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To: Licensing Staff
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Waste Licence W0274-01

I strongly object to the application of Waste Licence for facility at Ballinphuill, Tibohine , Co. Roscommon for the following reasons:

1. The project is not integrated into the community which reject strongly the idea of an anaerobic digester in the area. The applicant did not make any effort to gain the support of the locals. On the contrary a representative for the company stated in the local papers that the project will proceed with or without the support of locals (The Roscommon Herald of June 8, 2010 page 13).
2. Irregularities in the planning permission PD/08/656 and Waste Facility Permit WFP-RN-09-01
 - a. Inconsistency in the details of the waste streams provided by AD Power Roscommon Ltd intended to accept at their facility as noted in their waste licence application to EPA and those for which planning permission (08/656) has been granted by Roscommon county council.
 - b. BioPower Ltd has been granted a waste facility permit for 10,000 t/a and then AD Roscommon Ltd applied to the EPA for a waste licence of 24,999 t/a while the planning permission is for 20,000 t/a. The applicant did not explain how the surplus will be handled or stored.
 - c. According to the procedure for making and processing of application for waste permit or waste licence, the applicant must publish in a local newspaper, and erect on a site, a notice of intention to apply. The applicant in this case published his intention in the Irish Times instead of the local papers. When AD power Ltd representative was asked in our public meeting he stated that it is the company policy which is unsatisfactory reply- (Also refer to The Roscommon Herald of June 8, 2010 page 13). The same was done during the process of applying for the planning permission.
 - d. It is advised by DAFF that an AD developer seeks stage 1 approval for the design of the AD, types of feedstock used and processes involved before applying for planning permission to ensure that the design includes sufficient provision for the requirements of ABP.
 - e. The County Council did not take the necessary steps to inform all the departments concerned such as Health Board Authority, Health and Safety Authority and Shannon Regional Fisheries Board. This Project is not a C&D development and it should involve consulting of and explaining to members of the community about this new technology.
 - f. The County Council did not investigate the technical competence of the companies involved .They are newly established without any field experience in AD technology.
 - g. The County Council did not investigate thoroughly the impact of the AD on the ground and surface water neglecting
 - The water stream traversing the site and drains in river Lung,
 - The high density of drainage ditches within the site and surrounding area which facilitate the drainage of the water northwards in the direction of the stream.
 - The wells used by locals for drinking purpose. According to the applicant the well inventory from GSI and the door to door survey carried by OGE stated that no wells were located in the vicinity.

- h. The County Council did not investigate the impact of the proposed development on the archaeological/ historical sites and monuments found in the area.
(Ring fort, Crannog and Rath)

General:

I am not questioning the integrity of the County Council but the competence of the different departments to deal with such technical projects. The closure of the Ballagherreen landfill and the implementation of the Regional Waste Management Plans are not a burden for the County Council to rush on granting Planning permission and Waste permit (10,000 t/a)
The same applicant was refused a grant of permission by the local authority in other counties.

I wonder if the County Council Environment Department has enough literature, technical knowledge and experience in the technique of Anaerobic Digestion.

The EU Sixth Environment Action programme sets out objectives in the shape of Europe's future environment at the start of the 21st century.

This vision "**Environment 2010: Our Future, Our Choice**" seeks the following aims:

- For waste generated, these should represent very low risks to the environment and our health
- Waste should be treated as close as possible to where it is generated ("Proximity Principle").

I am not against the concept of AD but I do not support centralised ones (CAD) which impose a great threat to the environment (Refer to article 3)

3. Comments on the EIS

Generally speaking the EIS submitted by the applicant is sub-standard and it does not address much of the negative impact of this CAD on our environment. My first impression when I read the contents that it is a sort of compiled abstracts from different publications, web sites and other statements.

To the best of my knowledge the purpose of the EIS is to highlight the environmental impact of the development rather than the technical evaluation of the facility, although both presentations lack professionalism.

I reached the conclusion that the applicant is not up to the task to manage such technology and that adds up to my worries that disaster could happen during operations and we would not be able to face or handle the consequences in this downturn and in our recessionary times.

In this part of my submission I will try to highlight the negative impact on us as result of bringing this facility to our land. Also I will address the disadvantage of using CAD in populated area.

