

Decarbonization Without Disruption

*How switching your business energy
to BioLPG is safe, simple, and credible.*

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Executive Summary

Medium-Sized Organisations (MSOs) across Ireland understand the need to accelerate decarbonisation, yet so many hesitate because they are concerned about costs, potential for disruption, and even a fear of the unknown.

Too often, the challenge is framed as a binary choice where companies are expected to commit fully and decarbonise dramatically or delay action and ‘get round to it’ eventually. In reality, a more practical approach exists. And it’s in this context that decarbonisation should be seen as a gradual evolution. A level of phased obligation is on the horizon through the ‘Renewable Heat Obligation’ (RHO) scheme, which will help businesses transition at a manageable pace.



Drop-in fuels could be the answer

The emergence of drop-in fuels, like BioLPG, could well be the answer. These fuels directly replace conventional LPG and no significant infrastructure changes are required, making them both cost-effective and low-risk. Made from renewable feedstocks like vegetable oils,

waste cooking oils, and animal fats, BioLPG is chemically identical to traditional LPG. Performance across heating, cooking, and power applications is exactly the same.

However, its flexibility is what makes it a real gamechanger. Businesses can adopt blended fuel option like 10%, 25%, or 50% BioLPG, and this allows them to match sustainability progress with budget constraints while avoiding stranded assets or technology lock-in. A phased approach means they can reduce emissions gradually without disrupting day-to-day operations.

Practical pathway to sustainability

MSOs need a practical pathway to sustainability, and BioLPG is certainly a realistic starting point. It offers businesses of all sizes and sectors immediate carbon reductions while they get on with running everyday operations, and doing so cost-effectively. Many have experienced first-hand how switching business energy to BioLPG is safe, simple, and credible.

Experienced BioLPG suppliers ensure businesses can implement tailored solutions that support both environmental goals and day-to-day operations.

And this is what makes BioLPG a smart, scalable step toward achieving net zero.

Decarbonisation is easier said than done

For too long, medium-sized businesses and owner-run operations have pushed decarbonisation onto the long finger. What was once a “we’ll get to that” has now become “we really need to talk about this”. Large organisations have long been measuring and assessing their carbon footprint as a matter of course, but the sustainability net is closing in on companies of all sizes and sectors.

If you are a Medium-Sized-Organisation (MSO) operating in Ireland, research¹ shows that you absolutely accept the need to act on sustainability. But it is also understandable that you might see decarbonisation as something that will either cost a lot, feel risky, or could well be disruptive to your operations.

Large corporates have sustainability experts in-house and also have the budgets to tackle this area with purpose and conviction. When compared with the lean management structures, tight resources, and limited technical expertise typical of many MSOs, it is clear that the two operate in very different worlds. But despite these differences, both are expected to reach the same destination, albeit at different stages. As well as their own motivations, the need for smaller operators to decarbonise comes from a wide variety of sources and directions.

Why do medium-sized companies feel the need to decarbonise?

Supply chain

If MSOs are unable to provide emissions data or sustainability credentials, they may well find themselves dropping down supplier lists or even being removed entirely. When that happens, the issue becomes less about prioritising sustainability as an environmental strategy and more about a commercial tactic to remain competitive and relevant in an already tight marketplace. In fact, recent research² suggests that around three-quarters of large organisations now request emissions disclosure from suppliers, while Scope 3 emissions account for up to 90% of total corporate footprints, making supplier data essential.

1. https://www.gov.ie/en/department-of-enterprise-tourism-and-employment/press-releases/minister-burke-welcomes-findings-that-four-in-five-businesses-rank-sustainability-as-an-important-day-to-day-issue/?utm_source=chatgpt.com

2. <https://www.cdp.net/en/press-releases/corporates-supply-chain-scope-3-emissions-are-26-times-higher-than-their-operational-emissions>

Finance

While MSOs have often enjoyed stable relationships with their banks, sustainability has made things a bit more complicated. Financial institutions are increasingly factoring ESG risk into lending decisions, largely reflecting the evolving regulatory landscape and investor demand for sustainable finance. For these companies, this translates into stricter credit assessments, and those perceived as lagging behind on sustainability may face higher borrowing costs. In effect, decarbonisation can place organisations in a stronger position when it comes to accessing finance and ultimately growing their business. Analysts ³indicate that more than 90% of banks are now integrating ESG risk into lending decisions.

