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## **Circle K Response to the Biofuels Consultation**

**November 2019**

### **Background**

Circle K Ireland welcome the opportunity to reply to the consultation on the development of BIO Fuels obligation scheme for the period 2021 to 2030. As Irelands largest importer and distributor of oil products, Circle K is proud to play our part in the contribution and the achievement of Irelands Bio Fuels targets out to 2030.

Since the implementation of the scheme in 2010, Circle K Ireland (Topaz Energy at the time) has been an active participant in the BOS scheme. Throughout this period, we have always successfully engaged with the programme and ensured that Ireland remained on target towards the initial scheme, which was defined out until the year 2020.

As we investigate the new Bio obligations beyond 2020, Circle K is happy to play its part in continuing to maximise the blending of Bio Fuels into all transport fuels, and in addition to our reply in this document, we have worked with the IPIA in the formulation of their reply as issued separately.

Our objective in this reply, is to ensure that Ireland plots the correct course towards achieving our BIO Fuels Obligation out to the year 2030, whilst at the same time making the change required in a way that is as least disruptive to Irish consumers as possible. Circle K understand the need to make changes in the fuels we use to drive transport, however we would always encourage the Department to consider the consumer in its final decision-making process. As we move toward 2030, the Department of Finance has already detailed a trajectory towards additional taxes on carbon. Circle K believe that changes made to the BOS scheme, should not serve as an additional environmental charge on consumers, particularly at a time when viable alternatives may not be available to all end users in the supply and availability of Bio Fuels, as well as realistic alternative measures, such as the roll out of upgraded alternative modes of transport.

Circle K believe that the Department should set out the targets that are required to meet our Bio obligations and let the Fuels industry determine the most cost-effective way of reaching those. Flexibility is required in the methods of achieving the obligations, as the supply and demands of various Bio Fuels products will change between now and 2030, as other countries strive to drive improvement in delivering their objectives also. We don't believe that there is any benefit in the introduction of specific grades such as E10. With regards specifically to E10 in Unleaded Petrol, Circle K believe that all other avenues must first be explored, in order to minimise disruption and costs to the market and to the end consumers.



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### **Question 1**

#### **(a) Do you consider these blending levels to be a suitable balance of feasibility and ambition?**

Circle K believe that the intention to increase blending targets out to 2030 is ambitious, and whilst causing significant challenges to the industry, we believe these targets can be met.

We would ask however that the achievement of any obligation, must be considered based on the target being flexible enough to allow all obligated parties, the opportunity to achieve the targets in the most equitable and efficient way possible, for both their business and ultimately for their consumers. These considerations would differ for each party, however always the obligation should be met with a view to minimizing disruption and cost to the end user to the greatest extent possible. It should also be noted that the achievement of these targets needs to remain flexible in line with the feedstocks remaining available and applicable for the entire period covered by the consultation. This is something, which as of today, is impossible for anyone in the industry to predict, particularly out to the year 2030

Circle K expect that once the target goes beyond 11%, a B7 and E5 will make it difficult to achieve these targets without the introduction of, additional diesel appropriate BIO Fuels such as HVO (To stay within the EN590 Specifications), or the introduction of products such as double counting ethanol. We believe that a significant change, such as the introduction of E10 blend in Unleaded Petrol should only be taken when all other solutions have been exhausted. At this point Circle K is still of the belief that each company should have the option to meet their obligation, based on the optimal cost and on their individual existing supply chain arrangements.

#### **(b) Do you consider the approach to increasing the biofuel obligation rate appropriate?**

Circle K agree with the process of increasing the obligation over a defined period and setting out a realistic trajectory towards the achievement of this target. We believe that the bi annual review will give the industry in Ireland direction, whilst allowing the industry to assess whether the increase is appropriate based on the prevailing market conditions at the time. This relates specifically to reviewing the up to date market availability of the relevant feedstocks, and Irelands progress towards the Renewable Energy Directive II targets through other complimentary means. We believe that before any increase in obligation is decided, from the period 2024 onwards, that it must be considered in line with the latest information available at that time, and take full consideration of BIO fuels available in commercial volumes.

