the next 12-18 months included **Access to Business Finance and Funding, Sales Marketing and Business Development and Strategy and Business Planning**. The chart below shows survey responses when businesses were asked what further support their business might need.

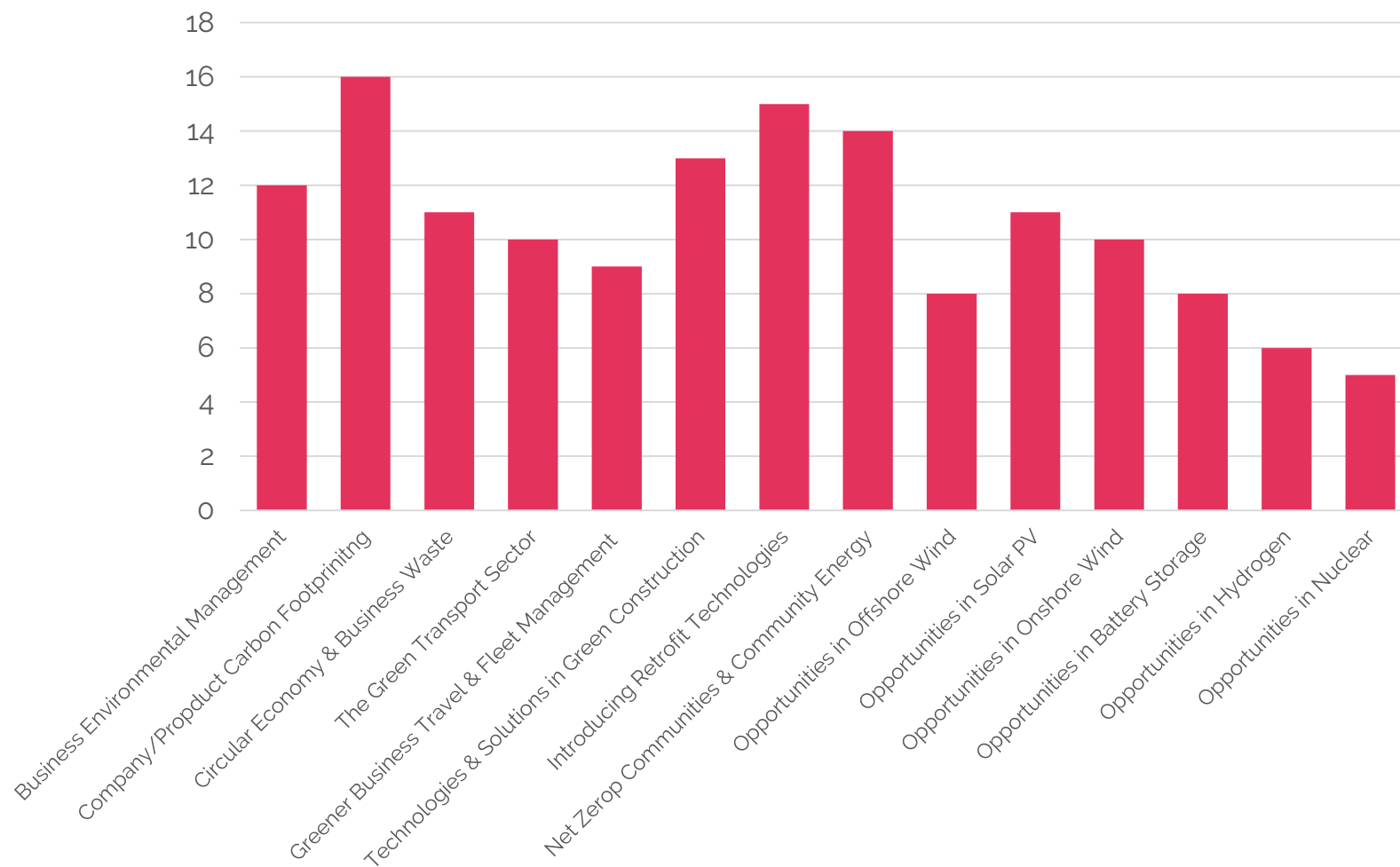


# Requirements for Business Support & Funding

Surveyed businesses were asked which Clean Growth topics were of most interest to them where they would like to see further information and support. The most popular categories were **company or product carbon footprinting**, **retrofit technologies** to reduce building greenhouse gas (GHG) emissions, **Net Zero Communities & community energy**, and technology / solutions in **green construction** appeared the most popular, although all topics received reasonably good interest from the businesses surveyed.