- People of Tibohine community (Human Beings): AD projects are relatively new in Ireland. Most people will know little or nothing about AD technology. The developer never consulted any of the people who live in the immediate vicinity of the proposed facility. Our people are furious at the whole issue as they were not informed from the beginning about bringing waste to the area. We feel that we have been cheated by the developer and let down by our County Council.

People welfare is the main issue in approving projects of this kind.

Thanks for Tibohine Action Group who took the responsibility to enlighten the community about the concept of AD through public meetings, leaflets outlining proposals and inviting comments.

The developer did not make any effort to involve the community, on the contrary he tried to mislead and intimidate some members of the community. As a result, 400 residents signed a protest and lodged many electronic submissions to EPA opposing the erection of such plant.

People's main concerns are:

- proximity of the facility to National School,
- The diversity of the feedstock,
- Emissions and effluents to air, ground and water
- Traffic movement in the area,
- Noise,
- Odours,
- Risks to human health from the pathogenic content of the feedstock and digestate.
- Risks of animal disease transmission between farms in the CAD schemes through cross contamination from vehicles movements and centralised collection of feedstock. (we have to bear in mind the foot and mouth disease havoc)

- Diversity of Feedstock :

- The EIS did not identify the impact of the use of different feedstock. The content of the feedstock will require careful assessment as it will affect the nature of emissions and outputs. It is essential that toxic substances are eliminated or minimised as it will arrest or kill the process and in addition it will leak these substances to the digestate.

For instance heavy metals from municipal solid waste (MSW), antibiotics and disinfectants from sewage sludge are not removed by the digestion process and will end up in the digestate. The impact is poisoning our food chain and ground water.

- Also the EIS did not state the priorities for outputs (waste management or methane gas yield or liquor/ fibre), for instance: sewage and manure yield less biogas as the animal which produced it has already taken out some of the energy content.

These priorities are the main factors in deciding the quality criteria for the feedstock in order to minimise elements of contaminations.

- The EIS failed to address the issue of quality control and assurance system and that is to provide farmers and other suppliers with detailed contracts and specifications of the appropriate content of the feedstock. This to avoid contaminating the plant or the other supplying farms.

An on-farm facility or scheme will encounter less problems managing the quality of the feedstock because the operator will control the farm's own waste.

- In Vol. 1 – Non technical summary of the EIS, the applicant stated that Biopark needs to be sited in an agricultural area with an adequate supply of feedstock and market for organic fertiliser "BioGrow®". This statement is incorrect as the farming practice is only for grazing and not tillage and that all the supply will come from outside the county (more than 6 Km). Most of the farmers in the area who are among the protesters have stated that they are not interested in growing crops, supplying manure or buying the organic fertiliser.

In the process of applying for a planning permission/ waste permit the

applicant submitted a letter from the so called Western BioEnergy Co-Operative Society Ltd that they will contract to supply crops and to purchase the organic fertiliser. This company has no records or activities in this field and has been formed by the applicant himself only to justify his incorrect statement.

The long haulage from catchment areas and transporting products will contribute to more traffic in the area and more pollution (Carbon dioxide and other emissions) from lorries or tankers running on conventional fossil fuels and possibility of cross contamination.

(Recommended distance from 6 – 8 Km)

The energy consumed in transporting needs to be balanced against the energy yielded from the facility.

Here I emphasise again on the advantages of promoting on- farm and at source digesters (proximity Principal) where the location is a crucial factor in waste management.

- Digestate (Liquor/ Fibre)

- The fibre which is used as soil conditioner has a low content of nutrients and should be returned directly to the land locally. However, market development is required to make the commercial sale of fibre viable on any large scale

For any sale of fibre, access to local markets is crucial as it would not be economically viable or environmentally sound to transport it long distances as it will create more pollution.

- In Vol. 2 section 3 (Description of proposed development), the EIS states that the solid fraction will be stored in skips within the solid separation building.

As the market is seasonal and due to the restrict nitrates directive for land spreading, the fertiliser should contain 170Kg of nitrogen/hectare/ year.

The statement should explain what local markets have been explored, and are there any other solutions? for instance: off- site storage or composting the solid fraction for marketing to the horticultural or gardening sectors.

