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Project: Public Consultation on a Micro-generation Support Scheme in Ireland 2021

Date: 17/02/2021 Job Code: --- Stage: 00

Document: Submission on Public Consultation on a Micro-generation Support Scheme

Attention:

MSS Consultation
Electricity Policy Division
Department of the Environment, Climate and Communications
29-31 Adelaide Road
Dublin
D02 X285

Date: 17th of February 2021

Dear Sir/Madam,

I am writing regarding the current public consultation on micro-generation supports.

We have many years of experience with sustainable construction and low energy building at the scale of single-family dwellings and therefore are well placed within the AEC sector to understand the current restraints and what measures need to happen to ensure that adequate adoption of micro-generation systems take place.

Our submission is broken into three parts.

- Part 1: Background and general hurdles to the adoption of micro-generation.
- Part 2: Future requirements for successful growth in micro-generation installations.
- Part 3: Specific response to the consultation paper titled "Public Consultation on a Micro-Generation Support Scheme in Ireland".

Part 1:

Background to micro-generation, in particular PV installations:

- Renewable electricity will become the new "black gold". It will replace petroleum as the main form of energy bringing with it the same influence and power that petroleum currently wields.
- Electricity is crucial in the move to a low carbon society and every opportunity to generate renewable energy should be supported as a priority of national security. We cannot generate too much renewable electricity!
- Electrification of transportation is becoming a reality but will substantially increase the amount of renewable energy to be generated.
- Every roof is a potential energy plant that does not suffer from many issues that plague other renewable energy projects like:
 - Environmental impact
 - Statutory licencing
 - Connections to grids

Every roof that is not covered in PV is the loss of another potential renewable energy plant.

- PV is ideal at small scale. It is:
 - just as efficient at domestic scale
 - easy to install
 - low maintenance
 - close to location of demand = very low transmission losses

- Minimal visual impact
- No noise concerns for neighbours
- Wind power is ideal at large scale because:
 - The larger the turbine the more efficient it is
 - It requires ongoing maintenance so economies of scale are really important.
 - It is more efficient when placed away from buildings and other built-up areas.
 - Off-shore wind is even more efficient including other benefits, but this can only be implemented by very large companies.
- The generation of wind power and PV complement each other i.e. it is generally not windy when it is sunny and vice versa. Since wind power is much better at grid scale and PV works very well at micro scale there needs to be a free and uninhibited flow of energy linking the two sources so that the complementary effect can be maximised.
- There is a requirement within the building regulations to install renewable energy generation on new buildings. In practice this is met in two ways:
 - installation of a heat pump (which does not generate electricity, it only consumes electricity, which is counterproductive). This discourages micro-generation.
 - Installation of gas boiler with minimal PV installation. A gas boiler generates CO₂, so these installations fall short of the Climate Action Plan.

Currently the main blockage we see to uptake on micro-generation installations is:

- Lack of capital finance. Generally during a deep retrofit or new build project people/developers are stretched to the limits of their available finance and since micro-generation is not considered essential it does not get installed. Also, current grants are not available to new builds and in deep retrofits the PV installation still requires a sizable capital investment even taking into account the available grants.

Part 2:

Micro-generation will increase renewable energy installations which will cut dependency on fossil fuels. We believe that the following policy changes are needed:

- Provide or make **capital finance** easily available. This should be through specific micro-generation grants with repayments being made through electricity bills and require no other collateral other than being part of electricity supply contract.
- Acknowledgement that the **grid is a national service and asset**, not a profit-making company. The electricity grid is of too much importance to society that decisions regarding it be made based on profit.
- We understand the need to limit the peak export of electricity, but there should be **no limitation on the size of installation**. With the increasing popularity of electric cars there is vast onsite energy storage and if self-consumption is being encouraged then there cannot be a limit on the installation size.
- A current standard domestic connection can draw up to 12kW we do not see any reasonable argument why the peak export can't be just below peak import, so **typical peak export to be just below 12kW**.