The most valuable forms of business resources, support and sharing of information according to the survey feedback were **Regular Digital Newsletters** highlighting Latest Developments, **Access to Specialist Advisors** to offer 1:1 advice, and **Events including Guest Speaker(s) and Networking**.

Online / Downloadable Resources, Guides and Toolkits, Peer-to-peer groups / forums with like-minded businesses, Webinars and online workshops were also considered helpful to share business information on Clean Growth sector opportunities.



# Clean Growth South East in Summary

As explored in this chapter, the Clean Growth South East programme has delivered a wide variety of business interventions and content to Clean Growth Sector businesses engaging with the programme team.

We have completed extensive business and stakeholder engagement, including with a total of 438 unique enterprises. This has established clear feedback on where businesses see the greatest opportunities, and where they are experiencing challenges, in the Clean Growth Sector across the region.

Business engagement has proved challenging at times throughout delivery, for example with some event sessions seeing fewer attendees registering than the programme would have intended. However, it is recognised that the context of delivery has led to significant disruption to normal business operations which is likely to have prevented many from attending and taking part in optional webinars and in support programmes then they may have done previously.

Feedback has indicated that the events held and advice provided throughout delivery has been hugely beneficial for businesses able to attend and offer their time.

The project has demonstrated that delivery of remote events and support has been successful and has ensured that the materials and content are made as accessible as possible for businesses to access at their convenience. The sessions have been recorded and made available online on the project web pages alongside other downloadable content after the sessions have taken place. KCC, SELEP and partners are encouraged to continue to make this material available, and to promote the content to encourage further businesses to access and benefit from it over time.

The Clean Growth South East database containing 6,273 businesses with 3,732 individual contracts represents the most up-to-date business database for the Clean Growth sector across the South East region. It is an ideal database through which information and updates should be shared across an active audience within the clean growth sector.

However, the value of this database will decrease rapidly over time if it isn't utilised, updated or re-evaluated often, to keep entries, business information and contact details for companies and individual contacts live and updated. It is recommended that this business database is utilised by KCC, and shared with SELEP, the county councils in Essex and East Sussex and other project partners as deemed appropriate by KCC and SELEP partners for their use as well. If incorporated with their day-to-day Customer Relationship Management (CRM) systems, the data will be effectively utilised and should be regularly updated.

It is vital that any partner using this data adheres to the GDPR policy specified at data collection which is available in the appendix provided.

The next steps of the Clean Growth South East programme, to the end of 2021 include a period of independent monitoring of the continued performance of the Clean Growth Sector and the uptake of online programme materials. It is recommended that during this evaluation period the conclusions and recommendations of this work are fully evaluated to identify how they can be successfully implemented across the South East region into the future to support continued sector growth. The recommended activity should be disseminated to local authority stakeholders across the SELEP to embed them in future plans and programmes.



**Chapter 6:**

# **Programme Conclusions & Recommendations**

Recommended interventions to support further Clean Growth across the South East



This project has run a successful project pilot, despite the challenging context of Covid-19, forcing many businesses to close completely or otherwise significantly change their operations, and the background impacts of Brexit causing many practical impacts and interruptions on supply chains and export potential.

Our business database, developed throughout the project and with **6,273 checked and verified businesses** active in the supply chain offers an excellent resource to continue open communication with these companies on clean growth-related issues and future projects.

Despite the challenging context, the programme has been successful in **reaching 438 different businesses** across the supply chain with one-to-one business support and advice, our series on events and supply chain focussed workshops, as well as through programme newsletters and online materials.

Feedback from beneficiaries of the programme has been complementary with many indicating their improving knowledge and appreciation of the opportunities for their business and the regions in the Clean Growth sector.