### **Question 2**

#### **(a) What do you view as the technical and consumer challenges associated with a blending level of 10% by volume in petrol on average?**

As covered previously, Circle K do not believe that E10 should be considered as the initial solution to achieving targets in petrol in the first instance. The introduction of E10 will present numerous

challenges to the industry. Whilst many may feel that E10 will need to be introduced at some time in the future, we would caution against its introduction without the first ensuring we have exhausted all current available opportunities to achieve the mandated targets. In addition, Circle K would urge the department to give due consideration given to the following items: -

- There are circa 2 million licensed vehicles on Irish roads, a significant percentage are still considered to be incompatible with E10 fuels. Industry figures would indicate that there are circa 420,000 pre 2008 petrol vehicles with many of these will not be compatible with E10. (Source Cartell.ie)
- Before any move to E10 is considered it must be clearly established at government level who is responsible for the real potential of vehicle breakdown. We believe as this is a government led change that all responsibility must lie with the department implementing these changes. Another consideration aside from engagement with the fuel retailers and the oil industry, must include engagement with vehicle manufacturers and insurance companies. The engagement on insurance, needs to cover both car insurance and business insurances, as cover cannot be compromised for the consumer or the retailer.
- The decrease in Energy in an E10 blend of Unleaded will have a significant decrease on the MPG achievable by the consumer. In simple terms we estimate that fuel efficiency would decrease by ~1.8% which if translated into the projected NORA blended volumes of 2019 of 1.095 billion would result in an additional purchase of 19.6M litres of blended E10. At an assumed price of €1.45 this would generate an additional cost on consumers of ~€28 Million due to decreased energy concentration within the litre of blended fuel.
- If E10 was introduced, it must be a government mandated move, as the industry will need to move together for multiple reasons, but primarily due to a broadly shared supply chain
- There can be no 'protection' grade of E5 held in conjunction with the introduction of E10, the base product unleaded (BOB) used in E5 cannot be used when mixing higher levels of Ethanol. An introduction to E10 whilst trying to maintain the E5 grade would require significant investment in terminal infrastructure for storage of dual grades. This would most likely have a significant lead time with planning requirements and would take significant time to implement. Additionally, most retailers would not have infrastructure to maintain two separate grades of unleaded petrol. This is a real concern for independent fuel retailers all over Ireland, who are battling increased costs in many areas of their business, be that wages costs, insurance, rates etc., and such they have huge concern over any further costs to their business. Some form of Department grant scheme may be required to assist in such investment.
- Due to the corrosive nature of Ethanol not all retail outlets will have the appropriate tank and dispenser infrastructure. Any upgrades to these will result in increased costs to the end consumer.
- If the government is to proceed with the change to E10, an extensive information campaign must be undertaken to make consumers aware of the change, and the detailed reasons as to

why the change is happening. We would suggest that safeguards and public assistance is offered in the form of

- a. information portals
  - b. Scrappage scheme for incompatible vehicles
  - c. A significant lead time for the fuel retailers to make changes across over 2,000 outlets to account for this new product.
- Even with this level of public engagement there is still likely to be a significant increase in 'misfuelling' with vehicles designated for E5 being fueled with E10, and vice versa.

**(b) What do you view as the technical and consumer challenges associated with a blending level of 12% by volume in diesel on average?**

The increase to a B12 blend in diesel will be a significant challenge for the industry. The current product specifications on diesel, limits blending fame to a maximum of 7%. In order to increase the blend, the only realistic product available would come in the form of HVO (Hydrogenated Vegetable Oil). The availability of HVO across Europe is severely limited, and therefore the acquisition of this product would come at a significant premium to fuel retailers, causing a significant increase in end cost to consumers.

Currently the Irish market uses UCO as the predominant bio fuel. The double counting of this product, as per the RED scheme, will allow users to meet the 12% without the need to introduce significant volumes of other bio fuel products.

If the use of UCO is limited, or availability of UCO becomes an issue in the Irish market, then the only currently available alternative to UCO would be a product such as HVO. The introduction of this product as part of the BIO mix on a large scale has the potential to exponentially increase costs to end consumers.

The current indicative prices available for HVO in the Irish market would suggest an increase in cost of product by around 3%., but the cost of this product is expected to increase significantly in future years. Based on current product mix's for Circle K, and the prevailing premium for HVO, the increase in costs per litre based on % HVO added would be as follows versus the current estimated comparable costs:



These assumptions presume availability of HVO at current indicative market rates, which, when considering the likely global increase in demand for this product, is unlikely and we believe prices will increase as supply struggles to keep up with demand.



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The increase in costs will be significant to consumers, and we believe will act as an effective double carbon tax on a product that already contributes a significant proportion of exchequer contributions.

**(c) What types of biofuel would you expect to be used to meet these increased blending levels?**

The only products currently available in enough volume are; Ethanol (Single and Double counting), Fame (UCO) and HVO.

The HVO availability is quite limited. Circle K believe that other products may become available over time, but as referenced earlier in this document, we believe the only sensible approach in increasing the obligation over time is to do so whilst considering the prevailing supply chain of product available at each review stage.

