

Sub (4)
PO931-01.

Beithgheal
Sion Rd,
Kilkenny
20th Nov 2012

Re: No 12/472. Application by Greener Ideas Ltd for a 100MW Electric Power station and ancillary works at IDA Industrial Park, Purcellsinch (Kilkenny)

Dear Sir,
I wish to comment and object to this proposal as follows.

Energy Policy

The submission makes considerable mention of the need for mid-merit electrical generation plant to support government energy policy on maximizing Ireland's potential to exploit wind energy. The author does not dispute the considerable potential of wind energy in Ireland but does contest 1) that the mid-merit plant of the type outlined by Greener Ideas Ltd (GIL) is the only option to meet this need, 2) that the site selected is suitable for such a scale of plant and 3) that forecast future electrical power demands in Kilkenny require this project.

In a report "Ireland's Future Energy Needs" September 2007 by Energy Needs Ireland (ENI) of UCD the following statement is relevant here "There is also scope for operating Combined Cycle Gas Turbine (CCGT) plant in a more flexible manner. Indeed, many have pointed out that mid-merit plant does not exist: it is merely old base-load plant. Many CCGTs plants can operate in open-cycle configurations, with the attendant fast ramping rates. It may become necessary to structure the SEM to incentivise generators to operate their CCGT plant in a more flexible manner." This type of mid-merit plant in the Greener Ideas Ltd. proposal is known in the industry as an Open Cycle Gas Turbine (OCGT) type with a maximum efficiency of 46%. This means that most of the energy in the fuel will be dissipated as waste heat. In the case of the Kilkenny proposed plant this means that over 150MW of heat will be wasted to the atmosphere. This heat has the capacity to meet the domestic capacity of the city by a factor of 5. This will also mean that more than 150,000 tonnes CO₂ pa will be emitted locally. Most of the new gas power plants installed in Ireland in recent times use the Combined Cycle Gas Turbine (CCGT) technology with an efficiency of up to 60%. It is also worth pointing out that the ESB's new 400MW generating plant at Whitegate is a CCGT plant that also has the flexibility to operate in the OCGT mode. On the other hand Bord Gais's plant new CCGT plant at Whitegate is not a flexible plant and cannot operate in the OCGT or mid-merit mode. It could be further argued that Bord gais is new to the business of building electrical power plant and have naively made the wrong choice in Cork. This view is supported by others in the know and also by the fact that the planned new Endesa plants at Tarbert and Great Island were to be similar flexible CCGT plants to the ESB. These facts cast serious doubt on the developer's expertise and competence in this area.

The EU's publication "Doing more with Less" available on the Department of Communications, Energy and Natural Resources website advises that new power plant should be CCGT type and be as efficient as possible. This publication further points out the further advantages of more efficient technologies such as Distributed Generation and (CHP) Cogeneration that have efficiencies in excess of 80%. These are the norm in Europe in countries and cities that value the environment highly and have won awards for same. Many of these cities have the most efficient power generating systems using renewable Combined Heat and Power (CHP)/district heating technologies.

Plant Design/New Technology

GIL's comments are noted here in terms of generic GE plant and their operation in Ireland. None of these locations mentioned in the report are similar to that proposed in Kilkenny in terms of proximity to existing residential and business interests. Also, the plant proposed the new LMS 100 has not been installed anywhere in Ireland or in Europe for that matter. The first LMS 100 installed in Groton, South Dakota, is clearly in a remote area. A paper from the manufacturer on the installation and operating experience of this facility refers to site selection as having included access to adequate roads, electric power transmission facilities and water and natural gas resources. Of equal importance was environmental and public impact. The advantages of the Groton site were an adjoining 345 kilovolt substation and 115 kilovolt substation on site, a short connection to the power grid and the availability of a 12 inch underground watermain beneath the site for cooling and water injection. There are different codes for the design of a plant such as this for American and European conditions. All electrical plant in Europe need the CE mark.

Water

It is noted that GIL are now using a combination of treated water from the adjacent waste water treatment plant (WWTP) and water extracted from the River Nore. This treatment plant is now an old 70s plant and in need of renewal. It has a legacy of pollution incidents to the River Nore and will not meet new European regulations for water quality. It was to be upgraded in the past to meet some basic standards. This did not happen but there was even doubt that this upgrading would meet present and definitely future imminent standards. It would seem cavalier in the least to be imposing more strenuous treatment loads on this inadequate plant.

This means of water supply is a major change from the previous submission in that ground water was solely to be used. It is also noted that the quantity of water to be used is a massive 90m³/hr. It will be mostly used for direct injection in the combustion process for NOX control. There are now serious concerns here for the community in that treated water with potential contaminants is to be passed through a combustion process and dispersed with a stack over the surrounding area. The HSE is also concerned here as evidenced by their submission in May 2012 to the EPA on the GIL application for an IPPC licence where the Health Inspector advises the abandonment of such a practice in the interests of public health.

The Council has also expressed concern to the EPA over the WWTP potential to handle the Chloride and Mineral Oil effluents from the GIL plant. It would seem that there is an aspiration to solve this problem simply by dilution.

This is enough evidence in these latter facts for Planning and the EPA to refuse outright this whole application.

