# Domestic Energy Skills Assessment

## Methodology Report

## June 2022

**Commissioned by:**

North East Energy Catalyst

North East Local Enterprise Partnership

north east & yorkshire NET ZERO HUB

**Produced by:**

Ideas for Change
PROJECT MANAGEMENT WITH A SPARK

kMatrix

# Introduction

The Domestic Energy Skills Assessment (DESA) was undertaken over a period of nine months from July 2021 to March 2022. The Assessment was commissioned by the North East LEP with funding secured by the North East LEP energy team from the North East and Yorkshire Energy Hub.

The main objectives of this study were to assess current skills provision for domestic retrofit, understand the barriers, challenges and gaps in training provision and assess market demand within North East and Yorkshire geographies.



The project team comprised of two external consultants and two North East LEP representatives from both the Skills and Energy teams worked together throughout the project.

The skills assessment methodology developed for this study was successful in producing valuable insights, data and a 10-year action plan that will help to put the North East on the right track to meet the skills challenges of domestic retrofit.

This report sets out the methodology approach for DESA drawing from the learning. Its purpose is to provide useful information, guidance and learning to those considering undertaking skills assessments in other sectors or geographies. It aims to highlight potential pitfalls and by doing so, help others to overcome various challenges faced when conducting similar assessments. This report references the other DESA study outputs described on page 4 and available through the North East Evidence Hub.

# Background and context

The prelude to DESA were discussions with the Energy Systems Catapult together with six LEP areas about the need to focus skills needs within local areas and build infrastructure within these areas that had the capability of addressing these needs.

It became clear through these discussions that the scale of the Domestic Retrofit Challenge alone was enormous and the North East LEP decided to focus their understanding of skills challenges on this sub sector.

Two important principles identified for the North East LEP approach and written into the methodology was a) the need for the study to be collaborative and b) for the need to build a local evidence base in the area. Both aspects were built into the tender specification and a successful proposal was submitted by the Energy Team to the North East and Yorkshire Energy Hub.

Initial attempts by the North East LEP Energy team to commission the work were unsuccessful and no tender submissions were received. There are a few factors that might have led to this outcome, including an overall increase in demand for consultants due to stalled commissioning of work because of the pandemic. Other contributing

factors might have been the broad nature of the study outputs and the range of associated skill requirements.

The North East LEP then decided to take a different approach, identifying consultants with the appropriate skills and capabilities to deliver specific elements of the study outputs and bring them together under a project team. The outcomes and study outputs were split between the work programmes with a distinction between quantitative and qualitative elements of the study. The North East LEP contract managed each element separately and the skills team, through the Skills Programme Manager oversaw the delivery of the study assessment with regular input from the Energy Innovation Partnership Manager. This approach worked very well.



## Study aims an objectives

The Domestic Energy Skills assessment aims were to…

(i) Help assess the skills needs of domestic retrofit and
(ii) Help and support the development of facilities and tools to drive skills development regionally and nationally.

The key objectives of the skills assessment were to:

- Assess the breadth and depth of current skills provision for domestic retrofit
- Understand the barriers, challenges, and gaps in training provision for domestic retrofit
- Understand the qualification levels required to deliver domestic retrofit initiatives
- Assessment of 'market demand' for such skills
- Build a 10-year legacy plan for futureproofing and strategy development

A full logic model was developed for the study and is included in Appendix 1

## The study methodology and scope

An overview of the study methodology and scope is outlined in Figure 1. Governance and stakeholder engagement were happening throughout the study. A Steering Group was established in the early months of the project to provide the project with critical review, advice and guidance as the study developed. The steering group was also an opportunity for the project team to raise awareness and inform key stakeholders about the study and work packages so that they could warm up colleagues and encourage them to participate as and when required.

