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Consultation: Draft Dublin City Development Plan 2022-2028

Chapter 3: Climate action

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Recommendations:

- Add a policy against the siting of any LNG terminals within the jurisdiction area of Dublin City Council.

3.5.3 (Energy)

- Add an objective to introduce a ban on fracked gas in the energy mix
- Add an objective that all existing data centres be required to transition rapidly to onsite or new off site renewables.
- Add an objective to support and establish community energy projects throughout the lifetime of the development plan.
- Any new large scale fossil fuel infrastructure projects must be mandated to undertake climate impact assessment to ensure they are consistent with Ireland's fair share net cumulative carbon dioxide (CO2) quota in line with the Paris agreement.

Background to recommendations:

Impacts of Fossil Gas Projects

Research states that if we are to keep global temperature rise below 1.5°C and avoid catastrophic climate change, fossil gas must be phased out of the energy mix in Europe by 2035 {i}, discrediting claims that gas is a "transition fuel" in the transition to a decarbonised economy {ii}{iii}. Research also states that we can't develop any new fossil fuel infrastructure from 2019 onwards if we are to have a 64% chance of limiting temperature rise to less than 1.5°C {iv}. Currently, 69% of all gas produced in the US and imported to Europe as Liquefied Natural Gas (LNG) is sourced through hydraulic fracturing, or fracking {v}. New LNG exports will super-charge additional fracking, as 80% of the increased exports will come from new, i.e, fracked, wells {vi}. Recent investigation shows that this is 40% more damaging to the climate than coal {vii}. The lifespan of a project like LNG is at least 30 years which would increase our dependence on dirty fossil fuels and discourage the development of renewable energy projects {viii}.

Energy Security and LNG

New gas infrastructure is not required for energy security. A 2020 study by leading independent consultancy, Artelys concluded that "existing EU gas infrastructure is sufficiently capable of meeting a variety of future gas demand scenarios in the EU28, even in the event of extreme supply disruption cases" {ix}. The European body of gas network operators, ENTSO-G, in its 2017 Security of Supply Review, found that Ireland and the UK would suffer no curtailment in gas supply if faced with a variety of supply

disruption scenarios {x}. Historically, the UK has provided most of Ireland's gas supply, and Ervia states that in the UK "there is ample import capacity over and above demand" {xi}. Demand for gas in the UK has decreased by a fifth since 2004 and gas-fired electricity generation is expected to drop by 40% by 2025 {xii}. This is due to the existing over-capacity of the EU gas grid; gas import infrastructures have import capacity 200% higher than what Europe actually imports {xiii}.

References:

Anderson, K and Broderick, J. (2017). "Natural Gas and Climate Change". Manchester:Tyndall Manchester. {i}

Hmiel, B., Petrenko, V.V., Dyonisius, M.N., Buizert, C., Smith, A.M., Place, P.F., Harth, C., Beaudette, R., Hua, Q., Yang, B. and Vimont, I., (2020). Preindustrial 14 CH 4 indicates greater anthropogenic fossil CH 4 emissions. *Nature*, *578*(7795), pp.409-412. {ii}

Borunda, A. (2021). *Natural gas is a much 'dirtier' energy source than we thought*. Science. https://www.nationalgeographic.com/science/2020/02/super-potent-methane-in-atmosphere-oil-gas-drilling-ice-cores/ {iii}

Smith, C. J., Forster, P. M., Allen, M., Fuglestvedt, J., Millar, R. J., Rogelj, J., & Zickfeld, K. (2019). Current fossil fuel infrastructure does not yet commit us to 1.5 C warming. *Nature communications*, *10*(1), 1-10. {iv}

U.S. Energy Information Administration. (2020). *Frequently Asked Questions (FAQs) - U.S. Energy Information Administration (EIA)*. Independent Statistics & Analysis – U.S. Energy Information Administration (EIA). https://www.eia.gov/tools/faqs/faq.php?id=907&t=8 {v}

Food & Water Watch. (2019). *The Fracking Endgame – Locked Into Plastics, Pollution and Climate Chaos*. https://www.foodandwaterwatch.org/sites/default/files/rpt_1905_fracking-2019-web_2.pdf {vi}

Oireachtas. (2019). *Joint Committee on Climate Action debate - Wednesday, 9 Oct 2019*. Houses of the Oireachtas. https://www.oireachtas.ie/en/debates/debate/joint_committee_on_climate_action/2019-10-09/2/ {vii}

International Institute for Sustainable Development. (2017). *Zombie Energy: Climate benefits of ending subsidies to fossil fuel production*. https://www.iisd.org/sites/default/files/publications/zombie-energy-climate-benefits-ending-subsidies-fossil-fuel-production.pdf {viii}

