# SUBMISSION ON Draft Fuel Security Plan

25 August 2025

**To:** Ministry of Business, Innvoation & Employment **Name of Submitter:** Horticulture New Zealand **Supported by:** Potatoes New Zealand, Pukekohe Vegetable

Growers Association, Tomatoes New Zealand, Vegetables New Zealand

## **Contact for Service:**

Emily Levenson
Emily.levenson@hortnz.co.nz
Horticulture New Zealand
PO Box 10-232 WELLINGTON

Ph: 027 305 4423

Email: Emily.levenson@hortnz.co.nz



## **OVERVIEW**

## **Submission structure**

- 1 Part 1: HortNZ's Role
- Part 2: Executive Summary
- Part 3: Submission
  General discussion and direct response to the consultation questions

## **Our submission**

Horticulture New Zealand (HortNZ) thanks the Ministry of Business, Innovation & Employment for the opportunity to submit on the Draft Fuel Security Plan and welcomes any opportunity to continue to work with the Ministry of Business, Innovation & Employment and to discuss our submission.

The details of HortNZ's submission and decisions we are seeking are set out in our submission below.



# HortNZ's Role

## **Background to HortNZ**

HortNZ represents the interests of approximately 4,500 commercial fruit and vegetable growers in New Zealand who grow around 100 different fruits and vegetables. The horticultural sector provides over 40,000 jobs.

There are approximately 80,000 hectares of land in New Zealand producing fruit and vegetables for domestic consumers and supplying our global trading partners with high quality food.

It is not just the direct economic benefits associated with horticultural production that are important. Horticulture production provides a platform for long term prosperity for communities, supports the growth of knowledge-intensive agri-tech and suppliers along the supply chain, and plays a key role in helping to achieve New Zealand's climate change objectives.

The horticulture sector plays an important role in food security for New Zealanders. Over 80% of vegetables grown are for the domestic market and many varieties of fruits are grown to serve the domestic market.

HortNZ's purpose is to create an enduring environment where growers prosper. This is done through enabling, promoting and advocating for growers in New Zealand.



**Industry value \$7.48bn** 

**Total exports \$4.67bn** 

**Total domestic \$2.81bn** 

Source: Stats NZ and MPI





# **Executive Summary**

## Importance of fuel for food supply

Access to food is directly tied to national security and maintaining social cohesion during a crisis. **Food supply chains**, including the fuel for the freight needed to move fruits and vegetables to population centres, should be considered part of the **critical lifelines** in the event of a major emergency. The availability of fuel during a supply chain disruption, caused by natural disaster or geopolitical conflict, will impact New Zealanders' continued access to fruits and vegetables and the ability of growers to export.

## Alternative fuels for doubling export

HortNZ fully supports efforts to pave the way for alternative fuel for international shipping and aviation. International agreements and the expectations of export markets are driving the push to low emissions shipping, and New Zealand needs to prepare to take part or risk being left out of trade opportunities. This includes **upgrading ports** with the longer and deeper berths needed to accommodate ships that use alternative fuels and building New Zealand's capability to **bunker ships with alternative fuels**. This will have benefits for New Zealand's fuel security and doubling exports.

## **Alternative fuels for resilient supply chains**

Farm vehicles and the trucks used to transport fruit and vegetables throughout the supply chain use diesel. The fresh produce sector could be an early adopter of electric farm equipment and heavy freight if it was as reliable as fuel options, affordable, the charging infrastructure was there, and the electric grid was prepared to accept the additional load. Alternative fuels are another option. HortNZ supports a long-term vision of zero emissions commercial vehicles including vans, utes, and trucks.

## Supporting the greenhouse energy transition

Greenhouses use heating to grow fresh vegetables in the winter months. The cost of energy transition is unachievable for most small and medium growers, and many businesses are closing up shop rather than transitioning. Government co-investment is needed to manage this transition. One of the key barriers for growers using natural gas to transition to alternative energy sources is the ability to capture CO<sub>2</sub>, which is pumped into the greenhouse to boost plant productivity. The Government can support the industry's fuel transition through a regime to incentivise **carbon capture**, **storage and**, **critically**, **use**.

## **New Zealand's national energy strategy**

Fuel is just one aspect of growing energy demand. The national plan for fuel security should sit within an enduring Energy Strategy. The national strategy should include projections for future energy demand, a stocktake of existing resources, and a plan to meet demand.



## **Submission**

## 1. Horticulture and fuel

The horticulture supply chain is powered by fuel, whether it's the diesel that keeps the tractors running or the fuels used to move boats filled with produce to export markets. The availability of fuel during a supply chain disruption, caused by natural disaster or geopolitical conflict, will impact New Zealanders' continued access to fruits and vegetables and the ability of growers to export, with consequences for meeting the basic needs of New Zealanders and the functioning of the economy.

