

## **Theme 8: Energy and Infrastructure**

There are 19 actions listed below with their context.

Energy use permeates everything we consume, when we drive, take the bus, boil the kettle, the plastic packaging on goods, the buildings we live in and the roads we travel on, the email we are writing almost everything we do depends upon harmful fossil fuels. Despite its importance and its pivotal place in each of the other themes - energy merits less than a page of the 236 pages in the development plan (2017-2023). The one page mention focuses more on energy infrastructure and not so much on energy itself and its provision and supply. In this plan energy needs to get a fitting position to merit the fact that it is the oxygen of our daily lives. This position requires dedicated staff, that are new and not rotated from one part of the council. They need to be specialised and housed within an agency in the council and we detail this below. We would like to underline that the galway energy agency dissolved in 2014 and until that time it only had a part time coordinator Peter Keavney so our suggestions here require a transformation in the way galway city council view energy and infrastructure and treat climate action.

**Action 1 - this part of the development plan needs to be tied to the SDGs** which are not mentioned in your questions despite being the international standard for sustainability. Every action needs to name the SDGs it impacts. **Action 2 - all actions need targets for which human resources and material resources are committed and time lines set.**

1. What infrastructural improvements including water supply, drainage network, telecommunications, waste management are required to ensure the sustainable development of the city? A deep consultation on Mutton Island is required. Perhaps by Delphi method working with experts in the area and building a consensus on the way forward.

Waste management is extremely important and there are a number of social enterprises in the city trying to make a difference. These need support and housing in premises. They are socially and environmentally beneficial businesses like rethink consumption (working on sheeps wool, paint, electronics, fashion, food), like an meitheal rothar (bikes) and like bounce back (mattress recycling). **Action 3, a circular economy centre of excellence with education outreach needs to be setup to support such activities. The city council is the right vehicle to do this. Westside enterprise centre has empty units and should be used for this.**

One can see unsightly telecommunications infrastructure on top of most hills around the city. How these got planning permission in the city is a wonder. The telecommunications infrastructure is adequate and an **Action 4 for those looking to improve telecommunications infrastructure - they should post their planning permissions and other notices more obviously. Mandate that all applications for telecommunications work to carry larger signage (A3) with minimum text type size of 20. Together with 4 separate posts in obvious places in our main newspapers.**

We are on the fringes of the grid system but we are very lucky in the city as the electrical infrastructure and transmission sizes are appropriate for renewables. Where we need to bring renewable electricity in from the grid edges we may need reinforcement depending on generation capacities. The STEPS Interreg project ([here](#)) is run between galway energy cooperative and NUIG and is installing testing and optimising e-storage systems in the west and across different sectors so that we get live case studies and solutions for how storage works. Galway energy agency is working with Medtronic for instance in designing and optimising a system for solar PV storage to maximise gains to Medtronic in relation to their consumption but also in commercially exporting green power to the grid. Storage is key to smooth out the discontinuous nature of renewables and when paired with our resources of renewables in galway which rival any in Europe we hope to create solutions that do not require large transmission infrastructure. **Action 5 to support local agencies working on solutions for renewables and efficiency type solutions - supports should include human and financial resources.**

2. What other measures which conserve and protect the environment can be incorporated into the development plan? The galway energy agency is mentioned in the last development plan (2017-2023) but the companies office show the galway energy agency was dissolved in October 2014. Peter Keavney its manager at the time of his decease was working just one day a week in the galway energy agency. This means it did not have dedicated staff and it would appear that other themes here are covered with paid up units or staff in the council eg: the heritage officer is a dedicated position, also the parks unit in galway city council have about 30 staff, why is energy the poor relation? It is ubiquitous and is required for everything we do. Why was the galway energy agency described as an important energy actor for the council in the last development plan when it was closed 3 years prior to that plan? Why was the council happy to propose this when it was no longer functioning and when it did function it did not have dedicated staff. Currently there is no dedicated energy auditor in the council with the necessary efficiency and renewables experience, knowledge and qualifications. Our 70% renewable targets mean that government and local government have to up their game considerably. The galway energy cooperative currently work in this space in the city, they are building an energy master plan for the city and have attracted considerable funding from state and EU funders. They have also attracted key staff from other energy agencies in Ireland such as the Tipperary energy agency. A collaboration between the galway energy cooperative and galway city council would be a good use of local resources and knowledge as the former have staff and a considerable volunteer base. In order to conserve the environment we need integrated programs led by sustainable energy practitioners working in the city council to define ways forward. If the galway energy cooperative is not utilised then a fit for purpose energy agency needs to be set up, with at the very least - a dedicated senior engineer, an administrator and 2 junior engineers. These engineers above all need energy efficiency and renewable energy project experience and sustainable design experience for buildings and neighbourhoods. They should be new staff and not just