Furthermore, **15 businesses interviewed** at the close of the programme said they had **created a total of 82 jobs** or increased their turnover in the last 12 – 18 months, whilst 30 indicated they expected further growth in employee headcount into the future. Those companies experiencing growth in the next

The growth seen through this small sample of businesses engaged is supported some evidence of Clean Growth across the region provided by an updated sector profile. This new data indicates **business counts rising by a moderate 255 (2%) between 2020-2021**. However, the early impacts of the Covid-19 pandemic on the sector may be being seen in an apparent **decrease in employment falling by 3,320 (4%) in total employment between the years 2019 – 2020**.

The project has also provided intelligence on the key opportunity areas for the sector into the future in the short-, medium- and longer term as well as offering insights into the perspectives of regional clean growth sector businesses on the key opportunities and challenges they have experienced in growing the sector.

We have developed and submitted three comprehensive reports detailing the research findings and delivery of this work.

The following pages detail specific recommendations developed during the work of this Clean Growth Programme and highlighting how future activity coordinated by the public sector partners across the South East can support further economic growth of the sector.

Following completion of this work, led by KCC, project partners and stakeholders will complete a period of independent evaluation of this work to assess the ongoing impacts of the programme. Partners are invited to use this time to also assess these recommendations and consider their integration into their future operations and activity plans.



Key Recommendations of this work are as follows:

## 1. Keep Clean Growth South East Brand and Profile Active

The Clean Growth South East programme has begun to build a recognisable programme and a network of followers through delivery of the pilot programme. There is an opportunity to keep this running acting as an umbrella brand through which information and business opportunities relevant to the Clean Growth Sector across the SELEP area.

It is recommended that the project website content remains available, either in its current location or hosted by another partner and is promoted alongside new opportunities and materials available to support the clean growth sector. Furthermore, it is recommended that the linked-in page continues to be operated and maintained to build followers further. This activity could be managed by the SELEP, KCC or a nominated third party as appropriate.

## 2. Continuation of the Successful Events Series

The series of events hosted through the pilot programme have offer valuable insights to businesses on the opportunities across the Clean Growth sector and how to access them. With feedback that some supply chain companies would still value help in this area, we recommend the events series is continued.

Events should include topical and knowledgeable speakers and cover key Clean Growth sub-sectors, projects and developers, including covering the topics of Low-Carbon Transport, Greener Buildings and Retrofit Solutions, Renewable Energy Production (Inc. Nuclear), Green Finance and Grant Schemes, and Support for Companies Reducing their Environmental Impacts. Partners such as The Energy Savings Trust and the organisation Low Carbon Homes have expressed an interest in working with KCC, SELEP and partners to support events in these topic areas in the future.

Event dates should be released well in advance and all sessions should be well marketed to ensure the best attendance possible. Events should focus on maximum reaching as many delegates as possible, and should be hybrid or virtual only events allowing live streaming and recording of sessions to further publicise the material post-event.

## 3. Focus on 1-2-1 Business Support

Feedback from the supply chain throughout this project indicates that, to complement one-to-many initiatives, events and business support offers, companies would hugely value further hands-on and practical support to help them progress in particular areas. This will help companies put into practice the recommendations or suggestions from group sessions or workshops and help them to fully understand how the content can be applied in their circumstances.

It is recommended that existing energy efficiency programmes for businesses for example LoCASE, maximise the value of their work by providing practical tools for companies to build in practical considerations and changes into their operations, and provide accessible tools for example in areas such as carbon foot printing for companies to complete for their own circumstances and operation.

These programmes should also, where possible, build in time for advisors to follow-up with companies after their engagement to support them individually in implementing actions across their business.

This will support them in maintaining momentum and enthusiasm after an event or workshop and may offer assistance to help them resource further follow-up activity within the business.



Furthermore, as well as existing programmes running in the area, it would be valuable to engage with providers such as the Nuclear Advanced Manufacturing and Research Centre (AMRC), and the Offshore Renewable Energy Catapult on the opportunity to roll out existing projects such as Fit4 Nuclear and Fit4 Offshore Renewables across the South East. These programmes provide in depth and hands of support to successful applicants looking to identify their place in these key growing markets, as well as to prepare them with the knowledge and understanding to approach clients and win work across the supply chain.

As with events, investment in clear marketing of all sector support initiatives and funding programmes is key as a significant number of projects remain available across the region, but the majority are not well recognised across the business community.

