



Mr. Barry Hussey
The Commission for Energy Regulation
Belgard Square North
Tallaght
Dublin 24

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8th May 2015

Re: Compressed Natural Gas for Transport

Dear Mr. Hussey,

Please see attached submission on behalf of Celtic Linen Ltd. on proposed arrangements for Compressed Natural Gas for Transport.

Celtic Linen operates a fleet of sixty trucks from four distribution centres serving business customers throughout the Republic of Ireland. The company since 2010 has been an active programme to reduce its CO₂ emissions from the current 9,000 tonnes per annum. Of the total emissions, the company's 'own account' distribution is responsible for emissions 1,900 tonnes of CO₂ per annum with all but two vehicles using diesel.

The company has conducted trials with diesel electric hybrid trucks, electric trucks and compressed natural gas trucks since 2010, comparing performance with conventional diesel vehicles. These trials have proven that, on balance, Compressed Natural Gas is the preferred energy source for Celtic Linen's future transport needs, meeting the goals of:

- Reduction in pollution:
 - CO₂ emissions
 - NO_x emissions
 - Particulate emissions
 - Noise pollution
- Reduced cost
- Reduction in sourcing of resources and supplies from areas of the world with poor human rights.

Therefore it is the company's desire that a well regulated supply network is created for compressed natural gas for use in vehicles.

Yours sincerely,

A handwritten signature in blue ink that reads "Peter Scallan". The signature is written in a cursive style and is positioned above a light blue rectangular background.

Peter Scallan
Director

INTRODUCTION

Celtic Linen Ltd is one of Ireland's leading textile rental and service companies, supplying hospitals, hotels, restaurants and industry throughout the Republic of Ireland with bedlinen, towels, table linen, workwear and similar textiles on a rental and service basis. All textiles are owned by the company and go through a cycle of delivery to customer, use by customer, collection from customer and laundering by Celtic ready to repeat the cycle again. All processing is done at one of the three production plants co-located at the company's headquarters site on the south side of Wexford town.

TRANSPORT AT CELTIC LINEN

The company operates two transport fleets:

1. A delivery fleet of mainly rigid trucks in the 7.5t – 12t range operating from the company's five distribution centres at Tallaght, Cork, Wexford, Carlow and Ballinasloe. These trucks deliver clean textiles to multiple customers on a route, collecting soiled textiles for return to the depot. All vehicles operate as a 'captured fleet' returning to the same depot each night.
2. A trunking fleet of tractor units (typically Mercedes Benz, Volvo or Iveco 450bhp 2 axle units) operating double deck trailers between the processing site at Wexford and the distribution centres. During busy times (i.e. the summer when hotels are full) these vehicles can operate up to 22 hours per day, with multiple drivers, completing over 1,100km and using 330 litres of fuel in a 24 hour cycle. These trucks operate on a point to point system, shuttling between the processing site at Wexford and one of the depots.

ALTERNATIVE FUELS

ELECTRIC

Since 2010 Celtic Linen has been operating a 10t Smith Newton electric truck. On balance this truck has not met the needs of the company, with reliability issues, range too short for practical use and CO₂ emissions (based on electricity at 450 gCO₂/kWh) being too high at 554gCO₂/km.

DIESEL ELECTRIC HYBRID

Since early 2014 Celtic Linen has been operating a 7.5t Fuso Canter diesel electric hybrid truck. This vehicle has shown no significant improvement in cost or emissions compared with a conventional diesel truck.



COMPRESSED NATURAL GAS

The company has been operating a compressed natural gas powered 12t Iveco Cargo since early 2014, out of its depot in Cork on urban, suburban and rural routes. This truck has been a success, proving easy to drive, quiet, cheaper to operate than diesel, lower CO₂ emissions than diesel, diesel-electric hybrid and electric, lower particulate emission than diesel and similar maintenance costs to diesel.

Based on the success of this vehicle, the company will now replace the majority of its diesel powered vehicles with CNG vehicles as soon as the current vehicles come due for replacement and when there is a sufficient refuelling network.



FUEL SUPPLY NETWORK FOR CNG

CNG NETWORK

The limitation to the spread of this technology in 'captured fleets' such as Celtic Linen is the availability of fuelling stations.

Celtic Linen does not require a full retail style fuel network, but simple commercial fast-fill fuelling stations at the following locations:

- Wexford town – sufficient for 25,000 kWh of CNG per day (v high priority)
- Tallaght or Clondalkin
- Cork City
- Galway area (low priority)

CNG STATION AT WEXFORD

The company will be connected to the Natural Gas network at its headquarters site in June 2016 and has allocated some land with road access adjacent to the N25 to build a CNG station. The gas connection is specified to be of sufficient capacity to operate a large commercial vehicle CNG refuelling station. However, as the company's core business is textile supply and service, it does not want to operate a



station, but would be interested in entering a partnership with an operator where Celtic would bring the following to the deal:

- Connection to the network (20MW skid on a 4bar 400mm distribution line)
- Closest location on the gas network to Rosslare Europort (site is on an IDA industrial estate 200 metres from the N25, 16km from Rosslare)
- Land sufficient to operate large commercial vehicles and to locate storage tanks of CNG
- Road access suitable for third party access to visit and fill trucks.
- Demand for 25,000 kWh of CNG per day on that site (and hence be an 'anchor' user for the operator)

Essentially this would be a private fuelling station, though could be made available as a 'semi-public' fuelling station to other fleet operators.

CNG STATIONS ELSEWHERE

The company does not have sufficient demand, land or finance available to justify building a CNG fuelling stations at its bases in Tallaght, Cork, Co. Galway or Carlow. Celtic Linen does wish to use CNG trucks at these locations and would be happy with either of the following scenarios:

- Public fuelling station located near the company's depots
- Private fuelling station located near the company's depots operated by a fleet operator (or filling station operator on their behalf) with a quid pro quo arrangement with Celtic Linen.
 - Example:
 - Four companies operating captured fleets nationally (e.g. creamery company, distribution company, linen company etc).
 - Celtic Linen builds a station at Wexford, with a partner
 - Company A builds a station near Tallaght
 - Company B builds a station in Cork city
 - Company C builds a station on the N6 near Galway
 - All four companies set up an arrangement to allow their trucks refill at any of the four stations.
 - Easy to use Smart Card access to the refuelling units ensuring that each company is billed separately by its shipper for gas used, and thus accounting for the road fuel taxation.

REGULATION – ECONOMIC/COMMERCIAL

The company is of the view that a free market should exist for fuelling stations, though on a simplified license basis (to ensure standards of safety and quality).

Initially to get the market going and give a critical mass of fuelling stations (similar to what has happened with electric vehicle recharging points), there is a case for subsidising early adopters through grant aid and/or tax incentives.



REGULATION – SAFETY

Celtic Linen's view is that a specific standard be set out for safe construction and operation of a fuelling station.

CONCLUSION

Celtic Linen will adopt CNG as the primary fuel for over 50 commercial vehicles on a phased basis as current vehicles reach end of life.

If this is achieved the company will reduce its transport based CO₂ emissions by 27% or 513 tonnes per annum. Importantly, particulate emissions would be reduced to negligible levels, have a significant impact on air quality and health in urban areas of Dublin, Cork, Galway and Limerick.

The only significant limitation is the lack of a fuelling network, which needs to be addressed urgently.

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