Department for Energy Security & Net Zero

Interim Evaluation of Domestic Energy Affordability Support Schemes in Northern Ireland

Annex B: Theory of Change

April 2025

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Annex B: Review of the Theory of Change

This section presents the methodology for developing the programme ToC, and also presents a review of the evaluability and validity of the ToC and the resulting contribution story following the findings of the process and outcome evaluation.

1.1 Methodology for developing the ToCs

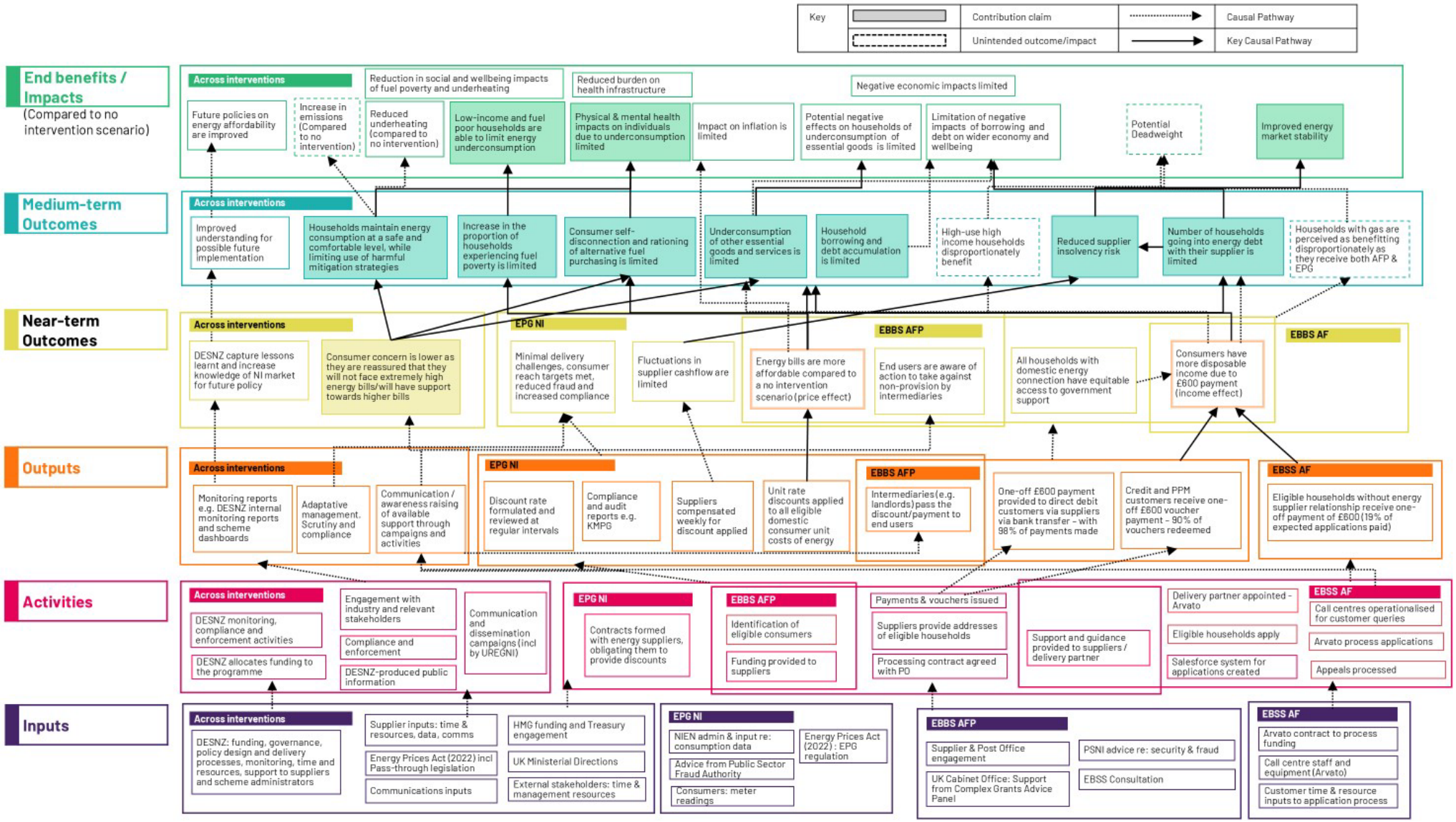
As set out in chapter 3 of this report, the evaluation team used a multi-phased approach to develop the overarching ToC for the energy affordability schemes. This process involved first developing a preliminary ToC, which was informed by a comprehensive review of scheme documentation, a broad analysis of relevant literature pertaining to the schemes' launch context, and five in-depth scoping interviews with key stakeholders from DESNZ. This initial scoping phase provided a foundational understanding of the schemes' rationale, anticipated outcomes and impacts, and facilitated an exploration of the underlying theory and assumptions driving the schemes' development.

Following the initial drafting of the ToC, the next phase involved the evaluation team facilitating a series of workshops with members of the DESNZ team to collaboratively refine the ToC for each energy affordability scheme. During these workshops, participants engaged in an examination of each scheme, discussing the inputs, activities, outputs, outcomes, and impacts. Additionally, they analysed and articulated the fundamental assumptions underpinning the relationships between these key elements. A further aspect of these workshops involved in-depth discussions to determine the most pertinent outcomes for each scheme and how these outcomes related to different household groups. Following stage one of the evaluation, each of the nested Theories of Change were revisited and revised to reflect the emerging evidence. This annex presents the overarching ToC, which informed by these individual scheme ToCs alongside narrative detail providing more detail about the contribution story.

In this final stage of the evaluation, the causal hypotheses which underpinned the programme have been updated in the diagram to represent the findings of the evaluation in relation to the programme’s anticipated contribution to impact. The changes were also made to increase the evaluability of the ToC.

The overarching ToC (see Figure B1.1) represents the underlying theories and assumptions of the energy support schemes designed to help households in NI designed by the UK Government in 2022 and illustrates this across all schemes. Within the main report, the key causal pathways (‘contribution claims’) are described at the beginning of each subsection of Chapter 6. In the diagram, interlocking boxes highlight the overlap and interconnectedness of some of these across schemes. Arrows illustrate the causal pathways through the intervention to impacts. The diagram in Figure B1.1 presents the design logic of the programme at the outset of delivery and not the findings about whether the anticipated change and contributions occurred.