## 4. Support for Key Markets

Throughout this commission and final report we have highlighted several key Clean Growth sub-sectors where considerable growth and investment is planned across the South East and East of England. The renewable energy sectors; with the greatest investments expected is Offshore Wind, Nuclear, Solar Photovoltaics and Battery Storage, and the Transport sector and associated infrastructure will see significant investment to 2050. Low Carbon Construction with a focus on creating energy efficient buildings and tackling issues such as how to decarbonise heat, are also increasingly important on the national and regional agenda to reach net zero. A key recommendation of this work to policy makers is to provide strategic support to these growing Clean Growth market sectors.

This may be in terms of offering supportive planning arrangements, funding where possible and practical, collaborating with the private sector to stimulate investment and growth in these sectors, as well as prioritising these developments through county related climate action plans and growth policies.

## 5. Targeted Initiatives to Achieve Emissions Reductions

Achieving clean growth goes hand in hand with reducing carbon emissions. This report has explored how an analysis of the regions carbon footprint can inform the areas where practical support and achievable interventions targeting Clean Growth could have the greatest impact on carbon emissions across the region, targeting areas of the economy that contribute the greatest portions of the regions carbon emissions; transport and domestic emissions.

It is recommended that interventions specifically supporting innovative companies in the transport and domestic energy efficiency sectors across the supply chain are considered, helping bring to market new services or solutions to address carbon emissions in these areas, and to support the growth of a local supply chain and base of expertise. Moreover, business support & funding schemes across the Clean Growth Sector should be created or directed specifically to addressing GHG reductions, with KPIs focussed on achieving ambitious emissions reduction alongside number of businesses targeted or jobs created.

Finally it is recommended that specific projects or programmes are run in collaboration with regional point source carbon emitters. This will engage these emitters and, through action with them and their supply chain, focus on carbon emissions through energy efficiency at these sites and through their supply chains.

## 6. Continued monitoring of sector performance over time

Whilst business feedback and the sector profile indicated some Clean Growth across the region during the programme duration it is recommended that the potential impacts of Covid-19 are monitored and validated over time to identify any particularly challenged sub-sectors and provide initiatives to support these sectors.



# List of Appendices

# List of Appendices & Reference Documents



This report is accompanied by the following appendices providing further information and references. These appendices are referred to in the relevant chapters of the report and include the following:

1. Clean Growth Sector Definition
2. Clean Growth Business Database
3. Carbon Emissions Data
4. Clean Growth South East Evaluation Survey

Through the Clean Growth South East programme, a number of materials were generated which have a continuing value to share with the supply chain. These include:

- Programme identify and branding
- Domain name [www.cleangrowthse.co.uk](http://www.cleangrowthse.co.uk)
- Website content
- Extensive video content and slide packs from online events series
- Newsletter content
- Business Database / CRM

It is recommended that this material is maintained and shared over the coming 6 – 12 months. A full list of materials is listed below:

## Reports & Materials:

- Newsletters: February, April, August, and October 2021
- Economic Impacts Summary Report
- Supply Chain Assessment Summary Report
- Final Report

## Event Materials and Recordings:

- Programme Launch: Business & Stakeholder Workshops
- Managing Environmental Impacts for Small Businesses
- Steps to Environmental Management Workshop
- Greener Homes and Retrofit Solutions
- Greener Buildings - Improving the Built Environment
- Offshore Wind and supply chain opportunities across the South East
- Local Authority Workshop: Building your Roadmap to Net Zero
- Solar Power Supply Chain Opportunities across the South East
- Opportunities in Onshore Wind & Battery Storage
- Circular Economy and Managing Your Business Waste
- The Opportunity of Hydrogen in the South East
- Net Zero Communities
- Tackling Carbon Emissions through Green Transport
- Introduction to the Nuclear Sector and Supply Chain Opportunities

# CLEAN GROWTH



## SOUTH EAST

For more information on the Clean Growth South East Programme, visit

<https://cleangrowthsoutheast.co.uk>

Kent County Council

<https://www.kent.gov.uk>

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South East Local Enterprise Partnership

<https://www.southeastlep.com>

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