Tendering

Across both public and private sector tender processes, a clear trend is emerging where ESG weighting is being embedded into supplier selection frameworks. For MSOs lacking formal decarbonisation strategies, this presents a growing challenge and another compelling reason to take action. Even where sustainability criteria represent a relatively small proportion of overall scoring, they can be the deciding factor in competitive bidding scenarios. Sustainability considerations are becoming standard practice in Ireland, with research indicating that between 55% and 70% of public

procurement processes now incorporate environmental criteria.⁴

Workforce

In a labour market characterised by significant talent shortages, it is increasingly an employee's market. A growing segment of workers now expect prospective employers to demonstrate clear leadership and a strong commitment to sustainability. Organisations that fail to do so are likely to struggle to attract and retain skilled employees. This can then impact productivity, innovation, and overall business performance. Surveys⁵ indicate that climate action is an important influence for roughly two-thirds of employees and up to three-quarters of younger workers.

Volatility

Today's geopolitical uncertainty is well known, and a direct effect of that is energy supply uncertainty. All companies are experiencing energy fluctuations, but MSOs are more at risk due to limited purchasing power and their inability to hedge. In recent times, European energy prices⁶ rose by more than 200% at peak levels, with smaller organisations experiencing the most acute exposure.

3. https://www.ev.com/en_gl/insights/climate-change-sustainability-services/institutional-investor-survey

4. <https://www.environmentireland.ie/new-green-public-procurement-strategy-approved/en>

5. <https://www.eib.org/press/all/2023-126-70-of-young-irish-people-say-the-climate-impact-of-prospective-employers-is-an-important-factor-when-job-hunting>

6. <https://www.elibrary.imf.org/view/journals/001/2023/197/article-A001-en.xml>

Reputation

Organisations that are seen as taking sustainability seriously can build up trust and a competitive advantage in the market. On the other hand, those that are viewed as environmentally lax can damage their reputation to the extent that the brand suffers and sales slip. More established brands and bigger operators will often have the financial capability and resources needed to overcome or indeed recover from a reputational issue.

Succession

Every owner-manager of an MSO is always thinking about ‘what comes next’ and is anxious to ensure that nothing done in the present has a negative impact on their exit or succession plan in the future. As part of any due diligence process, potential buyers or investors are placing greater emphasis on ESG maturity and environmental credentials. McKinsey has reported recently that ESG maturity increasingly influences valuation, with firms ‘demonstrating strong sustainability performance often achieving higher valuation multiples and improved access to capital’⁷.

7. <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/five-ways-that-esg-creates-value>



Putting things on the long finger is understandable

Energy is undoubtedly the biggest source of carbon emissions for most organisations, and it has to be the starting point of any credible decarbonisation strategy. When decision-makers think about traditional options like electrification, heat pumps, or hydrogen, the barriers in



place are also clear to see. Heavy capital investment is often needed, retrofits can be complex, and plant-wide sustainability projects have the potential to stall operations. Production reliability is crucial for every manufacturer, but costly downtime can be catastrophic for MSOs in particular.

The Costs

So much of all this comes back to costs. Big spending on sustainability upfront can squeeze balance sheets and damage other strategic initiatives. Grants are helpful but usually not enough to cover investments. At the same time, MSOs can find it hard to justify the investment required given volatility in energy and international markets. Irish evidence reinforces this thinking, with surveys showing that approximately 78% of SMEs identify cost as a key barrier to investing in sustainability and decarbonisation initiatives.⁸

The Complexities

When decarbonisation technologies need to be integrated with already finely-tuned systems in industrial environments, implementation risks may be perceived to outweigh any potential gains. Without having specialists in-house, adjusting existing infrastructure, redesigning processes, or managing staff can feel like a tall order for MSOs.

The Choice to Make

All this adds up to tough choices. Do nothing and business owners are exposed to escalating carbon costs, tighter regulation, and possible competitive disadvantage. On the other hand, throw everything at the problem and they might feel open to financial and operational risk. For most MSOs, the safe option is to put it on the long finger.