Figure 1: Overarching Theory of Change for NI energy affordability schemes



1.2 Overarching ToC contribution story

As set out in the overarching ToC, there was an overall causal assumption that the combination of: (1) the EPG discount on on-grid electricity and gas, and (2) a universal payment to all households in NI of £600 delivered through EBSS AF and EBSS AFP through several means depending upon how the household heated their home and paid for energy; through (3) funding to delivery partners and to suppliers as a contribution to wholesale costs [scheme activities and outputs] would lead to (1) reduced supplier insolvency; (2) better reassured customers; (3) energy bills being more affordable; (4) consumers having more disposable income; (5) consumers being able to use the energy affordability support towards the cost of energy bills [scheme outcomes in the near term], so that (1) consumers can heat their homes to a safe and comfortable level; (2) fewer consumers go into energy bill arrears; (3) there is less household borrowing; (4) consumer self-disconnection from PPMs and rationing of alternative fuel use and purchase is limited; and (5) underconsumption of other essential goods and services is limited [scheme outcomes in the near term]. It was expected that these outcomes would lead, in the longer-term, to (1) negative physical and mental health impacts on individuals linked to (cause or exacerbated by) underconsumption of energy being limited or reduced; (2) the prevalence and breadth of fuel poverty in the target population being reduced; (3) any negative effects of higher household borrowing and underconsumption of essential goods and services on the economy being limited; and (4) any negative effects of higher household borrowing and underconsumption of essential goods and services on households being limited. These results were all to be understood in relation to a 'counterfactual' situation – i.e. what would have happened in the absence of the schemes.

The achievement of these outputs and outcomes was dependent upon several assumptions pertaining to:

Scheme delivery – that the schemes would reach all households in NI through (i) the universality of the EPG and/or EBSS AFP or AF schemes, (ii) the different means of distributing the energy affordability support – and the accessibility of these distribution methods, (iii) the different delivery partnerships set up to support distribution of the support, (iv) – in the case of – EBSS AF – communications and awareness-raising that would alert eligible households to the of support and the application process, and (v) any scheme delivery challenges would not disproportionately affect / reduce access to the schemes / exacerbate existing risks and vulnerabilities for the most vulnerable households in NI (e.g. those at greatest risk of fuel poverty, with disabilities or existing illnesses, on lower-incomes, with young children and/or older people in the home).

The nature of the NI energy landscape (i.e. how different fuels are used and paid for) – that (1) a sufficient amount of households in NI access energy (electricity and gas) via the grid to render EPG support beneficial, (2) that the AFP support, given its universal application, would provide sufficient support for the achievement of intended scheme outcomes even where ~75% of NI households utilise alternative fuels for heating, and (3) that the EBSS AF scope of eligibility would cover all those not eligible for EBSS AFP.

NI household motivation and ability to access the EBSS AFP or AF support - that (1) for the large proportion of households in NI who purchase their on-grid energy through PPMs, credit,

cash and cheques, that they would be sufficiently motivated to make the trip to the Post Office to cash their voucher, (2) for those paying for their energy through intermediaries (e.g. as part of rent to heat network payments) that the intermediary would pass down the payment, and (3) for those paying for energy through other means – e.g. through non-domestic accounts and off-grid energy – that they would be sufficiently motivated to access the support through the application process.

Household energy consumption behaviours in NI – that (1) the EPG support would contribute to households being better able to afford the energy needed for them to heat their home to a safe and comfortable level, and (2) where this was not the case (i.e. where EPG support was not sufficient) households would utilise the EBSS AFP or AF support to pay towards energy (to prevent underconsumption).

The linkages between energy consumption, anxiety over being able to pay for bills, and health and well-being – that (1) concern about being able to pay for bills can negatively affect mental health, and (2) underheating of the home can negatively affect physical health.

The linkages between energy debt in homes and energy supplier stability in NI – that suppliers in the energy supply market in NI, similar to GB, were at risk of insolvency should levels of energy debt in households rise suddenly due to not being able to pay their energy bills.

These assumptions are discussed in more detail and by contribution claim in the tables overleaf.

Table 1: Contribution Claims HC1 & HC2: Maintaining energy consumption to a safe and comfortable level

Counterfactual	Design Assumption	Delivery Assumption	Behavioural Assumptions	Potential distributional impacts
The counterfactual scenario for these contribution claims assumes that without government intervention, the significant increase in energy prices leading up to winter 2022/23, and the absence of support during this time, would have led to a greater proportion of households in Northern Ireland reducing their energy consumption to potentially unsafe or uncomfortable levels. This reduction in energy use could have had negative consequences for households' physical and mental well-being, particularly for vulnerable groups such as older people, those with health conditions, and families with young children. This assumption is based on	The energy affordability schemes were designed to mitigate this risk by ensuring that households could maintain a safe and comfortable level of energy consumption, even in the face of rising prices. The EPG, by directly reducing the unit price of gas and electricity, aimed to make energy more affordable for households connected to the grid. This was based on the premise that lower energy prices would enable households to maintain their existing levels of energy use without experiencing undue financial strain. The EBSS AFP or AF payments, aimed to provide additional financial support to households, regardless of their energy source. This was intended	The effectiveness of the schemes in achieving these objectives relied on the timely and efficient delivery of both the EPG discount and the EBSS AFP or AF payments. The EPG discount was applied directly to energy bills, ensuring immediate relief for eligible households. This direct application was chosen to ensure that the benefits reached consumers quickly. The EBSS AFP payments were delivered through direct debit or redeemable vouchers, while the EBSS AF payments required an application process followed by direct debit disbursement. The assumption was that these delivery mechanisms would ensure that households received the	The design of the schemes assumed that households, aided by the government's financial support, would not have to significantly increase their energy-saving behaviours, even in the face of rising prices. This assumption was based on three key pathways: (1) that by being aware of the schemes (through scheme communications) households would be less likely to under consume energy even prior to receiving the support as they would know that support would be on its way. In the ToC diagram above, it is also clear that communications were assumed to play a role in households benefiting in the optimum way from the scheme – e.g. communications and information were assumed to play a key role in	Low-income households, already at greater risk of fuel poverty and energy underconsumption, were expected to benefit most from the schemes. The financial support would provide a greater proportion of relief relative to their income, potentially allowing them to maintain their energy consumption to safe and comfortable levels; Households with disabilities or health conditions that would make them more vulnerable to the cold or to limiting the use of essential appliances might be expected to be in greater need of the support (and potentially in receipt of a greater overall benefit from it proportional to the status quo).; It was anticipated that the schemes might have a differential effect depending on the primary energy source

