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IRISH RESIDENTS' VIEWS OF ENERGY-RELATED TECHNOLOGIES

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INVESTMENT IN ELECTRICITY GENERATION AND NETWORK INFRASTRUCTURE IS NEEDED TO REACH CLIMATE TARGETS

The European Union (EU) has put in place ambitious targets to reduce greenhouse gas emissions and to increase the use of energy from renewable sources. The transformation of the current electricity system will play a significant role in reaching these targets. This is true in all EU member states, but none more so than in Ireland where the goal is to have 40 percent of electricity generation coming from renewable sources by 2020. Reaching this target will require significant investments in renewable generation technologies, with accompanying development of the electricity grid to bring the electricity which is generated in often remote locations, to the homes and businesses where it is needed.

Experience has shown that while people generally hold positive opinions of electricity generation from renewable sources, there remains a significant degree of local opposition when it comes to infrastructure siting decisions. Local opposition can lead to project delays, unhappy citizens, and frustrated investors and policy makers. Moreover, delays to infrastructure development may result in missed targets down the line resulting in fines, reputational damage and environmental consequences.

So how can we reduce opposition to local infrastructure development? An important first step is to conduct a comprehensive survey of people's opinions, coupled with a detailed analysis of the drivers thereof.

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This Bulletin summarises the findings from: Bertsch, V., Hyland, M., and Mahony, M., "What drives people's opinions of electricity infrastructure? Empirical Evidence from Ireland", *Energy Policy*, Vol. 106, 2017.
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PEOPLE ARE GENERALLY POSITIVELY DISPOSED TOWARDS RENEWABLE GENERATION TECHNOLOGIES, MOTIVATED, IN PART, BY ENVIRONMENTAL POLICY CONCERNS

We conducted a survey of Irish residents and found that they are generally positively disposed towards renewable generation technologies (see Fig. 1 left). 75 percent of respondents stated that they held "positive" or "somewhat positive" opinions of biomass generation, increasing to 77 percent for wind power and 91 percent for solar. When it comes to the expansion of the transmission grid necessary to bring renewable generation online; people were positively disposed if the proposal was to put the wires underground, but there was significantly less support for expansion of the grid above ground.

A number of socio-demographic variables are related to people's opinions of these technologies, in particular, age, education and income, albeit to varying degrees. The relative importance people assign to energy policy objectives also matters. For example, people who place relatively more importance on national environmental as opposed to economic policy priorities are more likely to have a positive opinion of wind powered generation. Looking at the considerations specific to the individual technologies, people who expressed concern regarding the impact on the landscape are less positively disposed towards wind farms.

Looking at the drivers of opinions towards above-ground and under-ground grid expansion, many of the drivers of opinions for above-ground grids were in direct contrast to those for underground grids. For example, people who placed a high importance on security of supply in national energy policy had more positive opinions of above-ground expansion, whereas a prioritisation of environmental objectives was related to positive opinions of underground grid expansion.

DESPITE POSITIVE VIEWS, LOCAL OPPOSITION CAN STILL ABOUND

While our survey showed that 77 percent of people were generally positively disposed towards wind powered generation, only 36 percent of respondents indicated that they would be happy to have a wind farm constructed within five kilometres of their place of residence (see Fig. 1 right). Even fewer people (20 percent) would be accepting of the local siting of a biomass generation facility. Solar power, on the other hand generally has high support and high local acceptance.

Looking at the drivers of local opposition, in general, socio demographic variables do not appear to be significant with the exception of gender; male respondents were less likely to oppose the local siting of any of the technologies examined. Similar to the drivers of overall opinions, prioritisation of national energy policy objectives was related to people's likelihood of expressing opposition to local infrastructure development. People who place a high importance on environmental concerns were less likely to express opposition to proposed development of wind, solar or biomass power generation plants.

It is interesting to note that we do not find any evidence supporting the commonly-held view that opposition may be driven by NIMBYism (the "Not In My

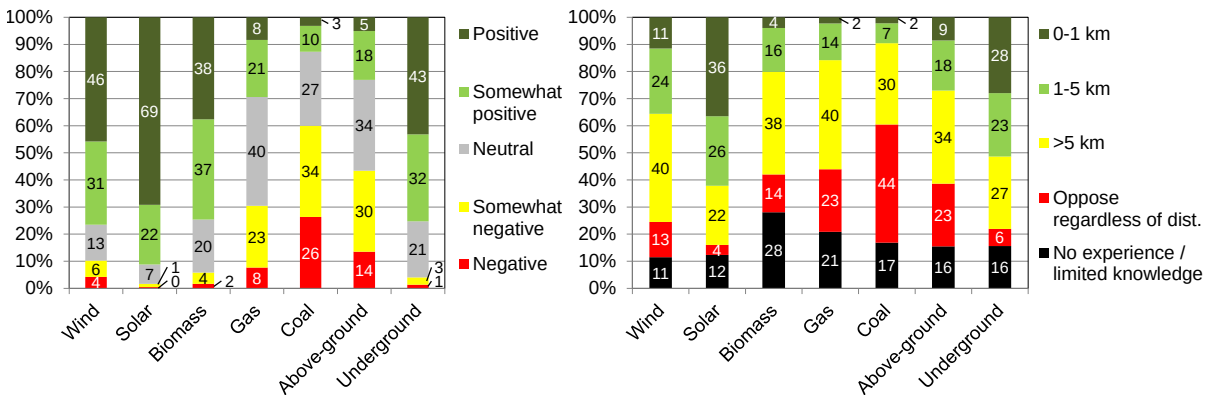
Back Yard" phenomenon). For instance, concerns regarding local landscape do not drive local opposition to energy infrastructure development.

USING THESE INSIGHTS TO REDUCE OPPOSITION AND REACH OUR EU TARGETS

How can policy makers use these insights? Understanding the drivers of opinions and framing policy proposals in such a way that the characteristics that matter to residents are highlighted may go some way towards reducing local opposition to infrastructure siting. Policy makers should take note of the views of Irish residents towards each of the technologies considered. While Irish residents are generally supportive of the need to move towards an energy system more heavily reliant on renewable sources, there is a clear reluctance towards building additional transmission lines, needed to facilitate this transition, above ground. On the other hand people are generally positively disposed towards underground grid expansion. Given that constructing grid cables underground is much more costly and technically challenging, policy makers may be interested to know what factors might explain such contrasting views.

There are a number of positive takeaways for policy makers. Firstly, when it comes to the drivers of acceptance of local infrastructure development, socio-demographics, over which policy makers have little to no control, play a minor role. This suggests that policy makers may be able to get additional buy-in from citizens by better communicating the environmental and other energy policy considerations behind infrastructure development. Furthermore, we do not find any evidence that reluctance among Irish residents to have energy infrastructure developed close to their place of residence is driven by a selfish "NIMBY" motivation. Concerns regarding health and local environmental impacts take precedence; again this highlights the role that could be played by improved communication.

FIGURE 1 LEFT: SUBJECTIVE OPINIONS OF ENERGY-RELATED TECHNOLOGIES (%); RIGHT: MINIMUM ACCEPTABLE DISTANCE OF ENERGY-RELATED TECHNOLOGIES FROM RESIDENCE (%)



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