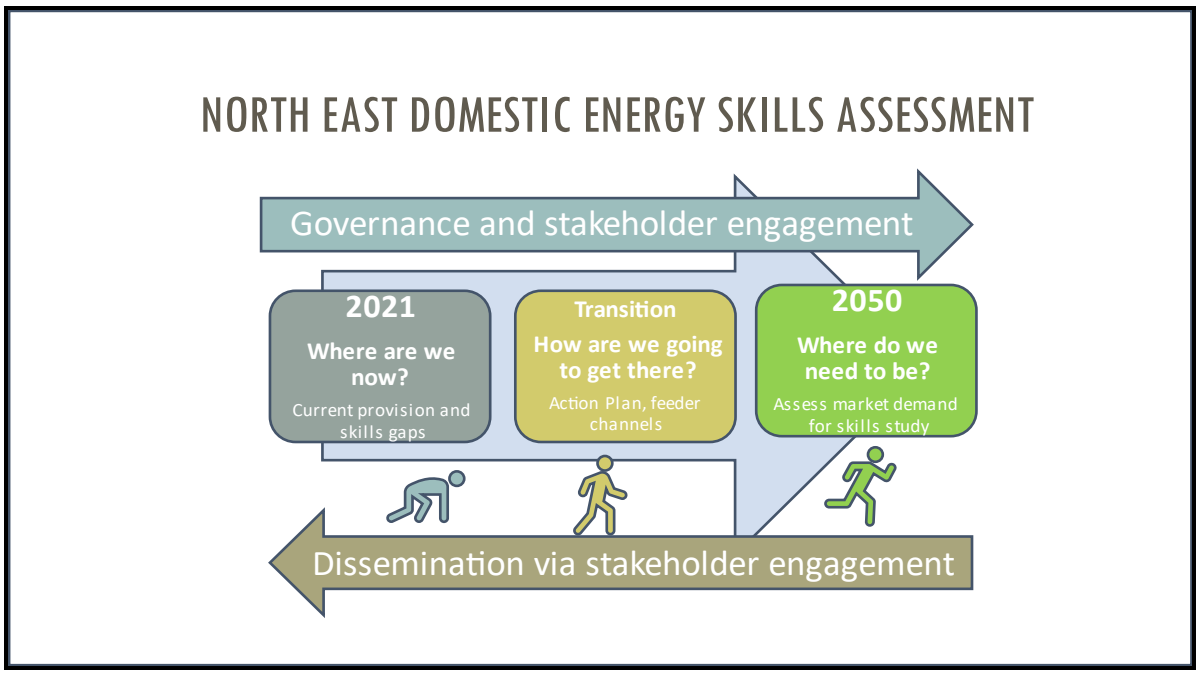
The Steering Group was chaired by the Skills Director at the North East LEP and included the six LEPs piloting work in this area, the Energy Systems Catapult, Skills Advisory Panel representatives, Housing Associations as well as membership bodies from the construction sector such as the CITB. A full list of Steering Group Membership can be accessed from Study Output 2.

Once the study was complete Study Output 5, the Knowledge and Dissemination Plan was implemented to ensure the findings were shared with as wide an audience as possible. The wider dissemination plan is on-going, and the study outputs will be located on the North East Evidence Hub by the end of the June 2022.

The work packages were then set against the framework presented in Figure 1, understanding the current position, identifying future requirement, and building an Action Plan to identify initiatives that would help the region to make the transition.

**Figure 1: An Overview of the North East Domestic Energy Skills Assessment**






The North East Domestic Energy Skills Assessment had several work packages outlined below.

## Work packages

Work Package 1 stakeholder engagement: Develop and implement an Engagement Plan to work with all levels of the Education Sector Industry and accreditation organisations to gain input, insights, knowledge on existing and current skills provision for domestic retrofit.

Work Package 2 Identify gaps in skills and training provision: Use the existing evidence base to assess gaps in skills and training provision. Drawing from existing skills databases and the Energy Systems Catapult's skills gap analysis.

Work Package 3 Develop a skills plan: Set out the content and practical tools required to fill gaps in skills provision and training delivery

Work Package 4 Assess market demand: Assess 'market demand' for domestic retrofit driven by national energy policy and decarbonisation scheme using different future

scenario which include achieving net zero by 2030 and 2050 with and without a policy intervention.

Work Package 5 Energy Sector Feeder Channels: Identify and understand 'energy sector feeder channels' and strategic ways to engage the potential future workforce, identify the industries they may be drawn from and setting out the key ingredients for a local or regional campaign which engages with different ages, demography, and skillset.

Work Package 6 Production of Report: A comprehensive report, detailing all the findings set against the research aims, pulling from all work packages. The report should include an Action Plan which sets out the training initiatives, tools, and timescales to fill skills gaps and deliver the skills required for net zero transition.



Work Package 7 Governance and Leadership: Establish a project steering group for the delivery of the assessment comprised of key stakeholders to actively engage with the assessment providing critical thinking and steer as well as peer review.