the well-established link between cold homes and poor health outcomes, as well as the understanding that energy is an essential service, and reducing its use to cope with affordability challenges can have detrimental effects on quality of life. It also needs to be recognised that the managed reduction in energy use, potentially through the use of energy efficiency measures, would have made a positive contribution to carbon reduction.	to increase their overall income, allowing them to better manage their energy costs and avoid having to reduce their energy consumption to unsafe or uncomfortable levels. The rationale behind this combined approach was to address both the price and income aspects of energy affordability, recognising that different households would be affected differently by the energy crisis.	financial support when they needed it most, during the peak energy consumption months, allowing them to maintain their energy use during the winter period and avoid heating their homes to unsafe or uncomfortable levels.	intermediaries (e.g. landlords) correctly ensuring that the financial benefits were passed onto residents and that those who did not benefit via their intermediary or who were denied AFP support knew how to appeal these decisions. (2) That through the lower energy bills and credit on their bills / PPM (price effects) their energy bills would be closer to typical levels, meaning that the households would be less likely to respond to the energy price rise with a change in energy consumption behaviour. (3) That increasing the disposable income of households (income effect), households would use this money towards energy costs (including the purchase of alternative fuel). The overall assumption was that the support would prevent households from resorting to potentially harmful energy-	used by households. Those reliant on gas and electricity would benefit directly from the EPG, while those using oil or other alternative fuels would rely solely on the EBSS AFP or AF payments. This difference in support mechanisms might lead to variations in the impact on households' ability to maintain safe and comfortable energy consumption levels, with those using gas and oil expected to benefit the most from the schemes, as they benefited from both EBSS AFP/AF and EPG, compared to those using oil, who benefitted from EBSS AFP/ AF alone.

			saving measures, such as under-heating their homes (i.e. heating it to levels that are not safe to their health or that are uncomfortable) or limiting the use of essential appliances.	

Table 2: Contribution Claim HC3: Limiting the scale and duration of disconnection and loss of energy supplies

Counterfactual	Design Assumption	Delivery Assumption	Behavioural Assumptions	Potential distributional impacts
The counterfactual scenario for this contribution claim assumes that without the energy affordability schemes, households facing financial pressure due to rising energy prices would be more likely to purposefully disconnect from energy supplies or avoid purchasing additional fuel when their supply runs out. This could involve self-disconnecting from PPMs by not re-crediting them or delaying the purchase of alternative fuels like heating oil. This assumption is based on the understanding that households facing financial hardship might resort to extreme measures to reduce their energy costs, even if it means sacrificing their access to essential energy services.	The energy affordability schemes were designed to mitigate this risk by providing financial support and reassurance to households, thereby reducing the likelihood of purposeful disconnections or fuel purchase avoidance. The EPG, by lowering the unit price of gas and electricity, aimed to make energy more affordable for households connected to the grid, reducing the financial pressure that might lead to disconnections. The EBSS AFP or AF payments, aimed to provide direct financial assistance to households, regardless of their energy source, further reducing the need to resort to disconnections or fuel purchase avoidance. The rationale behind this	The effectiveness of the schemes in achieving this objective relied on the timely and efficient delivery of both the EPG discount and the EBSS AFP or AF payments. The EPG discount was applied directly to energy bills, ensuring immediate relief for eligible households. The EBSS AFP payments were delivered through direct debit or redeemable vouchers, while the EBSS AF payments required an application process followed by direct debit disbursement. The assumption was that these delivery mechanisms would ensure that households received the financial support when they needed it most, reducing the	The design of the schemes assumed that households, in receipt of and reassured by the government's providing of financial support, would feel more confident about their ability to afford energy, and have a greater capacity to do so, and would therefore be less likely to purposefully disconnect or avoid purchasing additional fuel. This assumption was based on the understanding that households would be more willing and have a greater capacity to maintain their energy supply if they received support and felt secure in their ability to manage the associated costs.	Low-income households, already more vulnerable to energy affordability challenges and potentially reliant on PPMs, were expected to benefit most from the schemes. The financial support and reassurance provided by the schemes were anticipated to reduce their likelihood of experiencing disconnections; Households with disabilities or health conditions often have higher energy needs due to medical equipment or the need to maintain a warmer home environment. The schemes were expected to provide crucial support in ensuring they could maintain their energy supply without interruption, safeguarding their health and well-being; The impact of the schemes was expected to vary

	approach was to ensure that households could maintain access to essential energy services, even in the face of rising prices.	likelihood of disconnections due to a lack of funds.		depending on the primary energy source used by households. Those reliant on gas and electricity would benefit directly from the EPG, while those using oil or other alternative fuels would rely solely on the EBSS AFP or AF payments. This difference in support mechanisms could lead to variations in the impact on households' likelihood of experiencing disconnections or fuel purchase avoidance. This leads to the assumption that those on gas and electricity would benefit more from the scheme, receiving both the EBSS AFP, EBSS AF and EPG, compared to those on oil who receive only EBSS AFP or AF.

