



## [NexSys \(Next Generation Energy Systems\)](#)

Submission to Consultation on the Development of Ireland's Social Climate Plan

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October 2025

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## Introduction

[NexSys \(Next Generation Energy Systems\)](#) is an all-island, multidisciplinary energy research programme. Through this programme of research, 50 leading academics across 9 institutions are working in partnership with industry to tackle the challenges of energy system decarbonisation, developing evidence-based pathways for a net zero energy system.

NexSys is committed to engaging with national policy processes in order to provide evidence based research and policy insights in support of our net zero ambitions. This submission to the Consultation on the Development of Ireland's Social Climate Plan focuses on residential energy poverty (REP) and transport poverty (TP) as this is our area of expertise. We do not comment on micro-enterprises as this is not our area of expertise.

In summary, **we recommend a focus on policies which are both socially and ecologically progressive.** These would target the most vulnerable groups and disadvantaged areas. Such an approach would enable more progress on: Residential energy poverty; transport poverty; social inclusion; equitable climate mitigation and Just Transition.

While there are costs associated with the proposals, it is important to highlight three key points on this.

First, we rarely consider the substantial costs to taxpayers of failing to act on poverty. In 2020, it was estimated that the cost of poverty to public services was €27.9bn in annual state spending (St Vincent de Paul research by UCD's Micheál Collins).

Second, not enough attention is given to the environmental costs of poverty, including having to use fossil fuels for home energy and cars because you cannot afford to change. The cost of EU fines for failure to meet climate targets by 2030 will likely be between €8 billion and €26 billion (Joint report from the Climate Change Advisory Council and the Irish Fiscal Advisory Council, 2025).

Third, there are alternative sources of revenue to address these problems. The new EU Social Climate Fund will provide funding to help vulnerable households and transport users affected by energy and transport poverty. On the taxation side, tried-and tested policies include 'pay by weight' taxation for private cars and/or congestion charges. Congestion costs include economic/productivity costs as well as environmental and social costs. The European Commission has estimated that Ireland has among the highest congestion costs in the EU. Congestion charges would target those who use their cars the most in congested areas (e.g. cities and some suburbs). Unlike fuel duties, they would also target private electric vehicle owners, who are likely to be higher-income and who contribute to congestion just as much as petrol/diesel vehicle owners. It could also be a way of disincentivising private car use in urban areas without unfairly penalising car use in rural areas where sustainable alternatives are inadequate or non-existent. We could also restrict access to SEAI grants to the most disadvantaged households for a period.

Choosing actions like these will improve Irish performance on climate while increasing the wellbeing of the most vulnerable in our society. They are also in keeping with an 'invest to save' approach.

## **Part 1: Prioritising Vulnerable Groups**

*"In this section we wish to know which vulnerable groups need to be prioritised in urban and rural areas. We also wish to know how you propose we should identify the vulnerable groups for targeted supports."*

***Please suggest how vulnerable groups can be identified and targeted for support***

- To identify groups that are the most vulnerable to energy poverty in order to implement targeted policies that could mitigate this vulnerability, it is important to acknowledge that the issue of energy poverty is related to both residential and transport sectors.
- In this sense, a useful proposition for the identification of those at risk of residential energy poverty would be to assess families and/or groups having trouble heating their homes and/or keeping their homes adequately warm. A second step would be to address whether this lack of residential thermal comfort is related to affordability (e.g. energy cost-related issues; self-disconnection; arrears in energy bills; lack of adequate housing infrastructure) or accessibility (type of fuel; household's main heating type; payment options available) issues, or a mix of the two. This investigation would benefit from the elaboration of more meaningful questions that would capture the complex issue of residential energy poverty in its entirety. Most datasets available in Ireland today do not fully investigate other aspects of energy deprivation and deleterious coping mechanisms, such as limiting or reducing heating to certain rooms/sections in the house, or certain times during the day. Additionally, this examination would benefit implementation of more effective policy strategies, their type, and their specific range.
- Understanding moderating factors that might be associated with residential energy poverty or vulnerability, such as household composition (e.g. family size and age of family members, as well as any health conditions or disabilities), spatial (e.g. rural, urban or periurban areas) and socio-demographic differences (income and education levels, occupational status, house tenure, etc) which would help to guide the design of policy implementation. A recommendation would be the promotion of research strategies that would focus on the creation of 'energy-use profiles', that is, the identification of typical annual energy consumption profiles for households from distinct composition groups as cited above. This could further contribute to the allocation of specific resources and the implementation of targeted measures based on specific average energy thresholds observed in each profile.
- Similarly, the identification of groups that may be at risk of transport poverty would require an investigation of the availability, affordability and accessibility of transport services. First and foremost, further research would require a formal recognition and definition of transport poverty in Ireland. That is particularly reflected in the relative lack of data on transport use, cost, and options. Better indicators and measures of transport inequality need to be implemented. Particularly important is the assessment

of: 1) the availability and adequacy of public transport, especially in rural areas, 2) the accessibility level to essential services, such as health services and education, and 3) the accessibility of active and sustainable travel.