Artelys. (2020). An updated analysis on gas supply security in the EU energy transition. https://www.artelys.com/wp-content/uploads/2020/01/Artelys-GasSecurityOfSupply-UpdatedAnalysis.pdf {ix}

ENTSO-G. (2017). Union-Wide Security of Supply Simulation Report. Brussels:ENTSO-G. Available: https://www.entsog.eu/sites/default/files/entsog-migration/publications/sos/ENTSOG%20Union%20wide%20SoS%20simulation%20report_INV0262-171121.pdf {x}

Ervia. (2018). A Look at Irish Gas Market. Dublin: Ervia. Available: https://www.gasnetworks.ie/corporate/company/our-network/irish-gas-market-overview/The-Irish-Gas-Market-Overview.pdf (Accessed 17 Oct 2020) {xi}

Evans, S. (2019). Analysis: Half of UK's electricity to be renewable by 2025. *Carbon Brief*. Available: https://www.carbonbrief.org/analysis-half-uks-electricity-to-be-renewable-by-2025 {xii}

Gaventa, J., Dufour, M, Bergamaschi, L. (2016). More security, lower cost: A smarter approach to gas infrastructure in Europe. Available: https://www.e3g.org/publications/more-security-lower-cost-a-smarter-approach-to-gas-infrastructure-in-europe/ {xiii}

Chapter 15: Development standards

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15.14.14 Data Centres

Recommendations:

Rather than review data centre applications on a case-by-case basis, we recommend a moratorium on any new data centres until such time as as National Policy is in place that includes the following three elements:

- A national cap on the level of data centre demand that can be accommodated by the grid to 2030, while meeting our renewable energy and climate emissions targets consistent with our obligations under the Paris Agreement.
- Must be powered entirely by onsite or new off site renewable energy.
- Where technically possible, heat generated from a data centre should be utilised for district heating systems.

15.4.3 Sustainability and Climate Action

Recommendation:

The Development Plan should ensure a rapid phasing out of all fossil fuels including gas and should not allow the expansion of the gas grid. Therefore we recommend inclusion of the following in the “Key sustainable design principles”:

- New buildings should not have connections to the gas network.

Background to recommendations on 15.14.14:

Eirgrid estimates that data centres could account for up to 27% of Ireland's electricity demand by 2028, and up to 50% of new electricity demand growth {xiv}. The Irish Academy of Engineering predicts that data centre development will add at least 1.5 million tonnes to Ireland's carbon emissions by 2030, a 13% increase on current electricity sector emissions, and will require an investment in energy generation and storage of €9 billion by 2027 {xv}.

Indeed, recently Eirgrid recognized that they couldn't continue to grant connection agreements to Datacentres in the Dublin area due to constraints on the grid.

The government has acknowledged that "data centres pose considerable challenges to the future planning and operation of Ireland's power system" {xviii}. These challenges include higher electricity costs for consumers {xix}. The Danish Council on Climate Change recommended in April 2019 that the Danish government legally binds data centre owners and developers to contribute to the infrastructure required to supply the centres with renewable energy, such as wind and solar farms {xx}.

Currently, many companies claim to operate data centres powered by 100% renewable energy. However, the energy is largely sourced indirectly through Renewable Energy Certificates or Purchase Power Agreements {xxi}, which means that the energy is sourced from the grid, which in Ireland is 69% fossil fuel-powered {xxii}. If we continue to allow companies to virtually purchase clean energy where it is cheapest to create, while actually using and increasing demand for dirty energy in Ireland, we allow them to profit

while our real emissions continue to rise. It is crucial therefore that data centres are powered directly by onsite renewable energy generation such as rooftop solar farms or genuinely new offsite generation such as offshore wind or solar farms. Data Centres also generate large quantities of waste heat which could be utilised in district heating systems {xxiii}.

To meet the greenhouse gas emissions targets set out in the Paris Agreement, and in the recently published Climate Action and Low Carbon Development Bill, it is paramount to examine the impact that energy supply of data centres will have on net emissions. Furthermore, it is crucial that every City and County Council takes into consideration the cumulative impact of data centres' energy demand on a nationwide basis, as opposed to examining impact solely on a case-by-case basis.

References:

Eirgrid. (2020). All Ireland Generation Capacity Statement. Dublin: Eirgrid. Available: https://www.eirgridgroup.com/site-files/library/EirGrid/All-Island-Generation-Capacity-Statement-2020-2029.pdf (Accessed 2021, May 16) {xiv}

Irish Academy of Engineering. (2019). Electricity Sector Investment for Data Centres in Ireland. Available: http://iae.ie/wp-content/uploads/2019/08/Data-Centres-July-2019.pdf (Accessed 2019, September 22) {xv}

Lillington, K. (2018). Net Results: Data centres need to power down their energy requirements. Available: https://www.irishtimes.com/business/technology/net-results-data-centres-need-to-power-down-theirenergy-requirements-1.3561745 (Accessed 2019, September 22) {xvi}