8. <https://www.constructionireland.ie/construction-news/305135/survey-shows-increase-in-small-business-interest-in-green-support>

This binary choice of *do nothing* or *do everything* simply does not stack up. Owner-run companies want to decarbonise but might have difficulty seeing a path forward that matches the reality of their situation on the ground. It's fair to say that the concerns of MSOs and the smaller operators are not currently being addressed. There is no doubt that these companies understand both the moral imperative and the commercial need to act. A reasonable starting point may be that decarbonisation needs to be reframed as an evolution, allowing companies to adopt a more phased approach.

While a gradual shift towards decarbonisation is perhaps not well flagged or advocated, this middle ground is the key to a safe commercial transition to a more sustainable future for MSOs.

But what does this middle ground look like?



Drop-in fuels make sustainability practical, flexible, and affordable

Drop-in fuels work by replacing conventional fossil fuels with sustainable fuels and could provide the answer to the sustainability dilemma facing MSOs all over Ireland. The right drop-in fuel means no changes to engines, vehicles, fuel systems, or infrastructure. And as they are made from renewable feedstocks like biomass, waste oils, or agricultural residues, they are 100% renewable options. Drop-in renewable fuels reduce greenhouse gas emissions by lowering the carbon intensity used in commercial and industrial settings.

Reduce emissions immediately

Drop-in fuels give MSOs the chance to reduce emissions immediately, while providing a solution that will not disrupt operations, require little or no investment, and can be adopted gradually. And while we await broader electrification and hydrogen solutions to fully develop, this is what practical transition to decarbonisation looks like.

Unlike corporates, MSOs must balance sustainability with operations and budgets with a greater degree of control. And in that context, decarbonisation strategies must deliver measurable environmental benefits without putting pressure on budgets or slowing down operations.

Compatibility

Because drop-in fuels are literally direct replacements, they offer a compatibility that is particularly important for MSOs. Instead of having to replace entire energy systems, whether vehicle fleets, heating systems, or industrial machinery, MSO's only have to make one change, and that is simply how they purchase their fuel.

Optimising existing systems

In many ways, it could be argued that drop-in fuels represent the ultimate decarbonisation strategy. Instead of installing brand-new systems and processes, these fuels have more in common with pure sustainability which is all about repairing and upgrading where possible.

Gradual change

Given the severity of the climate crisis, it is understandable that we often think of taking dramatic action as the leading option. But the power of gradual change could well be the most effective. Instead of major technological shifts, meaningful emissions reductions may be more realistic and achievable for everyday businesses through incremental improvements. By targeting the lowering of carbon intensity in the fuels we use every day, greenhouse gas emissions can be reduced without the need for big changes.

A bridge solution

In sectors where electrification or hydrogen are still developing, this slow-but-steady approach may have the biggest impact. Heavy transport, industrial heating, power generation, and many more industrial processes remain heavily dependent on liquid fuels. Drop-in fuels have a big role to play here as a bridging solution. This allows MSOs to cut emissions in the short term while they await the longer-term development of alternative energy systems.



But how flexible is it?

What is possibly the biggest driver for MSOs in using drop-in fuels is the flexibility and control it offers them. Instead of making one large investment, renewable fuels can be adopted in a way that suits all resources and timelines.

Start small or go all-in

Companies can test renewable fuels in specific parts of their business before rolling them out more widely. They might introduce drop-in fuels to vehicle fleets, backup generators, or selected industrial processes. This way, they gain confidence in their decisions and can gradually increase the amount of renewable fuel they use across the organisation.

If MSOs are convinced that drop-in fuels can offer what they need, they can also start off with a larger share of renewable fuel from the beginning. And because no new equipment is required, scaling up is fast and impactful.

Align sustainability progress with available budgets

Big infrastructure changes like replacing heating systems or changing entire fleets over to electric vehicles will require significant investment upfront. As many MSOs do not have these budgets available, these solutions can be hard to implement, even if they are part of a long-term decarbonisation strategy.