- Certain moderating factors are also associated with the risk of becoming transport poor, including health-related problems (physical mobility, certain disabilities) as well as spatial (e.g. living in rural areas) and socio-demographic characteristics (income level, occupational status, age, gender). Addressing these associations would ultimately promote the development of more effective policies.

***The Plan aims to support both rural and urban areas impacted by the rising price of carbon through Ireland's Social Climate Plan. For RURAL areas, which vulnerable groups do you propose should be supported in order of priority?***

1. Rural vulnerable households
2. Rural vulnerable transport users
3. Rural vulnerable micro-enterprises
4. Equal priorities for all groups.

Prioritise 1 and 2 (rural vulnerable households and transport users).

***Please explain why you propose this order of priority***

We consider that vulnerable families and households should be prioritised as they are more likely to be in a worse position to afford and cope with climate change mitigation and adaptation. Going without adequate heating for prolonged periods of time is associated with an increase in physical and mental health problems, affects educational outcomes of young people, and is likely to perpetuate the maintenance of coping mechanisms that are not transformative (and can even worsen the prevalence of inadequate thermal comfort). Lacking adequate, affordable and accessible transport services is associated with a higher incidence of isolation and social exclusion. Research indicates that this is particularly true for younger and older people, people with mobility issues, and those with certain disabilities. Households located in rural areas are also more likely to be affected by transport poverty, which can lead to the 'trapping' of these households in their local areas, or 'force' them to own and drive private cars in order to fulfill their daily activities and or access essential services.

***The Plan aims to support both rural and urban areas impacted by the rising price of carbon through Ireland's Social Climate Plan. For URBAN areas, which vulnerable groups do you propose should be supported in order of priority?***

1. Urban Vulnerable Households
2. Urban Vulnerable Transport Users
3. Urban Vulnerable Micro-Enterprises
4. Equal priority for all groups

Prioritise 1 and 2 (urban vulnerable households, then transport users).

***Please explain why you propose this order of priority***

For the same reasons stated in the previous section, we consider that vulnerable families and households should be prioritised as they are less likely to be in a position to afford and cope with climate change mitigation and adaptation. Going without adequate heating for prolonged periods of time is associated with an increase in physical and mental health problems, affects educational outcomes of young people, and is likely to perpetuate the maintenance of coping mechanisms that are not transformative (and can even worsen the prevalence of inadequate thermal comfort). Lacking adequate, affordable and accessible transport services is associated with a higher incidence of isolation and social exclusion, particularly among older people, people with mobility issues, and those with certain disabilities. Households located in urban areas are, however, more likely to be served by a variety of transport services, which might be more adequate and accessible than those available in rural areas. Geographic differences in fares also need to be addressed. For instance, in the major cities and commuter belts, reduced Leap Card fares are based on TFI zones, while families living outside these areas have greater problems with accessibility and affordability. The costs for these households are not only financial but also include time taken to travel to essential services and activities.

**Part 2: Prioritisation of Measures and Investments in RURAL areas for Vulnerable Groups**

*“The Regulation and associated guidance documents elaborate upon which types of measures and investments would be eligible for inclusion in the Social Climate Plan. In this section we seek to understand which measures would best support the vulnerable groups in RURAL areas. We present a non-exhaustive list of possible options below with a space for proposals from the public. By ranking measures in order of priority for each vulnerable group, we will gain insight into which proposed and eligible measures should be supported.”*

***Supports for RURAL VULNERABLE HOUSEHOLDS with measures related to the Built Environment***  
***Eligible measures and investments to support vulnerable households in rural areas have been summarised below. Please rank the measures in order of priority***

1. Building retrofit supports for vulnerable households in local authority social housing
2. Building retrofit supports for vulnerable households in approved housing body social housing
3. Integrating renewable energy solutions for generation, storage and consumption for vulnerable households in social housing
4. Other measures or investment for the building sector (See below).
5. Building retrofit supports for vulnerable households in privately owned dwellings
6. Conversion of vacant and derelict commercial properties into social housing for vulnerable households
7. Build new housing units for local authorities for vulnerable households
8. Integrating renewable energy solutions for generation, storage and consumption for vulnerable households in privately owned dwellings