Table 3: Contribution Claim HF1: Energy debt

Counterfactual	Design Assumption	Delivery Assumption	Behavioural Assumptions	Potential distributional impacts
In the absence of government intervention, the sharp rise in energy prices would have rendered a greater number of households unable to meet their energy bill obligations. This would have led to a higher prevalence of energy debt, potentially causing financial hardship for households and posing risks to the stability of energy suppliers. This assumption is based on the understanding that energy is an essential service, and a sudden increase in its cost would strain household budgets, particularly those with limited financial flexibility.	The energy affordability schemes were designed to mitigate energy risk by implementing two key measures: the EPG and EBSS AFP or AF. The EPG aimed to directly reduce electricity and gas bills, providing immediate relief to households connected to the grid. This was based on the premise that lowering the unit price of energy would make it more affordable for households, thereby reducing the likelihood of falling into arrears. The EBSS AFP or AF payments, was intended to supplement the EPG by providing financial assistance to all households including those using alternative fuels or those without a direct relationship with an	The effectiveness of the schemes hinged on the timely and efficient implementation of both the EPG discount and the EBSS AFP or AF payments. The EPG discount was applied directly to energy bills, ensuring immediate relief for eligible households. This direct application ensured that the benefits reached consumers quickly. The EBSS AFP payments were delivered through direct debit or redeemable vouchers, while the EBSS AF payments required an application process followed by direct debit disbursement. The assumption was that these delivery mechanisms would ensure that households received the financial support when they needed it most, during the peak	The design of the schemes assumed that households would prioritise using the £600 EBSS AFP or AF payments towards their energy costs, rather than allocating it to other expenses. This assumption was based on the understanding that the primary objective of the schemes was to alleviate the financial burden of rising energy costs and to ensure that households could maintain a safe and comfortable level of energy consumption. The rationale was that households facing financial pressure due to high energy bills would be motivated to use the additional funds to address this pressing need.	The schemes were designed with the intention of providing universal support, aiming to benefit all households facing the challenges of rising energy costs. This universal approach was chosen to ensure broad coverage and minimise the risk of excluding those in need. However, it was acknowledged that the schemes were primarily focused on limiting increases in energy debt, rather than addressing pre-existing debt. Therefore, while the schemes were expected to benefit all households by limiting further debt accumulation, those already in debt were likely to remain so. Furthermore, it was anticipated that vulnerable groups, such as low-income households, those with disabilities, and larger families, would be disproportionately affected by the energy crisis. These

	energy supplier. This dual approach was chosen to ensure a more equitable distribution of support, recognising that the impact of rising energy prices would be felt differently across various household types and energy sources. For instance, households reliant on heating oil would not benefit from the EPG and would require separate financial assistance.	energy consumption months. The choice of delivery mechanisms was influenced by the need to reach a wide range of households, including those who pay their energy bills in different ways.		groups were expected to benefit most from the schemes, as the financial support would provide a greater proportion of relief relative to their income and energy needs. However, the universal nature of the support meant that all households, regardless of their income or vulnerability, would receive the same level of assistance. This approach aimed to ensure broad coverage and minimise the risk of excluding those in need, but it also meant that the support might be less impactful for higher-income households who were less affected by the energy price rises.

Table 4: Contribution claim HF2: Energy affordability and fuel poverty

Counterfactual	Design Assumption	Delivery Assumption	Behavioural Assumptions	Potential distributional impacts
The counterfactual scenario assumes that without government intervention, a greater proportion of households in Northern	The energy affordability schemes were designed to mitigate this anticipated financial strain by reducing the cost of	The effectiveness of the schemes relied on the timely and efficient delivery of both the EPG discount and the EBSS AFP or AF	The design of the schemes assumed that households would allocate the £600 EBSS AFP or AF payments towards their energy costs,	The schemes were designed with the intention of providing universal support, aiming to benefit all households facing the challenges of rising energy

Ireland would have experienced more financial strain due to the sharp rise in energy prices. This strain would have manifested as an increase in the breadth and depth of fuel poverty, meaning more households would be spending a larger proportion of their income on energy, leaving them with less money for other essential needs. This assumption is rooted in the understanding that energy is a fundamental requirement for households, and a sudden price surge would inevitably impact their ability to afford other essential goods and services.	energy and providing direct financial support to households. The EPG, by directly lowering the unit price of gas and electricity, aimed to reduce the overall cost of energy for households connected to the grid. This was based on the premise that a lower unit price would make energy more affordable, thereby reducing the proportion of income spent on energy bills. The EBSS AFP or AF payments, aimed to provide additional financial relief to households, regardless of their energy source. This was intended to increase their overall income, allowing them to better manage their energy costs and reduce the risk of falling into fuel poverty. The rationale behind this combined approach was to address both the price	payments. The EPG discount was applied directly to energy bills, ensuring immediate relief for eligible households. This direct application ensured that the benefits reached consumers quickly. The EBSS AFP payments were delivered through direct debit or redeemable vouchers, while the EBSS AF payments required an application process followed by direct debit disbursement. The assumption was that these delivery mechanisms would ensure that households received the financial support when they needed it most, during the peak energy consumption months, and therefore would be less likely to fall into energy debt. The choice of delivery mechanisms was influenced by the need to reach a wide range of	rather than using it for other expenses. This assumption was based on the understanding that households facing financial pressure due to high energy bills would be motivated to use the additional funds to address the increasing energy prices.	costs. This universal approach was chosen to ensure broad coverage and minimise the risk of excluding those in need. However, it was acknowledged that the schemes might have differential impacts on various societal groups. Low-income households, already disproportionately affected by fuel poverty, were expected to benefit most from the schemes. The financial support would provide a greater proportion of relief relative to their income, potentially allowing for some households to avoid fuel poverty; Households with disabilities or health conditions often have higher energy needs due to medical equipment or the need to maintain a warmer home environment. The schemes were expected to provide crucial support in paying their energy costs, therefore ensuring these households were better supported to deal

	and income aspects of fuel poverty, recognising that different households would be affected differently by the energy crisis.	households, including those who pay their energy bills in different ways.		with the increasing financial burden; Larger families typically have higher energy consumption and therefore face a greater burden from rising energy prices. The schemes were expected to provide much-needed relief, helping them to maintain adequate heating and energy use; The impact of the schemes was expected to vary depending on the primary energy source used by households. Those reliant on gas and electricity would benefit directly from the EPG, while those using oil or other alternative fuels would rely solely on the EBSS AFP or AF payments. Therefore, while all households received support, those using gas and electricity might be expected to benefit more from the scheme as they received both EBSS AFP or AF and EPG, compared to those using oil, who received EBSS AFP or AF. This potential

				'negative' or non-equitable effect is represented in the ToC diagram above with a serrated border.