- The statement did not address how to control the very high concentration of ammoniacal nitrogen in the liquor in order to apply it for land. Traditionally aeration, de- nitrification and reverse osmosis techniques might be needed.

- The statement did not explain how to deal with emissions in the reception area and the storage tanks. Normally the main bulk of the gas will be produced in the digesting tanks.

- Digestate recirculation to the reception tank (re- wetting the feedstock) was stated. This procedure has been criticised by many experts. Although it contains useful bacteria population but it will increase the concentration of contaminants such as heavy metals, phosphorous and nitrogen.

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Here the concept of on- farm facilities is obvious. For any sale of the fibre or the liquor access to local markets is crucial as it would not be economically viable or environmentally sound to transport it long distances.

It is easier to store it on farm adjacent to the areas where the digestate will be applied

- Biogas & CHP unit: Biogas is produced as a mixture of methane (heavy pollutant) and carbon dioxide with traces of hydrogen sulphide and ammonia which have impact on human health.
 - The emissions of nitrogen, sulphur and carbon oxides formed in the CHP were not addressed.
 - The EIS did not explain how the surplus of the gas will be utilised as only 30% will be used in the facility to produce heat and electricity.

There is no provision in the statement to explain the prospect of exporting, or selling energy to any establishment because heat sale is not an option here as district heating networks do not exist in Ireland.

However, heat sales to poultry producers, factories, greenhouses or other large buildings close to the facility are possible if the AD plant is suitably located (near urban areas). Electricity issue will need more gas purification and it is very expensive to be hooked into the national grid where there are already many problems for connecting from other resources. Also the poor rate for biogas electricity which is 12 cent /KW hour in Ireland compared to 20 cent in Germany.

My conclusion is that the operator of the facility will have two options, either to flare the extra gas contributing to more air pollution or will use it to produce more methane.

This problem would not exist for on-farm processing in which the operator will have many constructive options to benefit from the heat and electricity generated and distribute it to the amenities surrounding the facility.

- Personnel and job creation : This paragraph is not part of the EIS but it has a serious effect on the concept of Pollution. Efficient management including specialists and operators training to the highest standards as AD technology is new to Ireland should be considered. I cannot see any prospect of hiring locals from our community. In addition I cannot trust the applicant experience and knowledge to run such sensitive project. The following scenario will explain the Pollution possibility::

A major danger for overall anaerobic digester is presented when microorganism populations are not balanced. This can be a result of an overload, which is defined as either an excess of biodegradable organic matter for the active population capable of digesting it, or any circumstances that produce a decrease in active microorganism concentration (abrupt change of temperature, accumulation of toxic substances, flow rate increase etc.). These disturbances mainly affect methanogenic bacteria, whereas the much more tolerant acidogenic bacteria continue to work, producing more acids, which in return inhibit the activity of methane-formers. This imbalance can eventually result in a digester failure polluting the area around it.

Conclusion:

The main point of my argument is the well being of people. Government should consider the welfare of their people as priority in their agenda. This should come before any international commitments (the Kyoto Protocol, the Renewable Energy Directive, landfills directive and the Nitrates Directive)

Waste streams are very diverse, and their management requires consideration of a wide range of environmental, technical, economic and market related issues. Waste treatment options are often controversial and proposals for significant-scale waste infrastructure have generated strong opposition. Overall, the delivery of waste services and infrastructure is inherently more complex than the provision of other environmental services, such as water and wastewater management.

With a sea of plans based on hierarchy options of waste management, acts, directives and amendments, policy statements such as "changing our ways" "and zero waste" , I could not see a distinctive progress tackling the problem of waste. Millions in funds have been allocated to several environmental departments in the country. I cannot deny the small progress in the line of waste prevention and collection which reflects on my black and blue bins collection and bring banks facilities.

The AD technology is very successful in Germany, Sweden, Austria and Denmark but the question is it all suitable for Ireland? We could import parts of this technology without dashing for the whole thing. We must acknowledge the facts about our population, land volumes, possible markets for products, volume of animal wealth, Raw material availability, incentives to farmers and improving their conditions and integration of AD technology with other waste management plans.

I appeal to all the departments associated with the erection of this facility in Tibohine to consider :

1. The well being of the people before any other ambitions:
2. Location of the facility.
3. Community gain.

Thank you for your patience in dealing with my submission.

Magd Arafa

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