9. Building retrofit support for vulnerable households in old energy poor buildings
10. Support development and provision of appropriate funding instruments in line with the Social Climate Plan's goals (e.g. low-cost retrofit loans) for vulnerable households
11. Support for One-Stop-Shop Energy Efficiency Information Hubs for vulnerable households

***Please explain your preference here and expand on any “other measures” you wish to suggest***

- We recommend prioritising building retrofit supports for vulnerable households in local authority social housing and approved housing body (AHB) social housing. This is the most cost-efficient way to reach those households most affected by energy poverty. This should be combined with the other suggested measures below.
- Other suggested measures:
  - Prioritise targeted, full cost energy upgrades for low income vulnerable groups, specifically: Disabled people; lone parents; large families; working poor families; older people; renters.
  - Change the focus of the SEAI Sustainable Energy Community Mentors work to prioritise the most vulnerable households. This would make it more similar to the free ‘Green Doctors Scheme’ in the UK. It would ensure energy experts visit low income, vulnerable households to help them reduce bills and emissions. They can also provide training on the smart meters, time of use tariffs, the correct use of heat pumps and dynamic electricity pricing. The scheme could be advertised via community services (e.g. public health nurses, GPs, family resource centres) and these services could also refer those most in need to the scheme.
  - Return to unit-based energy benefit v. cash-based subsidies (e.g. fuel allowance) to ensure minimum level of electricity/gas regardless of cost. The eligibility criteria and seasons could be as per the Fuel Allowance.

***Supports for RURAL VULNERABLE MICRO-ENTERPRISES with measures related to the Built Environment. Eligible measures and investments to support vulnerable micro-enterprises in rural areas in the buildings sector have been summarised below. Please rank the measures in order of priority.***

N/A

***Please explain your preference here and expand on any “other measures” you wish to suggest***

N/A (we have not commented on micro-enterprises as this is not within the scope of our research).

***Supports for RURAL VULNERABLE TRANSPORT USERS. Eligible measures and investments to support vulnerable transport users in rural areas have been summarised below. Please rank the measures in order of priority.***

1. Other measures or investment in the transport sector (see under explanation below).

2. Improve availability and accessibility of Public Transport for vulnerable transport users
3. Improve performance, scale and frequency of existing Public Transport for vulnerable transport users
4. Financial incentives for using and making public transport more affordable for vulnerable transport users
5. Support public, private and community entities in providing sustainable mobility options such as mobility hubs and on-demand shared services including shared bikes, e-scooters and electric vehicles for vulnerable transport users
6. Support for private and commercial bicycles, electric bikes and cargo bikes and related facilities for vulnerable transport users
7. Support for private and commercial zero/low emissions vehicles and related infrastructure for vulnerable transport users.

***Please explain your preference here and expand on any “other measures” you wish to suggest***

- The “other measures” or ‘investment in the transport sector’ we consider urgent are:
  - expanding the eligibility criteria for the school bus schemes and improving the integration between it and public transport
  - expanding the Safe Routes to School Programme to increase active travel
  - extending access to TFI Local Link Community Car Scheme as coverage is limited and there are long waiting lists.
- These measures will benefit those most vulnerable to transport poverty, particularly those in rural areas where public and active transport options are more limited. In line with Just Transition principles, these measures also take a community and place-based approach to transport poverty rather than relying on individualistic or national strategies.

***Supports for RURAL VULNERABLE MICRO-ENTERPRISES with transport measures.***

***Eligible measures and investments to support vulnerable micro-enterprises users in rural areas in the transport sector have been summarised below. Please rank the measures in order of priority.***

N/A

***Please explain your preference here and expand on any “other measures” you wish to suggest***

N/A (we have not commented on micro-enterprises as this is not within the scope of our research).