Table 5: Contribution Claim HF3: Households' borrowing and capacity to spend on other essentials

Counterfactual	Design Assumption	Delivery Assumption	Behavioural Assumptions	Potential distributional impacts
The counterfactual scenario for this contribution claim assumes that without the energy affordability schemes, the sharp rise in energy prices would have reduced households' disposable income. This reduction would have forced households to make difficult choices, potentially leading to a decrease in spending on essential goods and services, an increase in borrowing to cover essential needs, and a depletion of savings. This then leads to the assumption that households, in the absence of the scheme, would not be able to afford other essentials as easily and therefore have a reduced quality of life. This assumption is based on the understanding that energy is	The energy affordability schemes were designed to mitigate this anticipated reduction in disposable income by lowering energy bills and providing direct financial support to households. The EPG, by directly reducing the unit price of gas and electricity, aimed to lower the overall cost of energy for households connected to the grid. This was based on the premise that lower energy bills would free up more disposable income for other essential expenses. The EBSS AFP or AF payments, aimed to provide a direct cash injection to households, regardless of their energy source. This was intended to bolster their overall income, allowing them to better manage their essential	The effectiveness of the schemes in supporting households' capacity to spend on other essentials relied on the timely and efficient delivery of both the EPG discount and the EBSS AFP or AF. The EPG discount was applied directly to energy bills, ensuring immediate relief for eligible households. This direct application was chosen to ensure that the benefits reached consumers quickly. The EBSS AFP payments were delivered through direct debit or redeemable vouchers, while the EBSS AF payments required an application process followed by direct debit disbursement. The assumption was that these delivery mechanisms would ensure that households	The design of the schemes assumed that households would use the additional disposable income, resulting from lower energy bills and the EBSS AFP or AF payments, to maintain their spending on essential goods and services. This assumption was based on the understanding that households prioritise meeting their basic needs, and when faced with financial constraints, they would allocate any additional resources towards ensuring their well-being and that of their families.	Low-income households, already facing financial constraints, were expected to benefit most from the schemes. The additional disposable income would provide a greater proportion of relief relative to their income, potentially allowing them to maintain their spending on essential goods and services; Households with disabilities or health conditions often have higher expenses related to healthcare and specialised needs. The schemes were expected to provide crucial support in managing these costs, contributing towards maintaining their well-being without sacrificing other essential expenses; Larger families typically have higher expenses

a fundamental need, and a sudden increase in its cost would leave households with less money for other essential expenses, particularly those with limited financial flexibility.	expenses and reduce the need for borrowing or depleting savings. The rationale behind this combined approach was to provide a comprehensive safety net for households, recognising that the impact of rising energy prices would extend beyond just energy bills.	received the financial support when they needed it most, during the peak energy consumption months, allowing households to pay towards their energy bills in a timely manner and not have to make sacrifices in the immediate future to be able to do so. The choice of delivery mechanisms was influenced by the need to reach a wide range of households in a timely manner that meant households were supported through the most difficult months.		related to food, clothing, and other necessities. The schemes were expected to provide much-needed relief, helping them to meet these needs without having to cut back on other essential items. The impact of the schemes was expected to vary depending on the primary energy source used by households. Those reliant on gas and electricity would benefit directly from the EPG, while those using oil or other alternative fuels would rely solely on the EBSS AFP or AF payments. This difference in support mechanisms could lead to variations in the impact on households' capacity to spend on other essentials. This leads to the assumption – or risk - that those on gas and electricity, benefiting from both the EBSS AFP or AF

				and EPG, might benefit more from the scheme, and therefore may have to cut back less on other essentials, than those using oil, as they benefitted solely from the EBSS AFP or AF

Table 6: Contribution Claim HW1: Limiting health impacts arising from Increases in Energy Bill Costs

Counterfactual	Design Assumption	Delivery Assumption	Behavioural Assumptions	Potential distributional impacts
The counterfactual scenario for this contribution claim assumes that without the energy affordability schemes, the increase in energy prices would have led to a rise in the physical and mental health issues related to cold homes, due to households reducing their energy consumption to cope with the higher costs. This assumption is grounded in the well-established link between fuel poverty, cold homes, and poor health outcomes.	The energy affordability schemes were designed to mitigate these anticipated negative health impacts by providing financial support to households, thereby reducing their concerns about energy bill affordability and enabling them to maintain adequate heating levels. The EPG, by directly lowering the unit price of gas and electricity, aimed to reduce the overall cost of energy for households connected to the grid. This was based on the premise that lower energy bills would reduce the need for households to under-heat their homes. The EBSS AFP and EBSS AF schemes, aimed to provide additional financial assistance to households, regardless of their energy	The effectiveness of the schemes in achieving these health-related objectives relied on the timely and efficient delivery of both the EPG discount and the EBSS AFP or AF payments. The EPG discount was applied directly to energy bills, ensuring immediate relief for eligible households. The EBSS AFP payments were delivered through direct debit or redeemable vouchers, while the EBSS AF payments required an application process followed by direct debit disbursement. The assumption was that these delivery mechanisms would ensure that households received the financial support when they needed it most, during the peak	The design of the schemes assumed that households, reassured by the government's commitment to providing financial support, would be less likely to under-heat their homes or engage in other potentially harmful energy-saving behaviours. This assumption was based on the understanding that households would feel more confident about their ability to afford their energy bills, knowing that they would receive financial assistance. The rationale was that this reassurance would alleviate concern about energy costs reducing the need for households to compromise their health by under-heating their homes.	The schemes were designed with the intention of providing universal support, aiming to benefit all households facing the challenges of rising energy costs. However, it was acknowledged that the schemes might have differential impacts on various societal groups in terms of their health and well-being. Low-income households, already more likely to experience fuel poverty and its associated health risks, were expected to benefit significantly from the schemes. The financial support and reassurance provided by the schemes were anticipated to reduce their concern about bills, improve their ability to heat their homes adequately, and