Alternatively, drop-in fuels mean emissions reductions can start immediately without major spending.



Avoid stranded assets or technology lock-in

One of the lesser-known benefits of fuel-based decarbonisation is that it helps organisations avoid the risk of stranded assets or technology lock-in.

For MSOs, investing heavily in a single emerging technology can be risky because future regulations, technological developments, and market conditions may well change. By introducing lower-carbon fuels that work within existing systems, a degree of flexibility is maintained while progress is still being made toward sustainability goals.

Time to get started

For companies considering drop-in fuels, the next question must be '*what fuels do we want to replace?*'. By identifying the fuel that is easily replaced and finding a chemically-identical renewable option that can replace it, the choice becomes clear. And as the range of drop-in fuels has developed, one stands out.

Conventional LPG has been successfully used for generations as a versatile off-grid energy source for companies of all sizes. Industrial and commercial organisations use it to heat offices and premises, while also deploying it for a wide range of purposes including commercial cooking, power generation, and more.

As a direct replacement, BioLPG can do everything LPG can do. But what it also can do is dramatically reduce emissions, allowing MSOs to decarbonise quickly, cost-effectively, and without disrupting operations.

Next, we'll find out how.

What is BioLPG?

BioLPG is a drop-in fuel that performs the same and is as reliable as regular LPG, but it has much lower carbon emissions. It is made from renewable feedstocks like vegetable oil, waste cooking oils, animal fats, and other organic materials. On the other hand, regular LPG is derived from fossil fuel extraction.

Because it is chemically-identical, BioLPG behaves the same way as LPG when used for heating, cooking, or as a power source. Essentially, it performs the same, but is produced very differently.

For MSOs already using LPG, there is now a clear pathway to reducing emissions. So instead of having to wait for new technologies to come on-stream or big changes in infrastructure, they can start reducing emissions by using this drop-in fuel.

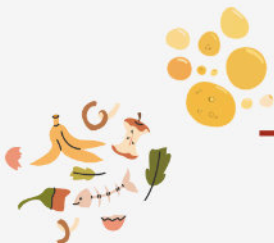
At a glance

- Switching to BioLPG can reduce carbon emissions for MSOs by up to 80% when compared with conventional fossil fuels.
- As a certified renewable fuel, it complies with the EU Renewable Energy Directive.
- Customers can choose blends that contain 10%, 25%, or 50% options allowing them to reduce emissions gradually.

How BioLPG is made

Step 1: Renewable vegetable oils & sustainably sourced waste feedstocks

Renewable vegetable oils and sustainably sourced waste feedstocks are collected and prepared for processing.



Step 2: Refined with hydrogen

The cleaned oils and fats are processed in a refinery, where they react with hydrogen and are converted into renewable hydrocarbon fuels.



Step 3: BioLPG produced

BioLPG (biopropane) is produced as a co-product of renewable diesel (HVO) production and is ready for use.



Key point:

BioLPG is a byproduct during renewable diesel (HVO) production. The same feedstocks are cleaned, then refined with hydrogen, then separated into different fuel products.

Compatibility is the key

Genuine compatibility automatically removes the main barriers many companies think of when they consider decarbonisation. These include costs and potential disruption when it comes to infrastructural change. As energy transitions can require big spending upfront and operational downtime, BioLPG offers the major advantage of working with existing systems instead of replacing or reconfiguring them.

And no matter what the sector, businesses can continue doing things the same as before. When we say nothing changes, we mean it. No change to operations, no downtime. Delivery and distribution are even the same as LPG.

Bulk deliveries arrive to fill on-site tanks and suppliers use cylinders to supply forklift trucks and other mobile equipment, just like they always have. The entire process remains familiar, reliable and fully integrated with existing supply chains. The only change is reduced emissions.

Flexibility is assured

No two sites or businesses are the same. Some want to transform their sustainability overnight, while others prefer a cautious approach that balances environmental concerns with operational realities. BioLPG is a fuel that can be introduced gradually through blended fuel options.

Experienced suppliers allow customers to choose blends that contain 10%, 25%, or 50% options and this allows them to reduce emissions within their organisation at a pace and a rate that works best for them.