### **Part 3: Prioritisation of Measures and Investments in URBAN areas for Vulnerable Groups**

*“The Regulation and associated guidance documents elaborate upon which types of measures and investments would be eligible for inclusion in the Social Climate Plan. In this section we seek to understand which measures would best support the vulnerable groups in URBAN areas. We present a non-exhaustive list of possible options below with a space for proposals from the public. By ranking*

*measures in order of priority for each vulnerable group, we will gain insight into which proposed and eligible measures should be supported."*

***Supports for URBAN VULNERABLE HOUSEHOLDS with measures related to the Built Environment. Eligible measures and investments to support vulnerable households with their homes in urban areas have been summarised below. Please rank the measures in order of priority.***

1. Building retrofit supports for vulnerable households in local authority social housing
2. Building retrofit supports for vulnerable households in approved housing body social housing
3. Integrating renewable energy solutions for generation, storage and consumption for vulnerable households in social housing.
4. Other measure or investment for the building sector (see explanation below, other measures only)
5. Building retrofit supports for vulnerable households in privately owned dwellings
6. Conversion of vacant and derelict commercial properties into social housing for vulnerable households
7. Build new social housing units for local authorities for vulnerable households
8. Integrating renewable energy solutions for generation, storage and consumption for vulnerable households in privately owned dwellings
9. Building retrofit support for vulnerable households in old energy poor buildings
10. Support development and provision of appropriate funding instruments in line with the Social Climate Plan's goals (e.g. low-cost retrofit loans) for vulnerable households
11. Support for One-Stop-Shop Energy Efficiency Information Hubs for vulnerable households.

***Please explain your preference here and expand on any "other measures" you wish to suggest:***

- Retrofit support for vulnerable households in local authority and AHB social housing should be prioritised as this will reach the most vulnerable in the most cost-efficient manner possible.
- In tandem with this, the following other measures should be undertaken:
  - Prioritise targeted, full cost energy upgrades for low income vulnerable groups, specifically: Disabled people; lone parents; large families; working poor families; older people; renters.
  - Change the focus of the SEAI Sustainable Energy Community Mentors work to prioritise the most vulnerable households. This would make it more similar to the free 'Green Doctors Scheme' in the UK. It would ensure energy experts visit low income, vulnerable households to help them reduce bills and emissions. They can also provide training on the smart meters, time of use tariffs, the correct use of heat pumps and dynamic electricity pricing. The scheme could be advertised via community services (e.g. public health nurses, GPs, family resource centres) and these services could also refer those most in need to the scheme.



- Return to unit-based energy benefit v. cash-based subsidies (e.g. fuel allowance) to ensure minimum level of electricity/gas regardless of cost. The eligibility criteria and seasons could be as per the Fuel Allowance.
- Return to unit-based energy benefit v cash-based subsidies (e.g. fuel allowance) to ensure minimum level of electricity/gas regardless of cost. The eligibility criteria and seasons could be as per the Fuel Allowance.

***Supports for URBAN VULNERABLE MICRO-ENTERPRISES with measures related to the Built Environment. Eligible measures and investments to support vulnerable micro-enterprises in urban areas in the buildings sector have been summarised below. Please rank the measures in order of priority.***

N/A

***Please explain your preference here and expand on any “other measures” you wish to suggest:***

N/A (we have not commented on micro-enterprises as this is not within the scope of our research).

***Supports for URBAN VULNERABLE TRANSPORT USERS. Eligible measures and investments to support vulnerable transport users in urban areas have been summarised below. Please rank the measures in order of priority.***

1. Other measure or investment in the transport sector (see below)
2. Improve availability and accessibility of Public Transport for vulnerable transport users
3. Improve performance, scale and frequency of existing Public Transport for vulnerable transport users
4. Financial incentives for using and making public transport more affordable for vulnerable transport users
5. Support public, private and community entities in providing sustainable mobility options such as mobility hubs and on-demand shared services including shared bikes, e-scooters and electric vehicles for vulnerable transport users
6. Support for private and commercial bicycles, electric bikes and cargo bikes and related facilities for vulnerable transport users
7. Support for private and commercial zero/low emissions vehicles and related infrastructure for vulnerable transport users.

***Please explain your preference here and expand on any “other measures” you wish to suggest:***

- Under “other measures”, we strongly urge:
  - Extending access to TFI Local Link beyond rural areas to peri-urban areas where there is a lack of public transport (e.g. North-West or South-west Dublin). This would reduce forced car ownership in suburban and peri-urban areas (see for example, Carroll et al., 2021).

- Expanding the Safe Routes to School Programme to increase active travel. This will give more young urban vulnerable transport users a low / no cost transport option for travel to school.
- Expand the Community Car Scheme as coverage is limited and there are long waiting lists.

***Supports for URBAN VULNERABLE MICRO-ENTERPRISES with transport measures.***

***Eligible measures and investments to support vulnerable micro-enterprises users in urban areas in the transport sector have been summarised below. Please rank the measures in order of priority.***

N/A

***Please explain your preference here and expand on any “other measures” you wish to suggest:***

N/A (we have not commented on micro-enterprises as this is not within the scope of our research).