	source, further reducing their concerns about energy costs and enabling them to maintain a safe and comfortable level of heating. The rationale behind this combined approach was to address both the financial and physical aspects of energy-related health impacts, recognising that both mental and physical well-being are intertwined and can be negatively affected by energy affordability challenges.	energy consumption months, reduce their anxieties about energy costs and allowing them to maintain adequate heating. The choice of delivery mechanisms was influenced by the need to reach a wide range of households, including those without bank accounts or those who pay their energy bills in different ways.		consequently, reduce their risk of cold-related illnesses; Households with disabilities or health conditions often have higher energy needs due to medical equipment or the need to maintain a warmer home environment. The schemes were expected to provide crucial support in managing their energy costs and ensuring their well-being, allowing them to maintain adequate heating and energy use without compromising their health; Older people are more vulnerable to cold-related illnesses and may have limited mobility, making it more difficult for them to adapt to cold homes. The schemes were expected to provide essential support in ensuring they could maintain a warm and comfortable living environment, reducing their risk of health complications;

				Young children are also more susceptible to cold-related illnesses and require a warm and safe home environment for their development. The schemes were expected to help families with young children maintain adequate heating levels, protecting their health and well-being..

Table 7: Contribution Claim ES1: Limiting the risks of energy supplier insolvencies

Counterfactual	Design Assumption	Delivery Assumption	Behavioural Assumptions	Potential distributional impacts
The counterfactual scenario for this contribution claim assumes that without government intervention, the sharp rise in energy prices would have led to a significant increase in customer debt levels and a higher rate of disconnections, both of which could have negatively impacted the financial viability of energy suppliers. This assumption is based on the understanding that energy suppliers rely on consistent revenue streams from customer payments to cover their operating costs and maintain profitability. A sudden increase in customer debt or a surge in disconnections would disrupt these revenue streams, potentially leading to liquidity issues and, in extreme cases, insolvency.	The energy affordability schemes were designed to mitigate this risk by implementing measures to prevent customer debt levels from rising and to ensure a smoother cash flow for energy suppliers. The EPG, by directly reducing the unit price of gas and electricity, aimed to make energy bills more affordable for households, thereby reducing the likelihood of them falling into arrears. The EBSS AFP or AF payments, aimed to provide direct financial assistance to households, further reducing their risk of accumulating energy debt or being disconnected due to non-payment. Additionally, the timely provision of support	The success of the schemes in achieving this objective relied on the efficient and timely implementation of both the EPG discount and the EBSS AFP or AF payments. The EBSS AFP payments were delivered through direct debit or redeemable vouchers, while the EBSS AF payments required an application process followed by direct debit disbursement. The assumption was that these delivery mechanisms would ensure that households received the financial support when they needed it most, minimising the risk of late payments or non-payments that could disrupt energy suppliers' cash flow.	The design of the schemes assumed that households, reassured by the government's commitment to providing financial support, would be more able to afford paying their energy bills, even in the face of rising prices. This assumption was based on the understanding that households recognise the importance of maintaining their energy supply and would be motivated to avoid disconnections or debt accumulation. The rationale was that by enabling responsible payment behaviour, the schemes would contribute to a more stable revenue stream for energy suppliers, reducing their risk of financial distress.	While the schemes were designed to benefit all energy suppliers by reducing the overall risk of insolvency, it was acknowledged that the impact might vary depending on the size and financial resilience of individual suppliers. Smaller suppliers, with less financial reserves and a greater reliance on consistent customer payments, were considered more vulnerable to the financial shocks of the energy crisis. The schemes were expected to provide crucial support to these smaller suppliers, helping them to weather the storm and remain viable businesses. Larger suppliers, with greater financial resources and a more diversified customer

	through the schemes was intended to prevent sudden fluctuations in energy suppliers' cash flow, as households would be better equipped to manage their energy costs throughout the year. This multi-pronged approach was based on the recognition that energy supplier solvency is crucial for maintaining a stable and functioning energy market, and that protecting suppliers from the financial shocks of the energy crisis was essential for ensuring continued energy supply to consumers.			base, were considered less vulnerable, but the schemes were still expected to provide a degree of protection by reducing the overall level of customer debt and disconnections in the market.

1.3 The validity of the Theory of Change

Following the analysis set out in the main report Chapters 5 and 6, the following conclusions about ToC validity can be drawn:

1.3.1 Validity of the assumptions around scheme delivery and reach

The schemes achieved good coverage of NI households with the combination of schemes (with their different delivery and targeting approaches), except for EBSS AF, which achieved a much lower than anticipated coverage. However, since this targeted a small proportion of households (those with no direct relationship to their energy supplier), the prevalence of this gap in coverage as a proportion of the NI population was relatively low.

A key issue here, however, is that the EBSS AF population had higher levels of households claiming universal credit than those benefiting EBSS AFP and EPG which might be considered more vulnerable to underheating than the average household.

One group for whom this evaluation has not been able to assess effectiveness and outcomes are those who pay for their energy through an intermediary where the intermediary would have received EPG and EBSS AFP support. Such households comprise, as set out in Chapter 2, those renting through a private landlord or accessing home-heating through a heat network. Here we might assume that if the intermediary received the energy affordability support that they would pass this through to the households concerned by maintaining the payments that the household paid prior to the support or by ensuring that the support provided was taken into account in any increases made to costs paid by the household towards energy. However, there is no evidence to substantiate this due to the very small number of households in this category that responded to the survey.

1.3.2 Validity of the assumptions around scheme awareness

Awareness of EBSS AFP was relatively high (at around two thirds of households), though awareness of EBSS AF was low (at around a quarter of all households) and EBSS AF-eligible households primarily found out about the scheme through informal channels such as word-of-mouth, generating a risk that they would not find out about and therefore access the scheme. This difference in awareness-levels may have been a driver in the respective high vs low take up levels of EBSS AFP vs EBSS AF. Therefore delivery assumptions around the EBSS AF delivery mechanisms were not valid and would need to be reconsidered in future schemes. As per the ToC set out above, where households were not aware of the schemes this invalidates the assumptions that households would – through awareness of the scheme support – respond by limiting underconsumption (e.g. they would continue to heat as normal, or to comfortable and safe levels).