staff shifted from areas where their experience is not relevant to sustainable energy. If Dublin, Cork, Waterford, Limerick, Kilkenny and Tipperary can do it why can't Galway do it? This capacity currently exists in Galway energy cooperative. The responsible unit needs to be housed in the council so that the work of the council can occupy it. It is not appropriate to tender work of this weight to others who do not reside in the council and work within its context and constraints. The new energy agency should develop an energy master plan for the city which: frequently audits energy consumption across the city, plans for and coordinates energy efficiency programs, designs and coordinates renewable energy installations and develops a register of opportunities which is reviewed yearly. The energy agency can manage the city council's energy use and significantly reduce both its energy use and its emissions once reimbursed. The city needs an energy agency to lead us through the climate crisis. It is not appropriate that distant organs such as the government or the climate action regional office are expected to solve our local problems. **Action 6, set up an energy agency with dedicated and new personnel who are hired specifically for purpose not shifted from another area of the council.**

3. How can the development plan encourage energy conservation and energy efficiency and the provision and development of alternative sources of renewable energy? Please read our last answer. **Action 7, set up an energy agency with dedicated personnel who are hired specifically for purpose not shifted from one area of the council.** Previous development plans have wasted Europe's best renewable energy resources – we cannot continue to ignore these given climate change. Anybody who has witnessed the prom carpark with cars immersed in flood water is convinced we need to act now. The development plan needs to ensure that a climate change mitigation plan for Galway city is completed within its life time. Adaptation is needed due to the climate change acceleration but mitigation is proactive and capable of reducing, stopping and reversing its progress. **Action 8, Complete a climate change mitigation plan within the lifetime of the project. The mitigation plan should identify and provide submissions highlighting where they input the plan content. It should be individual, for Galway city and not templated.** If we have a genuine plan with buy in it must engage meaningfully with residents and stakeholders. We need to be ambitious with hydroelectricity and other renewables. The 2017-2023 plan mentions the possibility for one hydroelectric station and this has not happened. As far as we can tell nothing happened. This despite having some of Europe's largest renewables resources in our midst. Our forebears were producing green power from the Corrib many years ago as it had 30 hydropower stations. Where did we lose the ambition, we lost all 30? Where did we lose the responsibility that our ecosystem places on us to provide a greener future for our children than the one we inherited. Our forebears were doing this. Instead of this we are doing the opposite as never before in Galway have we used as much harmful fossil fuel as we currently do per head of population. **Action 9, within the life of the plan to commission 5 hydroelectric stations on the Corrib and to work with the new Galway energy agency in doing so.** Galway

energy cooperative have looked at the feasibility of hydroelectricity within the city limits. As has others. We have a smoky coal ban in the city but still import coal, burn coal and release its sulphoxides and particulates. There is no such thing in reality as 'clean' coal or 'premium' coal. **Action 10, ban all use of coal, import of coal, processing of coal and sale of coal within the city.** Information which leads to the identification of those breaking this ban should be reimbursed. There is currently an unauthorised coal processing plant within our city limits. Why is this not stopped? Given our need to meet 70% emissions reductions and use clean energy we have to stop using coal now. **Action 11, ban the sale and installation of all new oil boilers.** For the same reasons as coal, oil is a harmful fossil fuel reducing the lifespan and quality of life of so many of the residents in the city. **Action 12, set up an energy agency with dedicated personnel who are hired specifically for purpose not shifted from one area of the council. This agency can roll out these bans, and the efficiency and renewable energy projects needed.** A transformation is required so that we can start to make changes at the speed they are needed to slow climate change. We need to set laws and actions that regulate beyond new buildings. We frequently see noise and renewables legislation for example impacting new build alone. Where there is little or no new building nothing is done. But we need change now. **Action 13, review environmental regulation and laws and make sure we impact new and built buildings and environments.** Under the transport theme we detail the lack of air monitoring stations in our city. We have one in ragoon and its the oldest technology in the country and not automated. Why are we not measuring the harm done to our citizens through traffic pollutants. They have 3 of these stations within limerick city. We need at least 10 placed at critical junctions and road stretches where urban canyons exist. The headford road is a case in point. It has a lot of pedestrians and cyclists and our city council is not aware of the harm done to users from harmful emissions which cause cardiovascular and respiratory morbidities and death. Over 1,000 people die in Ireland every year from NOx emissions and this is not counting particulates and other gases (WHO figures). The 1000 deaths ignore the suffering and morbidities caused to many many others. You will note that the NOx pollution caused deaths from just one pollutant is a greater amount than those occasioned by COVID. COVID has got all the headlines while our city sleeps its way through congestion-caused fatalities and morbidities. **Action 14, collaborate with the EPA to measure pollution across the city and then when we know the damage that is being done put displays in place to warn people from walking or cycling or driving in certain areas at certain times. Do this within the lifetime of this plan.**