This means any company can begin their decarbonisation journey immediately, even if they don't feel quite ready to commit 100% to a decarbonisation transition. As sustainability targets evolve, companies can increase the proportion of renewable fuel in their solution.

For MSOs, this has been a game changer as it makes all the difference between starting the transition and putting it on the long finger.



10% Renewable Blend

Start the Transition

Begin decarbonising without disrupting your operation.

25% Renewable Blend

Build Momentum

Increase renewable content as confidence grows.

50% Renewable Blend

Accelerate Impact

A meaningful step towards long-term sustainability.

Up to 100% Renewable Blend

Future-ready

Move closer as targets, budgets and confidence allow.

BioLPG ticks all the boxes

While we all know the environmental benefits of reduced emissions, BioLPG offers so many commercial benefits for businesses of all sizes, especially MSOs.

- ✓ **Reduces carbon** – as companies do not need to wait for new energy infrastructure to be developed, they can reduce greenhouse gas emissions, demonstrating genuine progress towards their ESG goals.
- ✓ **Minimises investment** – there is no need for major infrastructure spending or new equipment because BioLPG uses the same systems as LPG. By avoiding large upfront costs, businesses can decarbonise without diverting capital away from core operations.
- ✓ **Maintains continuity** – if companies are installing or commissioning new systems, production is often disrupted or at least stalled. When companies change from LPG to BioLPG, it is just business-as-usual with operations running smoothly while lowering emissions.
- ✓ **Performs reliably** – in terms of heat efficiency, output, and operational consistency, BioLPG does everything LPG delivers.
- ✓ **Simplifies reporting** – BioLPG is fully certified as a renewable energy source and its supply chain is 100% traceable. This ensures easier environmental reporting as companies work to meet evolving ESG standards.
- ✓ **Strengthens brand** – companies who take decarbonisation seriously are also committing to their customers that they understand the importance of sustainability. For businesses operating in competitive markets, this will strengthen brand reputation and build connections with customers.

By working with an experienced BioLPG supplier in Calor, MSOs all over Ireland from all sectors have reaped the benefits of this game-changing fuel. And by doing so, they'll have got their decarbonisation plans firmly back on track.

What can Calor do for you?

How Calor can help you



For MSOs determined to reduce emissions without major operational disruption or having to heavily invest, BioLPG has emerged as a flexible solution to their energy dilemma. Calor has been supplying this versatile drop-fuel for over six years, providing both expertise and product to sectors like food production, hospitality, manufacturing, and logistics.

From Irish engineering pioneers like Abbey Machinery to award-winning destinations like The Falls Hotel & Spa, Calor has helped companies integrate BioLPG into everyday processes and operations for heating, processing, and fuel.

Most importantly, in a time of tightening regulations and a focus on sustainability, these MSOs can now see a practical path to lower carbon emissions while both maintaining operational continuity and avoiding significant upfront investment.

Burren hotel reduces energy bills and fully decarbonises all heating and water with BioLPG

The Falls Hotel & Spa, Ennistymon, Co. Clare on Ireland's Wild Atlantic Way, is a family-run business with a strong sustainability reputation, achieving carbon-neutral certification in 2021. As they had no access to the natural gas grid, decarbonising their heat was proving to be an ongoing challenge.



In 2022, the hotel seamlessly switched to 100% BioLPG with Calor, working in tandem with the hydro and solar energy systems already in place. This switch meant heating and water was now fully decarbonised with emissions being reduced by over 1,200 tonnes of CO₂. In turn, The Falls benefited from a significantly reduced energy bill, and experienced no disruption in their power supply or performance.

By powering guest rooms, spa facilities, and kitchens, BioLPG continues to deliver reliable, high-performance energy while supporting the hotel's environmental goals and long-term sustainability strategy.

BioLPG powers Tipperary engineering firm to sustainability

For generations, **Abbey Machinery** has been manufacturing farm machinery to the highest standards at its purpose-built facility in Toomevara, Co. Tipperary. But as they are off the natural gas grid, getting access to the power sources required for their industrial processes was not straightforward.