Where households were aware of the schemes, the evaluation has found some evidence that this awareness did reassure the households and informed or influenced their behaviours.

1.3.3 Validity of the assumptions around additionality

The evaluation has concluded that the EPG support was beneficial to NI households. Households accessing EBSS schemes without EPG (i.e. EBSS AF households) also saw some beneficial outcomes. Therefore the assumptions about the coverage of the schemes within an NI landscape were accurate. The evaluation has also found some evidence of households which may have not needed the schemes to the same extent, though assessing the scale of deadweight was not within the scope of the interim evaluation (the UK impact and economic evaluation will assess the value for money of the schemes).

1.3.4 Validity of the assumptions around distributional effects and equity of reach

Whilst the EBSS AF population were more likely to be vulnerable to fuel poverty, this did not lead to the population being disproportionately affected by the energy price rises compared to other populations – those who successful accessed EBSS AF support saw similar outcomes and, in some cases, better outcomes according to this interim evaluation. However, the evaluation has not been able to assess the effects of the energy price rises amongst the EBSS AF-eligible population who did not successfully access the EBSS AF support.

1.3.5 Validity of the assumptions around links from outcomes to impact

There is evidence that EPG and EBSS contributed to households heating their homes to a safe and comfortable level.

The evaluation has not been able to draw conclusions on the linkages between safer / more comfortable energy consumption resulting from the schemes and improved health and welfare outcomes, although it is possible that health and welfare outcomes would have been worse without the scheme.

The evaluation has not found that energy suppliers in NI were at the same levels of risk of insolvency from increased levels of energy debt as in GB.

1.4 The resulting contribution story

Support provided to NI households in the form of EPG and EBSS contributed to preventing at least some increases in fuel poverty prevalence and magnitude and underconsumption of energy below safe and comfortable levels.

This is because the scheme delivery mechanisms were – on the whole – effective at reaching a near-universal coverage of the population, and because households used the support provided towards their energy bills. Further, the schemes' assumptions around how households would use the support were overall valid – there is evidence that there was awareness of the schemes and that households valued the support (considering that they could not have afforded their energy bills / to heat their homes comfortably without it). However, there is also evidence from the surveys that households took other measures to mitigate the effects of the rise in energy price rises and also that other factors, including other

government support received around the time of the scheme support aided certain households (e.g. those of pension age) which may have created some deadweight in the programme.

The interim evaluation has not been able to uncover robust evidence of the counterfactual situation – i.e. what would have happened without scheme support. This is both because of the small sample sizes reached (given the small size of the NI population relative to the GB population) and because of the inherent challenges in trying to construct the counterfactual, without a control group, from self-reported perspectives. Therefore the evaluation is not able to draw conclusions on the magnitude (importance) of the support provided and therefore its value for money to the public purse.

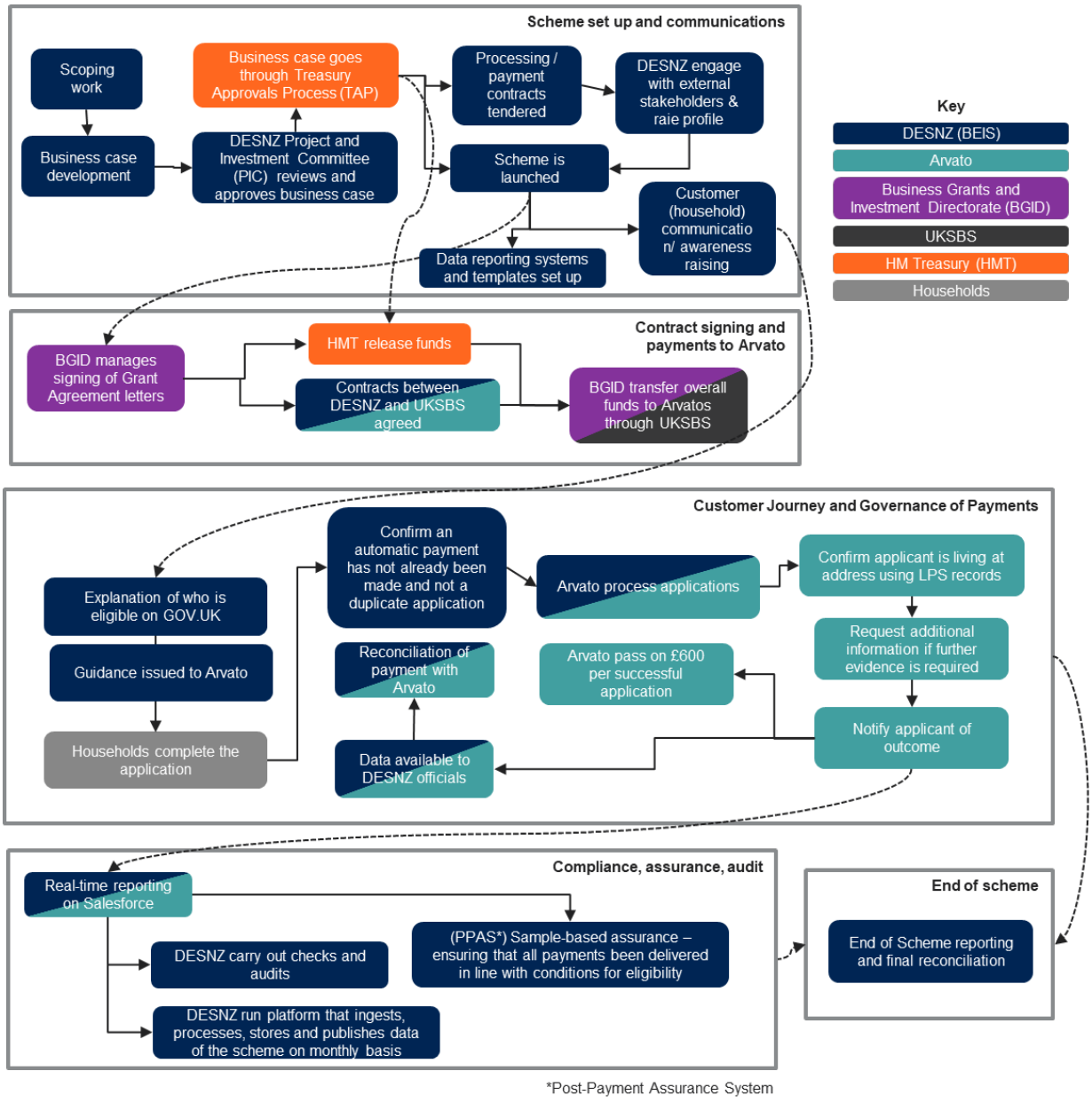
Overall, the evaluation evidence indicates that the risk posed by the energy crisis in NI was not of the same nature or scale as the risk posed to the GB population. Whilst the NI population had much higher levels of baseline fuel poverty compared to the GB population at the outset of the exponential rise in energy prices, there were already a number of safety nets in place in NI and the nature of energy use (in terms of prevalence of alternative fuels and PPMs) meant that the risks were not the same. Clearly from the evaluation evidence there were high levels of risk from the energy crisis – the evaluation's survey evidence shows clearly that households were struggling to heat their homes and afford energy – but it would be useful for future evaluations to take more of an ethnographic approach to understanding behaviours amongst those purchasing alternative fuels such as oil to understand when in the year they purchase the fuel and therefore when support would be most needed / useful.