4. How can the city council preserve the unique environment of the city while enabling sustainable development? Dedicated professional staff are required to navigate this balance and provide sustainable energy for our daily lives. **Action 15, set up an energy agency with dedicated personnel who are hired specifically for purpose not shifted from one area of the council.**

5. What measures can be introduced to support a smart city approach? Smart is a fashionable prefix that will mean nothing in the life of the next development plan. In Galway we start from a low base so progress can be swift. It is now urgent to start using what are Europe's largest renewable resources. We need energy systems that are integrated. Renewable supply needs to fit demand and its variability and storage and response are key in this. Two projects in Ireland will solve these 2 challenges in the life of this development plan. The first is STEPS run between Galway energy cooperative and NUI Galway and it is installing testing and optimising storage systems in the west and across different sectors so that we get live case studies of how optimised storage works. Secondly the CityXchange project in Limerick is working on the response challenge and will test on blocks of buildings and districts. This means soon that renewables will supply demand and its variability and our national 70% targets are likely to be met. But where are Galway City Council with an energy agency that had no dedicated staff and is dissolved for 7 years? We really are the child in the playground without shoes, the one that sticks out from the rest for not having. We need to build an energy agency with dedicated staff, and we need to do this in a coordinated and strategic way so that we bypass 'smart' as soon as it is no longer populist and meet the demands of our energy use with renewables. **Action 16, set up an energy agency with dedicated personnel who are hired specifically for purpose not shifted from one area of the council.** To create a 'smart city approach' you need ideas and buy-in. The Climate Adaptation Strategy was open to submission but no submissions were mentioned in it. Its template was copied and pasted from our regional CARO office. It gained no direction from its city and residents. Why? You need to consult with your public to create progress. There are organisations like rethink consumption in the city who facilitate nationally and internationally and could be used to negotiate and co-create plans and make a city we are all proud of. **Action 17, all city plans in future must show their consulted submissions and highlight where they have been adopted in the plan's text.**
6. How can the growth in digitisation and e-commerce be used to improve the quality of life, economic competitiveness and participation in public decision making in the city? Sustainable energy use can be displayed at specific junctions, buildings etc and build a growing awareness of the importance of green energy to the city. Digitisation has also a role in connecting people with their energy use. With a dedicated energy agency we can show citizens where their energy is being generated. We can use Irish suppliers of renewable energy onto the grid. People can look at their phones and see the good they are doing as hydroelectricity, or solar PV or wind energy meets their demand, all live. This power can come from community renewable projects in Ireland and in Galway creating jobs and enterprise as we clean the environment. This requires a professional unit or energy agency to coordinate and can be done in the life of the next plan. **Action 18, set up an energy agency with dedicated personnel who are hired specifically for purpose not shifted from one area of the council.**

7. Is there potential to incorporate district heating systems in the city? This needs to be planned and integrated at the right time for the city using dedicated and appropriately skilled and experienced engineering staff. So much more can be done initially at the energy conservation level and the renewables generation level before the expense of district heating is retrofitted in building sites. Feasibility should be looked at for new developments and compared to electrification of heating and use of heat pumps. If developments are dense enough and large enough district heating may work and provide affordable heat especially where other large local heat demands are required for example in hospitals or for industrial processes. The supply of energy into the district heating needs to be renewable as we need to meet our 70% targets and we need to address the climate crisis. We need to do this now so **Action 19, set up an energy agency in galway city council with dedicated personnel who are hired specifically for purpose not shifted from one area of the council. Energy Agencies network with European partners and so can bring significant experience with them.**