With solar power already in place, the company has long recognised the need to operate sustainably. In recent years, they have integrated BioLPG from Calor into their energy mix with an eye on meeting sustainability goals. High-

temperature heat is required for paint booths and production processes exceeding 200°C, and BioLPG can meet this need where electrification was not an option. Abbey now benefits from a reliable, lower-carbon energy supply while maintaining operational efficiency. Like so many medium-sized companies in rural Ireland, Abbey identified the need to decarbonise and their experience clearly shows how switching your business energy to BioLPG is safe, simple, and credible.



Switching is seamless

Probably the biggest advantage of BioLPG is that it requires no changes to existing equipment or infrastructure. From boilers and heating systems through to burners, cookers, and LPG vehicles, everything will work just as well as it always has. Keep in mind the only difference is how the product is produced, not how it performs.

As it is the ultimate drop-in fuel, moving from LPG to BioLPG is absolutely seamless. There is no need to replace boilers, upgrade pipework or buy new machinery or kit. MSOs continue to use their existing storage tanks, delivery systems, and appliances the same way they always have, while also using the same fuel supply arrangements.

Three Steps to Accelerated Sustainability

1. Assessment

Our Calor BioLPG advisors will assess how much energy you currently use, along with your infrastructure, and sustainability goals before identifying where BioLPG fits in to your overall picture. At this stage, we'll gather all the information we need about your site, working closely with you all the time. By taking into account your efficiency targets, budgets, and environmental commitments, we can paint a clear picture of where you are in energy terms and what you need.



2. Tailored Package

After the assessment stage, we have the insight to design and build a fully tailored BioLPG solutions that will meet your operational needs. With flexible blend options of 10%, 25%, and 50% BioLPG, our solutions ensure optimal performance. Every Calor solution carefully balances sustainability, reliability, and cost-effectiveness with your specific site requirements in mind.



3. Delivery

Now that we know what you need and have designed your solution, your site is ready to accept delivery. By providing end-to-end support, you're guaranteed seamless integration with minimal disruption. Periodic check-in calls mean we stay in touch to make sure your new BioLPG system delivers expected efficiencies, sustainability benefits, and long-term operational value.

Why choose Calor as your supplier?

Proven Expertise

Our energy advisors will bring deep industry knowledge and technical expertise to your project. From factories and hotels to offices and farms, our specialists understand your challenges and focus on identifying the most effective energy solution. We supply fuel but more importantly, we provide the energy guidance you need to improve efficiency, reduce emissions, and support long-term sustainability.



Tailored, Cost-Effective Solutions

We understand that every business is different, and we design fully-customised energy packages to meet your specific needs. For your site, we'll choose the right fuel mix and will recommend the best systems and appliances. At every stage, our focus is on making sure your solution is reliable, efficient, and commercially viable. And this will help you lower operating costs while improving overall energy performance.

Sustainable and Scalable Energy Options

We can offer a wide range of fuel solutions that are suited businesses of all sizes and sectors. In sustainability terms, traditional fuels simply cannot match what we provide. When you choose Calor, you will reduce your CO₂ emissions and lower your business carbon footprint. This allows you to commit to sustainability while also growing your business and managing future energy demands.

A practical first step toward net zero

Choices define successful business ventures. And those that make the best choices in the most difficult circumstances thrive and grow. Sustainability has hit the commercial sector like a tornado, with businesses having to make big decisions on decarbonisation under pressure from customers, suppliers, and the market. For medium-sized organisations who lack the resources and budgets of the corporate world, making these decisions while still balancing operations, budgets, and revenue is not easy.

These MSOs now find themselves having to decide between making major investments to change their emissions and sustainability, or simply waiting to see if new systems and technologies can make this transition a little easier. It's an all-or-nothing scenario that terrifies and confuses in equal measure.

BioLPG as a solution

The arrival of drop-in fuels and gradual sustainability improvements changes the game for these organisations. By simply replacing one fuel with another, the choice gets easier. Now companies can get lower emissions without investing heavily, without experiencing downtime, or having to change major aspects of how they run their business every day.

BioLPG in particular has shown enormous potential as a decarbonisation tool and switching your business energy to BioLPG has never been safer or simpler.

**For more
information, visit
www.calorgas.ie**