Similarly, unlike GB, the risk of supplier insolvency in the face of the energy crisis was much lower in NI than in GB due to the nature of the market in NI; therefore the rationale for the scheme support in order to mitigate risk of energy supplier insolvency was lower.

2. Scheme-level Process Maps

This section sets out the scheme-level process maps. A process map visualises a policy or programme's processes and activities in a clear, step-by-step way. The process maps were used in this evaluation (see Chapter 5) to ensure each step of the schemes' delivery was understood and evaluated.

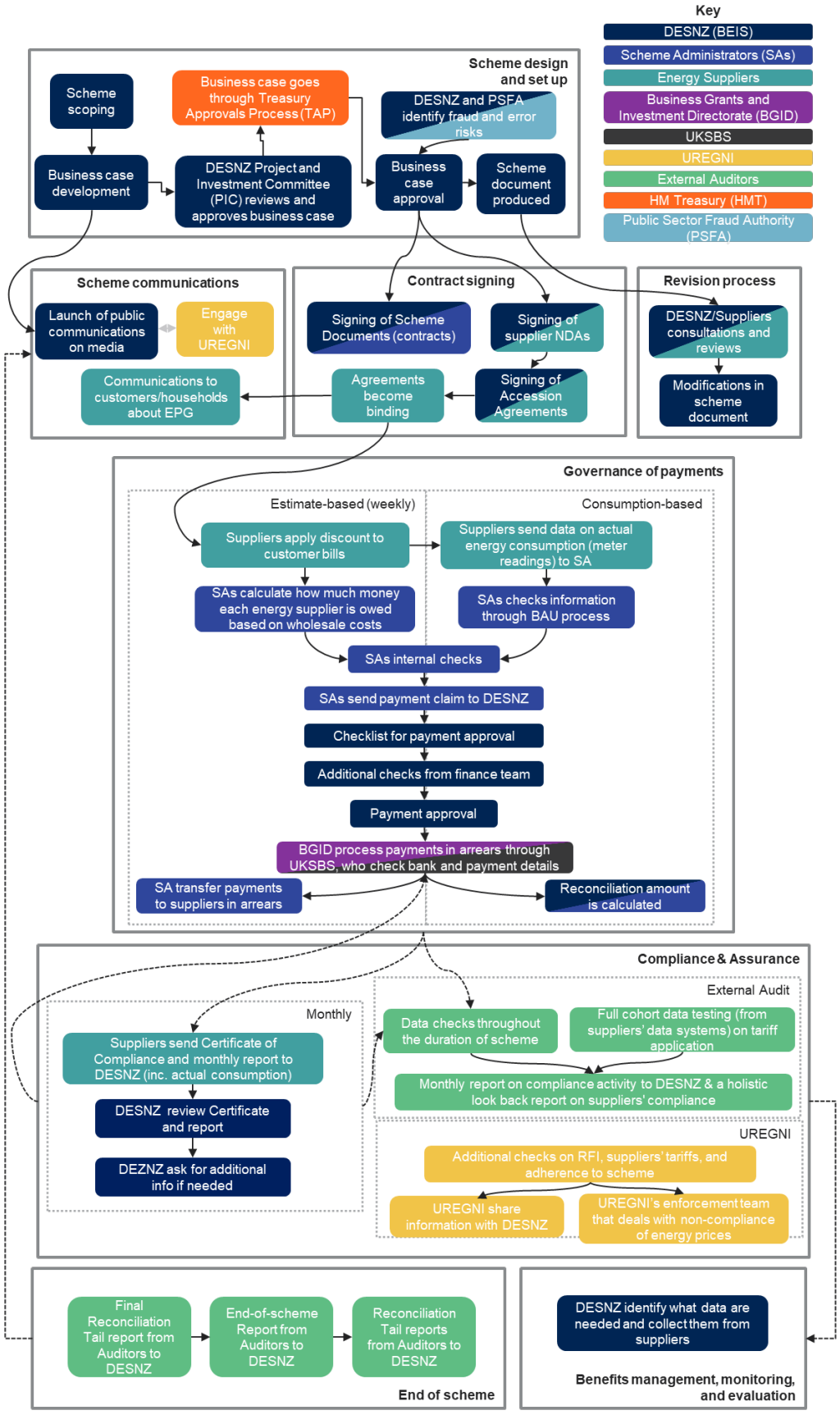
Figure 2: Energy Bills Support Scheme Alternative Funding (EBSS AF) Process Map



*Post-Payment Assurance System

Figure 3: Energy Bills Support Scheme Alternative Fuel Payment (EBSS AFP) Process Map

Figure 4: Energy Price Guarantee (EPG NI) Process Map



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