Work Package 8 Dissemination and knowledge transfer: Establish a plan to disseminate the findings regionally and nationally using established stakeholder engagement routes and hold an on-line session to share key findings and next steps.

### Overall Outputs

The associated outputs from the skills assessment are set out below: -

Output 1: An engagement plan targeted at distinct levels of the regional education eco-system.

Output 2: A report presenting an assessment of skills gaps and training provision required for domestic retrofit and net zero transition.

Output 3: A demand study report providing the evidence of market demand for domestic energy skills and feeder channels to meet such demand.

Output 4: An action plan setting out training initiatives, tools and timescales required to meet demand.

Output 5: A dissemination and knowledge transfer plan to inform stakeholders about the key findings and next steps.

### Geography

The demand assessment identifying future skills needs covered the following geographies:

- North East LEP
- Yorkshire and Humber Region
- North East and Yorkshire Energy Hub area

These geographies were chosen primarily because the funding secured was from the North East and Yorkshire Energy Hub area which covers the following LEP areas; North

East, Tees Valley, York and North Yorkshire, Leeds City Region, Sheffield City Region, and Humber LEP) and the work was being commissioned and led by the North East LEP.

Other aspects of the qualitative research such as the FE college on-line survey and subsequent interviews drew upon FE colleges within the North East and Tees Valley LEP areas.

Many organisations consulted in the wider stakeholder engagement were not confined to specific geographies and operated across the UK and in other regions, but there was undoubtedly more of a focus on existing and established relationships and knowledge of assets which were weighted within the North East and Tees Valley area. This is evidence from the summary report.



### Research Methods

The study used a range of qualitative and quantitative research methods which are summarised below.

Desk Research and Literature Review: Extensive desk research has been carried out at the start of the assessment reviewing key policy and strategic documents and various skills forecasts and assessments. A review of existing literature was also conducted as an on-going part of the study.

On-line Surveys: A retrofit readiness on-line survey was conducted with Further Education Colleges in the North East LEP and Tees Valley LEP area to understand current and future within the Further Education Sector. At a later stage, a similar survey trialled with a few of the Independent Training Providers in the area was conducted, however this generated just one response.

On-line workshops: As part of the stakeholder engagement plan, a series of three workshops were held, engaging between 40-60 stakeholders at each session.

1-2-1 interviews: Over 50 interviews have been conducted with a range of stakeholders using a semi-structured approach to discuss barriers, challenges and gaps and explore solutions.

Group discussions: As part of the engagement process, numerous discussions have taken place in different group and network settings, sometimes on specific aspects of the study and other more general discussions and these inputs have informed the study.

Quantitative Data analysis: The demand study conducted as part of the skills assessment uses a unique data triangulation methodology which has triangulated data from over 40,000 sources for the study. A full methodology of this approach is provided in the Market Demand study report. (Study Output 4)

## Implementation

The North East LEP provided clarity on the boundaries and scope of the study, they also allowed flexibility on the research methodologies and process, which enabled the external consultants to be very responsive to stakeholders input, advice, and guidance. This section looks at how the study was implemented giving examples of key points within the study where feedback provided by stakeholders has been invaluable.

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| Phase 1: July to Sep | Steering Group (Meeting 1) |
| | Familiarisation |
| | Understanding Market Dynamics |
| | Stakeholder Engagement Plan |
| | Reviewing existing NE-LEP skills data |
| | FE college survey design |
| | Demand study and Building the Taxonomy |



### Phase 1 KEY STEPS

1. **Familiarisation –** Initially a small number of days had been assigned to desk research. It was envisaged that this would be focused on familiarising with the domestic retrofit challenge itself and help to build knowledge around the background and context.

What became very clear at an early stage was the significant volume of research in the form of policy papers, reports, responses to parliament, skills assessments and initiatives that had taken place or were currently taking place across the UK. As these would all have to be reviewed as part of the study, it was decided to include a Literature review summary as an additional element which can be found as an additional spreadsheet within Study Output 3. Published research that was found to be particularly useful for the assessment were

- Building Skills for Net Zero, CITB Industry Insights and Analysis
- Retrofit Skills Market Analysis for West of England Combined Authority produced by ecuity
- Energy Efficiency Association's response to the House of Commons inquiry of Green House Grants written by Kenneth Campbell
- Retrofit Roles (PAS 2035) Trustmark documentation

**2. Understanding the market dynamics** – Understanding the key market drivers for both the demand and supply of skills was an important aspect of understanding barriers, challenges, and gaps. For example, it was apparent that the domestic retrofit market was still in the early stages of development, driven by government policy. Early adopters would be housing associations and therefore housing associations together with government policy would initially be the drivers of demand for skills. Both the literature review and the stakeholder engagement helped to develop an understanding of the market dynamics within the sector for the demand and supply of skills.