**(d) Are such fuels available in sufficient quantities to meet the needs of the Irish market?**

These products are available currently; however, we believe that European demand will increase in excess over supply in the coming years, and as such, costs on these products will rise considerably. This will undoubtedly lead to an increase in the cost of these BIO fuels, and ultimately these costs will be passed onto the end consumer.

**(e) What actions are needed (outside of the Biofuels Obligation Scheme) to support the increase in blending levels (e.g. consumer communication)?**

Consumer communication is hugely important if we are to amend certain mixes of biofuels products in blended fuels. Any obligation must be presented as a governmental required change, with obligation for communication resting with the DCCAE as to what is happening, why it is happening and the implications of the changes.

**(f) What is the expected cost to consumers associated with increasing the blending levels?**

This is very difficult to answer because the future supply and demand balance is highly uncertain. Fulfilling the requirements in RED II will significantly increase the cost of fuels, especially as a highly competitive situation may emerge because of advanced feedstock requirements and the expected phase out of palm oil. Taking the overall risk picture into account, it must be expected that any investor in such feedstock, and/or production capacity, will require short payback periods, and an elevated required return on capital, hence the likely need for a premium to be required in the production of this product.

Other costs that need to be considered as part of this change are;

- If there is to be any transition to E10 consumers may need to scrap their old vehicles.
- Infrastructural costs at retail and distributor level need to be considered in order to allow the blending and storage of these new fuel types. This may be at a significant cost and these costs are likely to be passed onto the consumer. As the obligations become more difficult to meet, fuel suppliers may not be able to blend the required amount of BIO fuels or advanced



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BIO fuels into their product mix. In this scenario, a supplier must pay a 'buyout' and these buyout costs would need to be passed onto the end consumer.

### **Question 3**

#### **a) Do you consider the move to an energy-based obligation appropriate?**

A simple system is preferred to cater for lowest cost and minimum transaction hurdles. A simple volumetric obligation is necessary, and could be based on the approximation of the different fuels (gasoline and diesel) and its bio fuel components (ethanol, ethers, biodiesel and HVO). A move to a solution taking energy density directly into the equation is adding complexity. Furthermore, all accounting solutions would need to be changed, requiring further investments. To add to this, contracts with Biofuels providers would need to be renegotiated based on joules of energy in the product and not volumetric. At this point it is difficult to know what the outcome of these negotiations would be.

We believe that any change to an energy-based system must continue to be managed by the BOS system, with supports in place for fuel retailers who continue to operate and report all our current sales / duty etc. based on a volume in litres calculation.

### **Question 4**

#### **a) Do you consider the timing of changes to the Biofuels Obligation Scheme appropriate?**

Yes, Circle K are satisfied with the potential timing of the change, with the first potential increase in obligations coming in 2022. Any changes beyond 2022 on a bi-annual trajectory should only be implemented following an assessment of the markets at that time and ensure that the obligation can be met based on prevailing products and technologies.

It's important to note that significant changes require significant planning and as such need to be communicated well in advance of such changes.

### **Question 5**

#### **a) Do you consider the approach to introducing an advanced biofuel obligation appropriate?**

Circle K would support the obligation at a level of 0.2% until 2022, but no increase on this level should be made without further consultation with the fuel retailers, as none of the participants in Ireland, or in other European jurisdictions, have a commercially sourced available volume of advanced biofuel product (as listed in part A of Annex IX of the RED II). Any increase in excess of realistically achievable targets, based on product availability, would only cause the imposition of further costs on consumers.



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**(b) What biofuels do you envisage contributing to meeting this obligation?**

Products as available in Appendix A of Annex IX – subject to their being enough supplies of this product at a commercial level. Availability of these products are the critical piece, as currently Circle K do not believe that these products are available in commercially viable volumes, and until they become available, we believe that the obligation will be impossible to meet.

**Question 6**

**(a) Do you consider the approach to include both the road and rail transport as obligated parties appropriate?**

Circle K agrees that rail transport should be included as part of the obligation.

**Question 7**

**(a) Do you consider the approach to exempting certain fuels from the obligation to be appropriate?**

Whilst Circle K would see some merit in no initial obligation on certain fuels (such as Hydrogen), where the fuel is in a very early stage of development, we would not agree that fuels from proven commercial channels should be exempted as this would distort the free market.

The obligation to contribute towards the BIO fuels targets should not look to pick technology winners.