- Acknowledgement that the **grid is the best storage device for PV energy**, because wind power makes more sense at grid scale to complement the PV energy which works great as domestic scale.
- Make sure that there is a **reasonable payment for power exported to the grid**.
- There should be **no limit on the quantity of power exported**, except to limit the peak export of electricity. It makes no sense to limit the quantity exported to encourage self-consumption. Self-consumption will already be encouraged because (a) the payment received will be below the retail rate and (b) by limiting peak export then a local use/storage of excess power will have to be implemented.

Part 3:

Table 3-1 Suitability of technologies by sector

There seems to be an error in this table or it is very out of date.

- Solar PV is very suitable and applicable at domestic scale. It should be changed to green.
- We are not aware of any suppliers of domestic scale Micro-CHP, not to mention Micro-CHP that uses renewable fuels! At domestic scale CHP systems discourage better/upgraded insulation and therefore will not reduce energy needs. This should be changed to red.

Section 3.6

We disagree with “A 30% limit on the level of export onto the network”. This does not take account of the profile of generation from PV and the inherent complementary link between grid scale wind power and domestic scale PV. We do not feel that a limit needs to be put in place to encourage self-consumption, that will already be ensured by (a) the gap between payment received and retail cost of electricity, (b) the limit on peak export.

Section 3.6 – Sector Demands – Table on page 19

This table does not take account of the electricity needed for charging a car, which we estimate to average about 4000kWh/annum. Also, as heating changes from fossil fuel to heat pumps an allowance needs to be made for this, which we suggest to be about another 4000kWh/annum. Therefore, it would more likely that households will be using on average about 13,000kWh/annum of electricity.

Section 3.6 – Table 3-4 – Finalised technology/sector archetype capacity bands.

We take issue with this table. First it is not clear how the capacity is measured. But 3kW is far too small for domestic solar. If electrical vehicles are being encouraged and self-consumption is being encouraged then this band needs to be increased. As we have stated elsewhere there should be no limit on the size of the installation, only on the peak export load.

Response to specific questions, where we have no opinion on a question, we have not included an answer/comment.

Question 1 & 2:

We think that the CEG should be slightly higher than the wholesale price because domestic PV results in less transmission losses because they are generally diffused installations within built up areas. The CEG should be set higher to take account of this.

Question 3:

The CEP should be available to existing installations otherwise it really sends the wrong message to early adopters and people who have supported renewable energy from the beginning.

Question 5:

It is important that the value of this premium remains unchanged for the life of the support and cannot be reduced. There needs to be certainty to get investment in a sector.

Question 6:

We strongly disagree with capping the export amount. We believe that self-consumption will already be ensured because of the gap between payments and retail rates and because of a limit on peak export. This is just an unnecessary measure that sends the wrong message.

If a cap is introduced then it has to be done on an annual basis to take account of the seasonal variations in demand and generation. Doing it on the size of installation or a monthly basis would be a disaster.

Question 9:

Getting an export connection has to be a straightforward and low-cost process! It cannot result in any perceived or actual barrier to having a micro-generation installation.

Question 10:

We have not seen in practice that there is much difference in the cost to install PV on a new building or an existing building so we strongly disagree that the CEP is limited to existing buildings. As we have said elsewhere, project finances are already stretched during a new build and not allowing access to the CEP will further discourage installation of renewable energy generation. **The CEP has to apply to new builds.**

Question 14:

Any financial supports for renewable energy micro-generation should not be added to electricity bills. This gives the sensation to the people who do not have the possibility to install micro-generation that they are paying for those who do. It will build resentment and resistance among the public towards micro-generation. Any premium supports should be paid for through a more general fund.

Question 15 (typo Q14):

It is important that reviews cannot make changes to existing customers or installations arrangements. When someone installs micro-generation, they need certainty on the remuneration that they will receive.

Please do not hesitate to contact me regarding any of the matters discussed above and I look forward to a positive step forward in the widespread adoption of micro-generation installations.

Your Sincerely,

Miles Sampson, BArch, MRIBA, Architect