**3. Stakeholder Engagement Plan –** The plan was useful in identifying, the groups of stakeholders for the DESA study and the discussion themes for each group. It was helped to identify stakeholder contacts and gaps. For example, gaps in contacts for the other Energy Hub areas and LEPs were identified and plugged through the energy team. Key senior management contacts within the FE colleges were identified through the skills team. The stakeholder plan forms Study Output 1 and can be accessed through the North East LEP.

**4. Reviewing existing skills data to identify skills gaps –** In this first phase of the skills assessment, existing available skill data located within the North East LEP, together with skills gaps research undertaken by the Energy Systems Catapult (ESC)on was reviewed.



The North East LEP Sector Skills database provided detailed information on current courses and qualifications available within the North East LEP area and the number of learners that had accessed this training. The existing North East LEP data was useful in identifying specific training provision for domestic retrofit that was available to run in the area. A key result of reviewing this data was that Skills Programme Manager Anthea Pratt was able to identify training provision that could be delivered under an existing ESF scheme run by the North East Institute of Technology. After discussion it was agreed that the training could begin in the new financial year. It was motivating for the project team to see activity happen.

The other benefit of reviewing provision was that a few independent training providers were identified delivering or with the potential to deliver domestic retrofit training. These providers were contracted and invited to engage with the study through the workshops and in other ways.

Data from the ESC provided an excellent base line for skills gaps within domestic retrofit and helped to develop an understanding of the different risk pathways within domestic retrofit and the skills requirements for each of these pathways. The ESC skills gap research together with the literature review, helped to build the teams knowledge of the Retrofit roles required for whole house retrofit within the PAS2035 specifications. Particularly helpful was The Retrofit Academy (TRA) and Trustmark website.

The project team agreed the best way to present the skills needs of the sector was by using the framework of each of the Retrofit Roles, this development in thinking helped to inform the development of the taxonomy which is reviewed in point 6.

**5. FE college survey design –** A high level strategic on-line survey was designed for College Principals and the Heads of Built Environment and Construction to complete. A key challenge during the survey design stage was deciding on survey content. For example, should there be detailed information requests about course content and what was being delivered or should it be more focused on Retrofit readiness and activities that were being put in place to develop provision in this area? The decision was taken to go for the latter approach. The survey content was reviewed by the NEIoT to ensure

it was suitable and fit for purpose. The survey design also drew from the D2N2 Low Carbon Mapping exercise. In hindsight the survey design provided us with just the level of information required and it was not onerous for the FE colleges to complete. Work was also undertaken separately by the North East LEP to identify exactly who the survey should be sent to, and all FE colleges were given the heads up about the survey and its purpose. This preparatory work helped to pave the way for a strong response rate. (92%)

**6. Demand Study and building the taxonomy –** A key activity within this phase undertaken by kMatrix was focused on building the taxonomy for the demand study. kMatrix apply a complex and detailed research methodology which started as an international research programme within Harvard University and subsequently developed in countries across Europe. The methodology is a unique data triangulation methodology, developed by Professor R. Jaikumar of Harvard University. It triangulates transactional data from many sources and provides the flexibility of a definition tailored to the sector being studied. The sector is classified and measured from the bottom up, the sector taxonomy is reported from the sector level down.



A key benefit of this methodology is that it crosses SIC codes, cherry-picking transactions in relevant activities across multiple 'traditional' SIC code sectors to build bespoke sectors. For this study over 40,000 data sources were accessed. Further information of the kMatrix methodology is provided in Appendix 3 and details of the full methodology and approach of the demand study assessment is set out within Study Output 4 itself.

Both the literature review and stakeholder engagement activities informed and helped to finesse the demand study in relation to a) defining all the activities that made up the sector and b) identifying the roles and the skills required within the roles.

A key outcome from building the taxonomy was the identification of 4 additional roles to the existing roles defined for whole house retrofit as specified within PAS 2035. These additional roles arose out of the conversations with the Energy Systems Catapult around sector market development and with Midlands Energy Hub contacts who identified the need to include public procurement officer roles as well as public procurement support roles. These interactions provided valuable insights at this stage.