**Question 8**

**(a) Do you consider the approach to issuing energy credits appropriate?**

Circle K agrees with the methodology proposed for the issuing of energy credits if it is decided to move away from a volumetric target. (see question 3 above for the Circle K position on this). Circle K do however not agree with the approach of moving to an energy-based target.

**Question 9**

**(a) Do you consider the approach to applying multipliers to be appropriate?**

Circle K supports the current approach of applying multipliers to certain fuels. The current methodology successfully encourages the use of waste derived biofuels over feed crops. Renewable electricity will have an increasing role in decarbonizing transport, with already ambitious 2030 targets set in the National Development Plan further increased in The Climate Action Plan



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(2019). Reward for renewable electricity, as outlined is appropriate, if this is in addition to the baseline of renewable generation.

**(b) Do you consider the approach to applying multipliers impacts the risk of fraud?**

Any system has potential risk of fraud as the market rules become more complex. Fuel suppliers need to be able to source with confidence any BIO Fuels products, as such the integrity processes of certification bodies plays a key role in this area. The further strengthening of certification schemes is the key driver of maintaining the integrity of the BOS scheme, both in Ireland and globally. The department also needs to consider a governance approach, that audits the market to ensure that fraud is prevented.

**Question 10**

**(a) Do you consider the approach to biofuels produced from feedstocks that are considered a high risk (from indirect land use change perspective) appropriate?**

Yes, Circle K agree with the proposals.

**Question 11**

**(a) Do you consider the approach to biofuels produced from food and feed crops appropriate?**

Presently the imposition of a limit on feedstocks does not cause issues. However, this limit will make it significantly more difficult to achieve Bio obligations if the market moves to an E10 blend. Please see estimate of annual requirements below.

At current product mixes the limit causes no issues, however should there be a change from Diesel to Gasoline over time, then the imposition of limits to 2% makes the targets impossible to achieve. Once again, any buyout fees or costs generated as a result of these limits may be significant and would ultimately become a cost paid by the consumer. The table below demonstrates that if the market moves to E10 and a 65/35 mix, then we will breach these targets.





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	Gasoline (vol%)	Diesel (vol%)	% Energy Ethanol (E5)	% Energy Biodiesel (E5/B7)	% Energy Ethanol (E10)	% Energy Biodiesel (E10/B7)
	10%	90%	0.29%	5.71%	0.59%	5.72%
	15%	85%	0.44%	5.43%	0.89%	5.44%
	20%	80%	0.60%	5.14%	1.19%	5.16%
<b>2019</b>	25%	75%	0.75%	4.85%	1.50%	4.87%
	30%	70%	0.90%	4.55%	1.81%	4.58%
	35%	65%	1.06%	4.26%	2.12%	4.28%
	40%	60%	1.22%	3.95%	2.44%	3.98%
	45%	55%	1.38%	3.65%	2.76%	3.67%
	50%	50%	1.55%	3.34%	3.09%	3.36%
	55%	45%	1.71%	3.02%	3.42%	3.05%
	60%	40%	1.88%	2.70%	3.76%	2.73%
	65%	35%	2.05%	2.38%	4.10%	2.41%

**Question 12**

**(a) What approach do you think should be adopted in relation to the 1.7% limit on biofuels produced from UCO and animal fats?**

Circle K believes that there is no rationale to enforce a restriction on the blending of UCO and animal fats on the fuels market and would challenge the implementation of a limit on same. The Irish market is currently hugely dependent on UCO to meet its obligation, and future demands will only serve to escalate this dependence as demonstrated in the table below. We estimate that in 2019 we will immediately be in breach of the 3.5 % limit in energy terms. In addition, a restriction of the use of these products could have an unintended negative effect on indigenous Irish producers of these BIO Products.



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					Biodiesel as a % of Mkt
	<b>GASOLINE</b>	<b>Ethanol</b>	<b>MOTOR DIESEL</b>	<b>MOTOR DIESEL BIO</b>	
Conversion L / MJ	32	21	36	33	
2014	45,985,761,120	1,103,969,370	97,416,600,336	3,773,552,475	2.54%
2015	43,593,906,112	1,238,483,946	106,282,722,816	4,140,495,645	2.67%
2016	40,727,391,200	1,324,772,085	114,756,346,044	3,621,249,687	2.26%
2017	36,683,144,352	1,227,996,651	116,733,167,856	5,520,780,639	3.45%
<b>2018</b>	<b>33,324,062,400</b>	<b>1,131,238,563</b>	<b>122,120,237,016</b>	<b>5,349,352,866</b>	<b>3.30%</b>
<b>2019</b>	<b>33,312,985,698</b>	<b>1,138,507,648</b>	<b>119,254,893,849</b>	<b>7,975,917,436</b>	<b>4.93%</b>

**(b) Do you consider it appropriate to seek the European Commission’s approval for a higher limit and, if so, what evidence would you suggest being used to support such a request?**

Yes, Circle K believe that we should seek an approval for a higher limit as UCO and animal fats are the only products currently available in commercial volumes that can be used in satisfying the BOS. If the consumption of diesel as a percentage of transport fuels continues to rise, then it is critical that there is flexibility in the delivery of this target.