Vapour Plumes

The stack emissions and associated plumes are discounted by GIL for the reason of the high flue final temperature. This plant is cyclic and on start-up the plant will take time to reach its operating temperatures. On cold mornings there will be a considerable plume taking consideration of the massive amounts of heat rejected and the high moisture content of the exhaust gases (now possibly contaminated) and the already saturated moist air in the area from the treatment plant. The amount of water vapour from this plant is estimated at a massive 100,000 tonnes pa. Any EIS report should also consider not only the water vapour emissions from this proposal but also the combined emissions of the neighbouring WWTP plant.

Kilkenny a Futureproof City

Kilkenny is also part of a worldwide transition town network with an apt title "Futureproofkilkenny". This movement has a stated objective of creating an energy descent plan and is particularly focused on reducing the city's carbon footprint and encouraging energy conservation and renewable energies. The GIL project would produce an extra 150,000 tonnes per annum of CO2 in the city. This would double the city's carbon footprint in one go. It thus can have no part in the "futureproof" initiative and will not be welcomed in a progressive sustainable town like Kilkenny. The city also subscribes to the main provisions of the "Aarhus" convention in that the public can participate in and have ultimate say in all local environmental matters and decisions.

Site Selection

The report makes reference to the future power demands for the Kilkenny area and that a plant of this type is needed to address the deficiencies here. The losses in modern high tension systems are minimal and a new plant could be located anywhere in the South East to address this problem. For example, the existing Great Island plant in Wexford which was owned by the Italian utility Endesa would be a very suitable location for a new expanded flexible high efficiency plant to meet future load expansion in the South East including Kilkenny. The existing Kilkenny site is not suitable for the scale of the development with its close proximity to existing residential and small scale office/commercial developments. Should any developer wish to develop such a scheme locally against all evidence for such a need in this regard - a much more suitable site would be adjacent the old Dublin Rd high tension sub-station. This would facilitate easy connection to the grid and the gas supply would not be much further and easier than the proposed project.

Bord Pleanala Assessment of Previous Mountside Submission No 07/2164 2008

The Council should note this excellent report by the Bord Pleanala inspector in respect of the previous application by Mountside - in particular its conclusion and recommendations which are reproduced here.

CONCLUSION

In conclusion, I consider that permission should be refused for this development. It would be located on a confined site which is zoned industrial/technology park under the Kilkenny City and Environs Development Plan, 2008 — 2014, under which public service installations are only open for consideration. The proposed development, by reason of its sheer scale in juxtaposition with an existing low rise office/parts storage use on the adjoining site and the possibility of unacceptable noise and atmospheric emissions, means that it would fail to be compatible with the policies and objectives for the zone and that it would conflict with the permitted uses and fail to conform with the proper planning and sustainable development of the area. It would be visually obtrusive. In addition, I consider that the Board, having regard to the documentation lodged with the application and the appeal, cannot be satisfied that the proposed development would be safe or that it would not be unacceptable on environmental grounds, notwithstanding the fact that the proposed development would be subject to an IPPC licence.

RECOMMENDATION

Having regard to the forgoing, I recommend that the planning authority's decision be reversed in this instance and that permission be refused for this development for the reasons and considerations set out below.

REASONS AND CONSIDERATIONS

1. The proposed development would be located in an area zoned "industrial/technology park" under the provisions of the current development plan for Kilkenny City and environs. The purposes of this zoning objective is to encourage mainly service type employment on a campus environment. Under this zoning objective, public service installations are only open for consideration. This zoning objective, its purpose and its restrictions are considered to be reasonable. The proposed development, by reason of its nature and scale, the likelihood of unacceptable noise and gaseous emissions and its location directly adjoining existing industrial and public utility facilities on a site which may be regarded as transitional from the zoning objective to the residential/agricultural uses which predominate on Sion Road, would be incompatible with the policies and objectives for the zone, would conflict with the permitted uses and would fail to conform with the proper planning and sustainable development of the area. The proposed development would, accordingly contravene, materially, a development objective indicated in the development plan for the zoning of land for the use primarily of this particular area for particular purposes and would seriously injure the amenities of property in the vicinity.
2. Having regard to the information lodged with the application and the appeal, notwithstanding the fact that it would be subject to an Integrated Pollution Prevention Control licence under the Environmental Protection Agency Act, 1992, the Board considers that the proposed development would be unacceptable on environmental grounds, having regard to the proper planning and sustainable development of the area in which it would be situate.

3. The proposed development by reason of its excessively close proximity to the developments on the adjoining sites to the north and west, would endanger the health and safety of persons employed in the structures on these adjoining sites.

4. The proposed development by reason of its heavy industrial visual profile and its location in a somewhat elevated position within the valley of the River Nore, and by reason of its visibility from Ossory Bridge, a view listed in the current Kilkenny City and Environs Development Plan, would represent an incongruous and visually obtrusive form of development which would interfere with the character of the landscape and with a view of special amenity value which it is necessary to preserve. The proposed development would thus be contrary to the proper planning and sustainable development of the area.

Summary

This project fulfils no unique role in terms of national or South East power supply solutions, it lacks sound environmental analysis, is counter to good local area and amenity planning, is speculative in nature, is likely not technically or commercially feasible and is being honed into a site that is totally unsuitable. The revised water supply arrangements of partly using treated waste water do not meet HSE requirements. The old WWTP may not be capable of handling the effluent from this plant which could exacerbate the quality of the river water.

The GIL project should certainly be rejected.

Donal J Deering CEng MIEI