We need to skill the trainers and educators! – This was a statement made within the project team, that led to a change in methodology for the demand study, an additional valuable piece of work performed by kMatrix, essentially using the same methodology, with a focus on training to quantify the number of full-time equivalent trainers and educators required to supply the future workforce. As a result, the demand study output also identifies the number of trainers and educators required to train up the workforce. It also identified that an immediate short-term action would be to train and skill up the educators.

## Learning from Phase 1:

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| a) Allocate more time to conducting a full literature review for the sector as these can be very helpful in finetuning methodology and approach. |
| b) Reviewing existing skills data sourced from individual learning records did not particularly help to inform the gap analysis work, however it did lead to additional delivery of training activity in domestic retrofit and the identification of independent training providers that could or were delivering in this area. |
| c) Having the North East LEP skills programme manager within the project team meant that as evidence emerged it was being actioned immediately, so the research was dynamic and responsive to the findings before it was concluded. |
| d) Preparatory work with FE sector is very worthwhile as it is more likely you will get a positive response rate. The preparatory work needs to ensure you have the right contacts and they are suitably warmed up why the work is being carried out and the potential benefits. |
| e) The flexibility within both the methodology and the project team enabled the building of an additional feature to the demand study which adds significant value to the study. |
| f) Stakeholder engagement and the literature review provided additional valuable insights into roles and skills within roles that had not been considered. |



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| Phase 2: Oct to Dec | FE college survey and 1-2-1 interviews<br>Workshops<br>1-2-1 stakeholder engagement<br>Demand Study Report<br>Feeder Channels |

### Phase 2 KEY STEPS

FE college survey and follow up 1-1 interviews: The FE college survey had an excellent response rate with 11 out of 12 colleges responding. It was decided to focus on these two LEP areas partly due to the budget and timeline and partly due to the established relationships with the colleges. The on-line surveys went live in October and the last one was completed in January. Allowing for this longer window led to a higher response rate, as did the follow up calls and prompts through stakeholder engagement activities. The surveys provided excellent high-level information about the College's position on domestic retrofit, and these were followed up by vary valuable 1-2-1 interviews with the College Principals or Heads of Department. Through this approach, a deeper understanding of the skills gaps, concerns, barriers, and challenges was obtained. For example, a fuller understanding of the FE college funding models and their demand led evidenced based nature. This model is not fit for purpose in skill areas focused on anticipating future demand.

Independent Training Provider Surveys: A perfect example that highlights the importance to response rates of having established relationships is the Independent Training Provider Survey. The survey was carried out with around 6-8 training providers most of which were newly established contacts. Only one response was

received, and this was with a training provider where a strong relationship had been established.

Workshops – Skilling up for Retrofit Series: The format and content of these workshops was developed in phase 2. It was decided to present the workshops as a series rather than stand alone, the first explored the current situation, the second was about fore sighting and forecasting for the sector and shared emerging data from the demand study and the final workshop was about solution building. As the sessions were on-line, we were able to bring several national as well as regional experts to the sessions.



There was a mix of local and national participants, and many participants attended all three sessions. Participation attendance was very good and built up at each session, the final session had around 80 participants attending and received very positive feedback. It was clear that there was an appetite for this type of activity. These workshop formats might have been improved with more structured discussions around a series of specific questions if this type of activity was repeated. In on-line formats, this additional structure can be useful to stimulate thoughts and contributions.

1-2-1 and group stakeholder engagement activity: Throughout the process and particularly in phase 2, the project team were engaged in stakeholder activity with the stakeholder groups outlined in the engagement plan. (Study Output 1) These discussions provided valuable insights into the current state of play, pitfalls, and challenges for both the demand and supply of skills. Although, the project team had identified a long list of stakeholders that the study would benefit from speaking to, there was also a bit of snowball methodology applied as after every conversation there was a recommendation to speak to several contacts and networks. In many instances this was taken up. It was useful to allow stakeholder engagement to happen naturally in this way, the downside was deciding when to draw a line and move on to the write up phase. One group the study would have benefitted from greater discussions with, was the Universities and perhaps more initial work in establishing the key contacts, as was done for the FE colleges, would have been useful here.