In horticulture, fuel is used for:

- Farm equipment
- Processing and packing
- Distribution to domestic and export markets
  - Heavy freight on roads
  - o Coastal shipping and inter-island ferries
  - o International maritime shipping for most export products
  - o International aviation for high-value, highly perishable exports like cherries
- Heating greenhouses

## 2. Importance of fuel for food supply

A shortage of diesel would impact the distribution of food, immediately making it difficult to get fruits and vegetables to New Zealand consumers by road. These products are perishable and need to be transported in tight timeframes. In the event of a major disruption, this would have serious ramifications for the ability of New Zealanders to access food. **Food supply chains**, including the roads and freight that are essential for moving fruits and vegetables to population centres, should be considered part of the **critical lifelines** in the event of a major emergency.

Food is a critical human health need, alongside shelter and water. Fuel is needed both to transport that food to people and to produce that food, which is especially important if there is a prolonged disruption cutting off New Zealand's fuel supply. This is a matter of national security. If access to food is severely disrupted, there is a risk to social order.

The Fuel Security Study estimates that the fuel required for critical transport use, including food distribution, is not consistently included in Civil Defence Emergency Management

Plans and would raise the estimated normal demand for petrol and diesel by 5-15%. 1 This 5-15% should be considered when deciding the amount of fuel that must be kept onshore, and it should be prioritised in Civil Defence emergency planning.

The production and distribution of fruits and vegetables should be considered an essential service deserving prioritisation for essential infrastructure in times of emergency, and that includes access to fuel. This should be recognised in the Emergency Management Bill.<sup>2</sup>

## Alternative fuels for doubling export

HortNZ fully supports efforts to pave the way for alternative fuel for international shipping and aviation. Fruit and vegetable exports were worth \$4.988 billion in 2024, and horticulture was New Zealand's third highest value export sector.3

As the "food miles" conversation becomes more prevalent, New Zealand will be at a disadvantage in its trade due to distance, unless we can access alternative ways of transporting product. Targeted support from the New Zealand government to enable low emissions shipping will contribute to doubling exports by meeting the sustainability demands of our export markets and contribute to our national resilience through reducing reliance on imported fuels.

Our export markets are demanding that we reduce our shipping emissions. The European Union (EU), one of New Zealand's biggest export markets, requires businesses to manage the environmental impacts of their entire supply chain through the Directive on Corporate Sustainability Due Diligence. 4 Under this directive, large companies must show how they are helping limit climate change based on the Paris Agreement target of 1.5°C, and New Zealand suppliers of any size could be captured as part of a wider supply chain.

The International Maritime Organisation (IMO), of which New Zealand is a member, has a target to reduce international shipping emissions to net-zero by 2050 through their 2023 IMO Strategy on Reduction of GHG Emissions from Ships. 5 New Zealand has also signed the Clydebank Declaration at COP26 to support development of low emissions shipping corridors.6

New Zealand is highly geographically isolated and distant from major shipping routes and key markets. New Zealand's exports are small compared to the scale of the global market, meaning that New Zealand's stop on shipping schedules is not guaranteed. If we become a port where ships can bunker with alternative fuels, which will become more necessary as these international commitments progress, we can get New Zealand on low emissions shipping corridors and secure our place within shipping schedules.

Lower emissions fuels are less energy dense and require more space, so the ships that use alternative fuels are larger. In order for low emissions shipping alternatives to be

<sup>&</sup>lt;sup>1</sup> Envisory, Castalia. (2025). *Fuel Security Study*. Prepared for MBIE. (p. 33)

<sup>&</sup>lt;sup>2</sup> Bisson, Alex. (2025). Submission on the proposed Emergency Management Bill. HortNZ.

<sup>&</sup>lt;sup>3</sup> MPI. (June 2025). Situation and Outlook for Primary Industries (SOPI).

<sup>&</sup>lt;sup>4</sup> European Commission. "Corporate sustainability due diligence". Accessed 1/8/25.

<sup>&</sup>lt;sup>5</sup> IMO. "IMO's work to cut GHG emissions from ships". Accessed 1/8/25.

<sup>&</sup>lt;sup>6</sup> MFAT. (2021). Proactive Reelase: Commitments made at COP 26.

accessible to New Zealand suppliers, the Government needs to **invest in bigger ports** with long and deep enough berths for the larger ships required to use alternative fuels.

The kiwifruit industry has been taking a lead in this space. Zespri has partnered with shipping partners to do low emissions shipping trials, including chartering kiwifruit from New Zealand to Shanghai using biofuel bunkered in Hong Kong<sup>7</sup>, after a successful trial using biofuel in a charter vessel between Hong Kong and New Zealand<sup>8</sup>. They've also done a feasibility study for a low-emissions shipping corridor between Tauranga and Belgium via the Panama Canal.<sup>9</sup> Some of the report's relevant findings are:

- Renewable energy is critical for upscaling alternative fuel production.
- Biofuel can provide a useful lower-emissions bridge as it can be "dropped in" to conventional vessels often with little or no modifications.
- First movers are needed to understand commercial production and economies of scale. In an uncertain regulatory environment, they must be supported by relevant agencies to overcome barriers and reduce investment risk.
- Ports need longer and deeper berths to accommodate low-emission ships. These ships are larger than fossil-fuelled ships as alternative fuel is not as energy dense and vessels need larger fuel tanks.
- New Zealand trails other countries in climate and transport policy and investment for low emissions shipping.