**Question 13**

**(a) Do you consider the approach to carryover appropriate?**

Circle K understands that the current 15% carry over limit used to meet a target within a given year is in place.

Circle K strongly disagree with the limitation of carrying over Advanced BIO, as the market uncertainty should allow for companies to generate excess credits when available to meet this section of the obligation.

If volumes are converted to energy, then any transfer of volume derived credits must be done based on the MJ value of the relevant BIO product.

**Question 14**

**(a) Do you consider the approach to setting the level of compliance fee (or ‘buy out charge’) to be appropriate**



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As with previous comments in this reply, Circle K does not believe that fuel retailers should be asked to achieve the impossible by setting targets based on products that are not available in the market in commercially available quantities. We would urge caution in the introduction of fines going forward, as ultimately consumers will end up bearing the cost of achieving compliance. As referred to in answer 1b, there should be a bi-annual review of the overall scheme to ensure its aims are still relevant and achievable, based upon the prevailing market at each review.

Circle K also strongly disagree with the proposal to set a different buy out rate for the advanced BIO Fuel target, until such a time as there are commercially available volumes of these products available.

#### **Question 15**

**(a) Do you consider the approach to dealing with a potential supply disruption appropriate?**

No, in the event of a significant emergency that interrupts operational blending at fuel terminal level, it should not be up to the fuel retailers or the oil industry to shoulder additional burden of achieving targets. Once a product is released to the market in an unblended form, then it cannot be undone.

In the case of an emergency where product is released to the market without biofuels, then it is impossible for the fuel retailers or the oil industry to catch up, as additional blending isn't possible without altering product specifications.

#### **Question 16**

**(a) What is your opinion on the potential for an obligation scheme (similar to the Biofuels Obligation Scheme) in the heat sector?**

We understand that there has been very little development on bio fuel alternatives in this area across Europe, principally since the compatibility of such fuels with various heating systems has never been quantified.

Some fuels used in heating are multipurpose, in that they are also used in other forms of transportation such as agricultural and other off-road use. This would also need to be considered in the further development of bio obligations in this sector.

**(b) What do you see as the technical barriers to introducing such a scheme?**

As above, the initial introduction of FAME/UCOME may lead to problems for heating systems. Many domestic installations are completely unfit for the storage of product containing biofuels, as in many situations the fuel may be stagnant in the tank over long periods, and with rising and falling temperatures may for example promote the generation of moisture which in turn can cause issues with microbial growth. As a company, the chain of ownership is too far removed from terminal to end user, to ensure the maintenance of good housekeeping which may generate significant issues for end users, many of whom have no other heating choice available without significant expenditure.



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**(c) If a heat obligation scheme was to be introduced, what level of obligation (e.g. in percentage or energy terms) would be appropriate?**

Circle K strongly disagree with the inclusion of BIO products in heating fuels for the reasons outlined above. The only option we can consider, that would have minimal operational impact on heating systems, would be the inclusion of HVO as part of any heating mix. The issue this will create for users is the cost, whereby the inclusion of even a small percentage of HVO would have a significant effect on customers prices.

**SUMMARY:**

To summarise, Circle K believe that the Department should set out the targets that are required to meet our Bio obligations and let the Fuels industry determine the most cost-effective way of reaching those.

We also believe that flexibility is required in the methods of achieving the obligations. As before, methods such as the introduction of E10 should only be considered, after other less disruptive methods are explored and dismissed. We feel that, E10 will be disruptive to the industry, require investment and risk to fuel retailers, and ultimately cause inconvenience and increased costs to consumers. The issue around vehicle incompatibility to E10 must be considered as the percentage of registered vehicles at risk remains too high to allow for a smooth transition, and the difficulty for consumers must be considered as part of any BIO Fuels obligation. Circle K believe alternatives should always be considered that make the achievement of Bio obligations easier for all.

The supply and demands of various Bio Fuels products will change between now and 2030 as other countries strive to drive improvement in delivering their objectives these changes must be considered at each review of the BOS scheme. We believe that with review periods every two years, that government and industry can work effectively to meet our obligations while minimising disruption and cost to importers, retailers and consumers.