As part of the stakeholder engagement process, the project team discussed the study with various teams including the North East Chamber, Energy Systems Catapult team, the LEP and energy hub networks facilitated by the Energy Systems Catapult, the LEP network, the North East Climate Coalition for Change and the North East and Yorkshire Energy Hub.

Stakeholder engagement, led to a great deal of positive activity outlined in the Outcomes section. Examples of this include, the establishment of domestic retrofit training, several introductions between national and regional workshop participants to stimulate domestic retrofit activity in the area and funding applications to deliver training programmes based on the emerging findings.

Demand Study Report: During this phase the Demand Study report was completed. The report is a comprehensive analysis of the future demand for retrofit skills across the three geographically defined areas. It quantifies the number of skilled full-time

equivalent workers required for domestic retrofit by activities and by skilled roles in four different scenario settings. It presents these numbers by both SIC activities but also by Industrial areas. The latter was introduced as a direct result of a discussion during one of the workshops. As part of the stakeholder engagement, kMatrix and the CITB engaged in detailed discussions about their different forecasting methodologies, a good example of the collaborative nature of the project. (See Appendix 3 and Study Output 4 for detailed information about the demand study methodology)

Feeder Channels: Stakeholder engagement activity and the literature review helped to identify four broad potential feeder channels into the sector. kMatrix undertook to identify which horizontal sectors were most likely to be the right fit to supply workers into the sector. The feeder channel analysis considers each of the retrofit roles and the 56 skills, exploring potential feeder channels for each. This provides a starting point to consider areas to target. This activity has formed a useful part of the skills study and further work needs to be undertaken to build on these initial findings as proposed in the Action Plan (Study Output 3)



| Learning from Phase 2: |
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| a) When conducting on-line surveys, allowing a longer window for response with regular prompts helped to boost the response rates. This was aided by the existing relationships with the College Principals, LEPs and the North East and Yorkshire Energy Hub who all did their bit to support and encourage responses. |
| b) The Skilling up for Retrofit Series workshops were received well and stimulated positive activity, they led to many connections nationally and locally. The key benefit of the workshops being on-line was that the study was able to engage with many national participants adding greater insight and depth. The downside of the on-line format was it was more difficult to stimulate discussion, a more structured discussion might have helped do this. |
| c) Stakeholder engagement activity was crucial in building the understanding of the challenges, barriers, and gaps. The study would have benefitted from greater engagement with the Universities. However, finding the right contacts and accessing them proved difficult, so allowing additional time to do this is advised. |
| d) Stakeholder engagement led to several actions that began immediately reflecting the dynamic nature of the study. |
| e) Feeder channels formed a useful element of the assessment, and it is recommended that these are considered in other studies. |

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| Phase 3: Jan to April | Analysis and Report Production<br>10-year Action Plan<br>Early-stage dissemination<br>Dissemination Plan and implementation |

**Phase 3 KEY STEPS**

Analysis and Report Production: During this stage the analysis of all the qualitative data as well as the findings from the on-line survey were brought together grouped and reviewed against the key questions asked within the original tender specification. The production of the overall summary report began in January. This report brought the entire study together, summarising the demand study report findings as well as setting out the skills needs, barriers and challenges. The report was structured using the initial framework identifying the now, the future and the how which was the implementation plan.

10-year Action Plan: Using the time frame of the UK Government's Heat and Buildings Strategy, for short, medium and the long-term, a 10-year action plan was produced in spreadsheet format, referenced within the main report. This Action Plan addresses the four main challenges identified by the National Grid's Future Energy Scenario for Domestic Retrofit and sets out proposed initiatives within these challenges. For each initiative the activity is outlined, together with the evidence base, suggested partners, and potential partner lead. The Action Plan is set out to engage stakeholders to identify potential activities they could lead and participate in. It does require facilitation and co-ordination, for it to gather momentum. A small investment in such a resource could go a long way in getting the action plan off the ground and it is recommended for future studies and methodologies to consider securing funding for this type of resource so that momentum is not lost.



Dissemination Plan and implementation: Early-stage dissemination of findings took place with stakeholders from the North East Climate Change Coalition Retrofit Group at their request and this provided some very useful feedback which informed the writing of the final report. A formal Dissemination Plan was drawn up (Study Output 5) which set out how the findings from the study would be disseminated. The first formal dissemination activity was with the North East Yorkshire and Energy Hub and once approval was gained to share the findings, the DESA Steering Group, Stakeholder Group and Skills Advisory Panel were presented with the findings. It was envisaged as part of the dissemination plan that there would be an element of internal training within the North East LEP's energy and skills team so that internal sharing could take place more widely. This did not take place; however, the North East LEP project team did present the findings themselves together with kMatrix at the North East Energy and Yorkshire Hub and are very comfortable with sharing the findings internally as and when required.