#### **Part 4: Additional Comments**

***Is there anything you feel is important in the context of the Social Climate Plan that has not been covered in this survey? Word limit (1500 words)***

The importance of ‘double energy vulnerability’ - encompassing both residential energy poverty (REP) and transport poverty (TP) - is increasingly recognised and addressed in international research. Transport poverty is not in the national definition or measurement of energy poverty but we understand this is in progress (Department of Transport and CSO).

National definitions and indicators of both transport and energy poverty are required and these need to be included in all relevant household surveys including: the Growing up in Ireland Survey, Tilda, SILC and the National Student Survey.

NexSys researchers have examined these issues through our research. Key findings from our relevant papers include:

##### **1. Impacts on child education & mental health (GUI, 2007-2016) (Da Silva Pedroso et al, 2025)**

For those in REP (those who had to go without heating and inability to keep home warm), we found:

- Experiencing REP at each age results in a decrease in educational results and mental health.
- This is not just due to income as we find the effects there after grouping children with a similar socio-economic background.

- The negative impacts of REP on mental health increase when we control for socio-economic background.
- REP effects are stronger at age 9 compared to age 13 & 17 as younger children spend more time at home.

For those in TP (accessibility to key services: public transport; GPs or hospitals; schools; banks; social welfare services; libraries; grocery shops; & recreation), key findings were:

- At age 9, those experiencing both REP & TP have significantly lower education scores.
- At age 13, TP continues to affect child outcomes.

## **2. Impacts on older people (Tilda, 2018/19) (Dingley, 2025)**

For those in REP (those who cannot afford to keep home warm/had to go without heating), we found:

- 8% experience REP, half of these also in TP (Double Energy Vulnerability)
- Living alone triples the risk
- Three times more likely if poor health
- Least significant variable = Household Benefits Package.

For those experiencing public transport poverty (none/unreliable/infrequent/inconvenient), we found:

- 42% in this situation
- Rural areas: 3.5 times greater risk; town/city outside Dublin more than twice the risk
- Those experiencing TP are 2.5 times more likely to drive frequently. What will happen when they lose their driving licence.
- Travel Pass: almost  $\frac{2}{3}$  had not used it in 4 weeks, but highest usage in Dublin.

## **3. Electricity disconnection bans: Ireland in international context (Australia, France & Spain) (Willand, Herrero, Dubois, Winston and Dingley, 2025)**

This study explored prohibitions of residential electricity disconnections for nonpayment of bills in 'exemplary' jurisdictions (France, Ireland and Spain) to better understand them. It examined how these bans were configured, to whom they applied, under what circumstances and how effective they may have been in protecting the health and wellbeing of householders. We found:

- Relatively low disconnection rates in Ireland but problem of debt accumulation.
- Significant human impacts of this: stress and health of family members.
- For those with prepayment meters: payment on higher tariffs, and worse human impacts. Important equity issue.

#### 4. Inequalities & CO<sub>2</sub> emissions: residential & transport sectors (Winston et al, 2025)

In this paper, we examined a) the emissions associated with household residential energy and transport use in Ireland, and b) socio-demographic factors associated with these household emissions. We created a new dataset from the Household Budget Survey and Exiobase emissions data. We found that:

- Higher income households have higher emission rates from residential energy and transport.
- Lower income households tend to have lower emissions on both
- Air travel emissions are higher among those with higher incomes and higher levels of education.
- Homes with children are higher emitters except on air travel.
- Rural households: highest travel-related emissions relates to the use of the private car. This represents forced car ownership in situations of problematic access to public and active transport.

In aggregate, NexSys research suggests the need for a greater acknowledgement in national policy of the strongly interrelated nature of residential energy poverty and transport poverty in Ireland. It also suggests that structural measures taken to address these issues are cost-effective over time, as they significantly reduce the medium- and long-term costs of poverty. The forthcoming Social Climate Plan is an opportunity for the Government to begin to address these issues in a more strategic manner through the multi-annual funding which will be available through the EU Social Climate Fund. Doing so will not only help Ireland to meet its emissions reductions targets, but also to do so in a way which is consistent with principles of social justice and the Just Transition to which Ireland has committed.

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NexSys is funded by Research Ireland Grant no. 21/SPP/3756 (NexSys Strategic Partnership Programme). Observations and recommendations in this submission are those of the author(s) and do not necessarily reflect the views of NexSys affiliated research organisations or industry partners.

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