Submission to the DCCAE’s Consultation “Ireland’s Draft National Energy and Climate Plan (NECP) 2021-2030”

Submission prepared by the Association of Irish Energy Agencies

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Introduction

The Association of Irish Energy Agencies is an all-island body engaging with Local Authorities and communities they serve to meet its energy performance targets through professional development and implementation of good and best practices.

The overall common aim of the AIEA is to supports its members in achieving sustainable energy actions in member regions. This includes both sustainable energy and climate change actions. The AIEA provides a network for all members to share their experience and knowledge.

The AIEA welcomes the opportunity to comment on the Draft National Energy and Climate Plan and look forward to working with the CARO offices in delivering mitigation measures within local authority areas of influence.

Local and Regional Energy Agencies

On page 41 of the document, under the section titled iv. Administrative structure of implementing national energy and climate policies - Local authorities the document states “Some local authorities have renewable energy agencies which promote and develop renewable energy projects.”. This statement is incorrect. They are not renewable energy agencies, they are local and regional energy agencies who are driving and delivering local, national and EU projects at a local level since the mid 1990’s. These include three not-for-profit companies limited by guarantor and a number of other active Local Authority owned energy agencies:

Limited by Guarantor:

- Codema – Dublin Energy Agency (13 staff)
- Tipperary Energy Agency (33 staff)
- 3 Counties Energy Agency (14 staff)

Local Authority owned energy agencies and energy officers include:

- Waterford Energy Bureau
- Cork City Energy Agency
- Midlands Energy Agency
- Limerick Clare Energy Agency
- Mayo Energy Agency
- Cork County Energy Agency
- Galway Energy Agency Limited
- Galway County Council
- Kerry County Council
- Meath County Council
- Kildare County Council
Over optimistic or false assumptions

Heat

- It assumes low carbon heat in building regulations in line with the EPBD, yet the new domestic (proposed) and non domestic regulations for 2020 allow fossil fuels cover up to 80% of the energy use in a single building. While the sector is moving ahead, it is not appropriate to assume decarbonisation in new build.

- There is no plan to effectively scale up domestic renovation from the current 30k per year shallow retrofit to the assumed 45k per annum deep retrofit.

- The Deployment of heat pumps is assumed to meet 170k houses per annum with the state doing little to develop the market resulting in a disastrous 16 heat pumps installed in the first 8 months of the better energy homes program. The assumption that 20,000 heat pumps by 2021 is widely optimistic with current programs and delivery mechanisms.

Transport.

- The transport assumptions of 500,000 electric vehicles by 2030 is optimistic given the slow take up to date. However there are signs of technology progressing at an increased pace that may improve the outlook of the technology.

Electricity

- The auction process is significantly delayed and should be brought forward to original time frame published in 2018.

Suggested ambition/ targets

The NECP in the four scenarios depends on a high oil price to see any Non-ETS emissions reductions, and then it is a mere 2.9MT or 6.5% reduction over 11 years. We understand that the generation of the NECP must include only policies that are sanctioned by government, and therefore the work required in development of policies that are both sanctioned and effective is the fundamental gap in this regard. This best case scenario, in the context of requiring a 50% reduction by 2030 to meet our climate and energy goals, appears to be:

- fundamentally against the targets in the white paper of 2015.
- Not contributing sufficiently to the EU 2030 requirements.
- Morally unjustifiable in the context of our children’s future.
The NECP should be revised to match the ambitions of the Paris climate accord, which are higher than the EU targets from the winter package. Any NECP should also be in line with at least a linear implementation of the 2015 white paper on energy.

This should at least have:

- A minimum of 70% Renewable electricity (as proposed by a broad coalition of respondents to the draft first NECP).

- No new fossil infrastructure except in the case where it is required to facilitate/backup renewable energy.

- The complete decarbonisation of all state buildings, social homes and facilities through long term finance repaid through carbon levies and decrease fuel allowance for efficient homes.

- The complete decarbonisation of all new buildings by implementation of building regulations in line with the Commission communication on NZEB (31/07/2016).

- The mobilisation of a new Green Deal that would seek to retrofit 80,000 homes to B2 standard (at least) per annum by 2025 with e-heat and RES-E (where possible). A Deep retrofit facilitation service (like some Local energy agencies already provide) for each county.

- The mobilisation of at least 10% Renewable indigenous sustainable biomass and/or biogas for heat.

- The rapid reduction in all fossil fuels—solid fossil fuels should be eliminated by 2030; oil by 2040 and non-renewable gas by 2050.

While these targets are unfathomably challenging in light of the government’s current progress, there are a number of key actions that could be added. Many of these actions have been proposed through the myriad of previous consultations, but are added here for completeness:

**Suggested Actions:**

**RES-E:**

- Reform the consenting process and facilitate the mobilisation of offshore wind.

- Re-evaluate the required interconnection and increase the pace of interconnection with mainland Europe to provide at least 2GW by 2025.

- Implement the RESS urgently. The delays are unacceptable. We suggest that specific auctions for community projects in 2019 will encourage greater citizen participation in the RESS. An increased RESS ambition will be needed versus the high level design to achieve 70% by 2030.
• Increase the targets set to Eirgrid and ESBN with regard to DS3 and deployment of Distributed generation. Hold both state organisations accountable to streamlining procedures and consenting process to facilitate the 70% (3.33% per annum). Consider specific sanctions on both DSO and TSO if these results are not achieved. The current process of DSO connections, where deadlines for connections being missed by months or in some cases years is unacceptable.