Overall, the presentations were well received, though it proved difficult to strike the right balance between providing breadth and depth within a reasonable time frame. On reflection a stronger narrative or themed approach to the findings might have worked better and this is something for future studies to consider.

## Learning from Phase 3:

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| a) | The simple framework of the report; where are we now, where do we need to get to and how are we going to get there seemed to work well for the study and could be applied to other sectors. |
| b) | Specifying a 10-year action plan provided a useful focus to the report. Building the detailed action plan provides a useful steppingstone to implementation. What is recommended in future studies is an allocation of resource to begin the facilitation and co-ordination of the action plan immediately so that momentum is not lost. |
| c) | The dissemination of findings format was through several presentations, it was difficult to strike the right balance between breadth and depth. A stronger narrative format for the presentations or a themed approach might have worked better in stimulating discussion. |



## The project team

The project team comprised of representatives from the North East LEP, Kmatrix Data Services and Ideas for Change Consulting. The team met every week throughout the life of the project to address any issues, share and respond to emerging findings and utilise their pooled networks, contacts, and expertise to add value and insight to the study.

**North East LEP:**

Anthea Pratt, Skills Programme Manager: Anthea Pratt managed the implementation phase of the DESA study. Anthea provided valuable context, networks and facilitated the skills workshops, and steering groups. She was able to action and initiate training and bid for funding as findings emerged. Through Anthea, the assessment was linked closely to other complementary skills activity taking place within the North East LEP.

David Lynch, Energy Innovation Partnership Manager: David led on the DESA study design and development phases as well as the tendering and commissioning. David provided valuable contacts within the Energy Hubs, Housing Associations and local authorities making sure that the Study was working collaboratively with other research and initiatives taking place. David also remained involved during the project implementation phase, providing advice and guidance, and engaging with stakeholder events and activities whenever possible.

**Ideas for Change Consulting:** Sanjee Ratnatunga from Ideas for Change Consulting an economic development consultancy operating across the North East of England. Sanjee was engaged to lead on the stakeholder engagement and perform core project management tasks to ensure that overall project was on track. Sanjee has an extensive working knowledge of the North East economic development infrastructure having worked for both local and regional government prior to establishing her consultancy.

She was responsible for delivering the work packages focused on gathering qualitative data from stakeholders to understand the current market dynamics and skills needs, current training provision qualifications and curriculum gaps. Sanjee developed the

domestic retrofit workshop series, developed the stakeholder engagement and dissemination approaches and the overall DESA study report.

**kMatrix Data Services**: Sarah and Steve Howard from kMatrix Data Services were responsible for the work packages focused on the demand study and feeder channels. kMatrix have a unique research methodology initiated within Harvard University and then developed in countries across Europe which they utilised for this study. The company has an excellent reputation in their field providing market intelligence to national and local governments across the world. They also work in the private sector from major corporations to sole traders.



The key asks for this piece of work within the demand study was to a) identify the activities and roles within the domestic retrofit sector and then b) quantify the numbers of full-time equivalent people within each of the roles and activity areas that would be required to achieve net zero across several scenarios. Sarah and Steve were also tasked with identifying potential market feeder channels for future supplies of skilled workers to deliver domestic retrofit.

The project team was an excellent fit with complementary skills, knowledge, and expertise. The project team environment, all delivered on-line was supportive and collaborative with a strong focus on the overall task in hand. These qualities were agreed to be an essential ingredient in delivering the study.