Climate Home News. (2017). 'Tsunami of data' could consume one fifth of global electricity by 2025. Available: https://www.theguardian.com/environment/2017/dec/11/tsunami-of-data-could-consume-fifthglobal-electricity-by-2025 (Accessed 2019, September 22) {xvii}

Department of Business, Enterprise and Innovation. (2018). Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy. Available: https://enterprise.gov.ie/en/Publications/Publication-files/Government-Statement-Data-Centres-Enterprise-Strategy.pdf (Accessed 2019, September 22) {xviii}

Taylor, C. (2018). Data centre demand to lead to higher energy prices. Available: https://www.irishtimes.com/business/energy-and-resources/data-centre-demand-to-lead-to-higher-energyprices-1.3581998 (Accessed 2019, September 22) {xix}

Tech told pay for wind farms. (2020). Irish Examiner. https://www.irishexaminer.com/business/arid-30917493.html {xx}

Chernicoff, D. (2016). How data centers pay for renewable energy. Available: https://www.datacenterdynamics.com/analysis/how-data-centers-pay-for-renewable-energy (Accessed 2019, September 22) {xxi}

Sustainable Energy Authority of Ireland. (2019). Renewables. Available: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi69MPZiPTuAhUvThUIHXzMA9wQFjADegQIARAD&url=https%3A%2F%2Fwww.seai.ie%2Fpublications%2FRenewable-Energy-in-Ireland-2019.pdf&usg=AOvVaw0H1q38mxqi3ITr3FrjO8O8 (Accessed 2019, September 22) {xxii}

Ramboll Group. (2019). *Unprecedented data centre surplus heat recovery to fuel district heat network*. https://ramboll.com/projects/rdk/unprecedented-data-centre-surplus-heat-recovery {xxiii}

Chapter 16: Monitoring and Implementation

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16.2 Collaboration and Engagement

Recommendations:

- Indicate that wherever practically possible “collaboration with communities and networks” will be designed in a participatory way, with input from representatives of all groups who are expected to take part.
- Include a commitment to lead annual local climate dialogues which serve to inform communities about the ongoing transition to a low carbon society and seek their opinions, ideas and consent.
- Include a commitment to adequately resourcing, publicising and staffing the Climate Action and Environment office (or equivalent). Include verbiage that these offices should work closely with local communities to improve education and access to information around environmental issues, proactively engage in consultations and participatory processes which allow local people to have a say in the energy transition in their area.
- Include a commitment to make special outreach efforts to include disadvantaged or marginalised groups in participatory processes. Those running participatory

processes should keep a detailed record of the participation of marginalised groups and of best practices that serve to increase this participation.

Background: Throughout the lifetime of this development plan, Ireland's transition to a low carbon society is entering its most crucial decade. It's vital that it should be centred around providing people and communities with clean, affordable and reliable energy. The best way to do so is to ensure citizen participation at all levels and stages of the energy transition.

There are many different ways in which people can participate in governance, ranging from informing to consultation to partnership to citizen control, whereby community members control the process (Armstein, 1969) {xxiv}. While all of these methods of participation are useful and valid at different stages of policymaking, different forms of participation should be incorporated into major decisions (such as energy infrastructure projects) to create a thoroughly participative process; for example, informing and consulting at the stage of technical impact assessments. Ideally, there should be citizen participation in the design of the participatory process itself, for example through focus groups or workshops which feed directly into sub-national and national policymaking.

Community participation and ownership has proved important for public acceptance of the energy transition in countries where the transition is more advanced than in Ireland. For example, in Germany, 70% of the tax paid by wind turbine operators goes directly to the municipality where the turbines are based. In Denmark, taxes on energy go into funds to subsidise local initiatives for environmental improvement and community generation. Denmark also requires that local communities have a 20% share in onshore or near-

shore wind turbines. Ownership measures like this are shown to increase community acceptance of energy transition infrastructure, and can take the form of individual shares in an energy project, community ownership of part of the infrastructure, or joint ventures between communities and developers {xxv}. There are many renewable energy projects that, with the support of the Council, can be developed. Numerous renewable energy exemplar projects exist around Europe, such as the Edinburgh Community Solar Co-operative, which empowers the public to be part of the transition to a low carbon society {xxvi}.

References:

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of planners*, *35*(4), 216-224. {xxiv}

Olsen, E. (2016). Renewable energy: public acceptance and citizens' financial participation. Elgar Encyclopaedia of Environmental Law. Available at: https://www.elgaronline.com/view/nlm-book/9781786436986/b-9781783477616-I_39.xml {xxv}

Edinburgh Community Solar Co-operative. (2021). *About Us | Edinburgh Community Solar Co-operative*. https://www.edinburghsolar.coop/about-us/ {xxvi}