• Mobilise large numbers of RES-E generators through implementation of the citizen’s right to produce electricity within the recast RES-Directive.

**RES-H & Energy efficiency in heating.**

• Provide a one stop shop at a county level like a number of energy agencies already provide. Decrease the cost of this service through exchequer funding.

• Provide 2% 20 year loans through similar process as the SME and proposed Agri derisking loan schemes to incentivise private investment in buildings.

• Urgently implement a CO2 tax (and equivalent ETS floor price) with carbon dividend of at least €40 per tonne and rising to at least €150 per tonne by 2030 and €265 by 2050. Signal this on the sale of any vehicle or appliance to ensure that people are informed at point of decision. Evidence from Sweden suggests €120 per tonne has not fully decarbonised the heating sector over 20 years.

• Finalise the deep retrofit pilot and provide a scheme that brings the payback within 8 years (noting the above carbon tax), with a signalled reducing grant rate to incentivise early uptake.

• Ban the sale of solid fuel primary heating systems (except wood pellet), oil and gas systems for homes and buildings on a phased basis over the next 12 years. Provide certainty to service providers and homeowners to allow reskilling.

• Task SEAI with a significant market development Brief that should include a significant investment in:
  
  o Training for trades and professionals
  
  o Funded homeowner advice via local energy agencies or similar.
  
  o Provision of tools, guides and research to ensure optimum deployment of investment.
  
  o A widespread, well funded and long term marketing campaign for specific methods and technologies to increase their uptake.
  
  o Better market surveillance to ensure that sub-optimal, non compliant products are removed from the market.
RES-T and Energy efficiency in transport.

- Implement Citizens assembly 2:1 recommendation on expenditure in favour of Public Transport/ Cycling vs Roads.

- Cycling and walking task force to attempt to move as many journeys from cars to low carbon alternates.

- Public transport master plan for 80% of journeys by 2050 to be non private car.

- Electric Vehicles should be supported through:
  - Urgently roll out the committed fast charging infrastructure.
  - Create a program for slow charging (7kW AC) in public car parks and locations where people normally park for long periods, or where people have no access to home charging. “charge where you park, not par to charge”.

- Public Transport should be mandated to be electric only for new infrastructure where cost effective on a life-cycle basis noting the shadow price of carbon announced by DPer.

Excess Heat Should be Considered along with Renewable Heat as it also offsets carbon emitting fuels such as oil and gas

District heating infrastructure is an essential component for renewable heat, so it is essential that this technology is developed in Ireland in the coming decades. Excess heat can be used in the early stages and can be replaced with renewable heating over time, which has been demonstrated in many EU countries already.

A recent peer-reviewed scientific paper estimated that there is 102 PJ/year of excess heat in Ireland, which is a by-product of power plants, waste incineration, and industrial processes. In comparison, the total heat demand in all Irish buildings was calculated in the same paper as 117 PJ/year. Therefore, 87% of the heat demand in buildings in Ireland is ‘freely’ available as a by-product from existing plants. By replacing fossil fuels with this excess heat, fossil fuels are replaced with carbon-neutral heating, which is as important as renewable heating. Therefore, excess heat should also be included on the list of technologies considered under the RHI. If not, the scheme will likely support new renewable generation where there is already an enormous over production of sustainable heat. For example, there is enough excess heat in Dublin and Cork to supply all of the heat demands in the cities. Therefore, if this RHI scheme supports a new renewable heat facility in these areas, then it is effectively supporting a new renewable heat supply in a location that does not need it.
This excess heat study is also limited to sources of high temperature waste heat, when there are also multiple sources of lower exergy heat available in close proximity to heat demands, such as waste water treatment plants, data centres and service sector buildings, that can be utilised, particularly when looking at heat supply of buildings with improved energy efficiency. For example, the first DH scheme in Dublin will be heated from waste heat from a Data Centre in Tallaght, which is supplying 4MW of waste heat just from its latest extension. The data centre sector in Ireland is growing substantially, and as an example a midsize data centre with 1 MW IT load releases 3,700 MWh thermal energy per year into the atmosphere (equivalent to around 0.46 MWhth of waste energy/MWh of electricity consumed by the data centre). Codema research has shown that, there is 343MW of waste heat available just from planned and existing data centres in Dublin alone, and these centres run 24/7.

From Codema’s research into the waste heat potential in the Dublin region, there is 2,358 MW of zero-carbon waste heat already available that is currently not being used, over half of this is available from existing power stations and industrial processes. The equivalent annual market value of this heat is €1.2 billion. The potential value to the heat suppliers for their waste product is €410m. This is money that will be paid to local business for indigenous energy that will off-set the equivalent gas import dependency and increase security of supply.

**Recommendation:**

The NECP should consider ‘excess heat’ along with renewable heat as a way to reduce carbon emissions in Ireland. The excess heat is already being produced, but the district heating network is required so this excess heat can reach the consumer and thereby replace fossil fuel boilers such as gas and oil.