# Appendix 1: Domestic Energy Skills Assessment Logic Model

North East Domestic Energy Skills Assessment Logic Model

## Context

The UK national government has made a commitment to reducing carbon emissions by 100% of 1990 levels by 2050. The National Energy Policy on carbon emission abatement is a driving factor shaping policy at a local level. Regionally all 7 local authorities in the NE-LEP area have declared climate emergencies. The scale of the challenge is vast. Domestic Heating alone accounts for a third of total UK carbon emissions. To achieve the 2050 targets the UK must decarbonise the heating market at a rate of 20,000 homes per week by 2025. There is a need to move away from natural gas fired boilers to new low carbon heating systems

## Market failure assessment

The biggest challenge is around the development of skills required to deliver net zero by 2050. A consumer transformation and energy system transition of monumental proportions is required to hit these government targets. Future Energy Scenarios work conducted by the National Grid shows failures and weaknesses in the following area;

- A lack of training infrastructure to up-skill at the scale required to match government ambition
- Lack of skills required to meet demands of regional and national net zero transition.
- Poor communication and dissemination of career path opportunities
- Poor standards and accreditation

There is a need for urgent, collaborative action on skills development to address these issues particularly in the area of domestic retrofit

## Project rationale

In response to the challenges and potential opportunities laid out in the context NE-LEP has bid for funding from the North East Yorkshire and Humber Energy Hub Board to produce a North East Domestic Energy Skills Assessment. The assessment will

(i) Help assess the skills needs of domestic retrofit and

(ii) Help/support the development of facilities and tools to drive skills development regionally and nationally.

This collaborative project will works with the Energy Systems Catapult who are co-ordinating with other LEP areas to assess the skills needs of domestic retrofit.

The Skills assessment specification set out an approach to enable the assessment of skills requirements to deliver net zero across the domestic housing sector.

## Project objectives

- Assess the breadth and depth of current skills provision for domestic retrofit.
- Understand the qualification levels required to deliver domestic retrofit initiatives.
- Develop/Review curriculum and training content, cutting across digital, housing, construction and energy systems.
- Assessment of 'market demand' for such skills
- Build a 10 year legacy plan for futureproofing and strategy development

## Project inputs

Original Budget circa 50K

## Project activities

The following are work packages identified;

**WP1: Stakeholder Engagement** -Engagement Plan and Workshops x 3 with Education Sector all levels and Industry and accreditation organisations to gain input, insights, knowledge on existing and current skills provision for domestic retrofit

**WP2: Identify Gaps –** Use existing evidence base to assess gaps in skills and training provision. Engage with ESC, industry bodies to estimate scale of skills and training provision required.

**WP3: Develop/Review Curriculum Plan** – Work with NE-LEP skills team and external partners to develop an integrated curriculum for all levels of the education system supporting progression from further to higher education, to stimulate demand for Level 3 Higher qualifications and T-level. Progress Skills4Jobs agenda

**WP4: Assess Market Demand -**Assess demand for energy skills driven by national energy policy and decarbonisation schemes

**WP5: Energy Sector Feeder Channels -**Identify strategic ways of engaging with future workforce to raise awareness of requirements

**WP6: Production of Report –** A comprehensive report detailing all the findings set against the research aims, pulling from all WP's

**WP7: Governance and Leadership -**Establish project steering group comprised of NELEP/Skills Advisory Panel

**WP8: Dissemination and knowledge transfer –** Establish a plan

## Project outputs

O1: An **engagement plan** targeted at different levels of the regional educational eco-system

O2: A **report** presenting an **assessment of skills gaps and training provision** required for domestic retrofit and net zero transition.

O3: A **curriculum plan** setting out content and practical tools to fill skills gaps and training provision.

O4: **A report** providing the evidence of **market demand** for domestic energy skills and feeder channels to meet such demand.

O5:An **action plan** setting out training initiatives, tools and timescales required to meet demand

O6:A governance, dissemination and **knowledge transfer plan.**

## Project outcomes

Outputs will feed into strategies and policies and funding applications to secure funding for initiative and actions that will move the North East forward in preparing for net zero transition around skills

## Intended Impacts

North East in a competitive position to take advantage of the National and regional opportunities through net zero transition for the local economy through being able to address the market failures outlined in the context.

# Appendix 2: kMatrix taxonomy and methodology description

kMatrix Domestic Energy Retrofit Skills

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## About Ideas for Change Consulting

Ideas for Change Consulting is an economic development consultancy based in North East England working with organisations who are developing alternative solutions to persistent economic, social, and environmental challenges. Our services include, evaluations, feasibility studies, market insights, impact analysis, business and strategic planning, capacity building, facilitation, and project management.

Sanjee Ratnatunga, the company's founder has 25 years of experience working as an economic development practitioner in the North East of England. Sanjee works closely with Academia, Industry, Government and NGO's and has an excellent reputation for bringing an open, inclusive, and collaborative approach to all her project work.

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