## 4. Alternative fuels for resilient supply chains

Beyond the orchard gate, trucks are used to transport fruit and vegetables between orchard/farm, packhouse, and/or processing facilities and point of distribution. Some growers have their own truck fleets. The distributed nature of horticulture and the perishability of fresh product creates limitations on the use of rail and coastal shipping, particularly for domestic distribution.

The fresh produce sector could be an adopter of electric trucking, but uptake will depend on the commercial case, including whether it is affordable, the charging infrastructure is there, and the electric grid is prepared to accept the additional load. Electrification will be more appropriate in some locations than others, depending on the existing infrastructure and cost of increasing capacity.

Alternative fuels are another option, as discussed in this strategy. HortNZ supports a long-term vision of zero emissions commercial vehicles including vans, utes, and trucks.

## 5. On-farm energy diversification

<sup>&</sup>lt;sup>7</sup> Cross, Anna. (27 Mar 2025). <u>"FCC and Zespri complete first ever biofuel kiwifruit charter kicking off season in Greater China"</u>. Zespri. Accessed 31/07/25.

<sup>&</sup>lt;sup>8</sup> Zespri. (11 Jun 2024). <u>"Fresh Carriers Co., Ltd (FCC), and Zespri's first biofuel shipping trial docks at the Port of Tauranga"</u>. Accessed 31/07/25.

<sup>&</sup>lt;sup>9</sup> Zespri. (11 Sep 2024). "Drive towards low-emissions international shipping". Accessed 31/07/25.

The horticulture industry uses on-farm vehicles, including light commercial vehicles (e.g., utes) and machinery for cultivation and harvest. Electric alternatives are available in some areas (where the grid has capacity and connection is existing or affordable, which is frequently not the case) and for some equipment (e.g. forklifts), but not all. Concerns for growers include whether electric alternatives are reliable, time saving or as effective as their existing vehicles and equipment. When there is a good business case, they will be adopted.

Given the limitations of New Zealand's electrical grid, long-term planning is needed to build capacity and access to the system. Growers have told HortNZ about quotes of hundreds of thousands of dollars for cable work or transformer upgrades when they seek to access more electricity on-farm or orchard. Given this exorbitant cost for individual businesses, the scale of New Zealand's electrification will be dependent on bigger, community-scale infrastructure upgrades rather than the decision making of individual land users.

Even if the sector is able to transition to alternative energy sources, fossil fuels will still be needed as an emergency energy option, such as for diesel generators.

## 6. Greenhouse heating and use of CO<sub>2</sub>

Growing indoors in greenhouses is what allows New Zealanders to buy tomatoes, cucumbers, capsicum, courgettes, eggplants, leafy greens and herbs year-round. Greenhouses provide a supply of fresh produce at times of the year when outdoor cropping is challenging, which evens out the supply of fresh produce and extends the availability of seasonal crops. Without domestic vegetable production, these items would be imported from other countries with consequences for biosecurity, employment and the price of vegetables. Growing indoors is also a form of climate adaptation, since the crops are much less vulnerable to adverse weather conditions.

Most greenhouse vegetables are grown to be sold in New Zealand, and they are staple foods in our diets. For example, 95% of greenhouse-grown tomatoes by value are sold in the domestic market. <sup>10</sup> Some of these crops also have an export component. This supports the viability of businesses when excess seasonal summer supply exceeds local demand and wholesale prices fall below the cost of production.

A resilient fuel supply for greenhouses is important given their contributions to domestic food supply and economic growth. Greenhouses are heated in the winter using a variety of energy sources, including natural gas, coal, other hydrocarbons, electricity, biomass and geothermal energy. A 2020 survey of New Zealand greenhouse growers found that 44% of heated greenhouse area was heated by gas (Figure 1). Some growers will have decarbonised, stopped heating, or closed their business since this survey was conducted.

The cost of growing in a heated glasshouse is becoming untenable for growers still using natural gas because of the cost and declining availability of fuel. The industry sees the importance of decarbonisation, but the cost of energy transition is unachievable for most small and medium growers, and many businesses are closing up shop rather than transitioning. **Government co-investment** in the transition is needed to avoid this

<sup>&</sup>lt;sup>10</sup> Tomatoes NZ. Annual Report 2025.

<sup>&</sup>lt;sup>11</sup> DETA. (2022). "Covered Crops Decarbonisation Plan". Prepared for EECA, HortNZ, TNZ and VNZI.

perverse outcome and protect our domestic food supply. There are existing funds like the Regional Infrastructure Fund that could support these businesses which build resilience into our domestic food supply, if their **criteria were minorly amended** to make greenhouse energy transition eligible for funding.

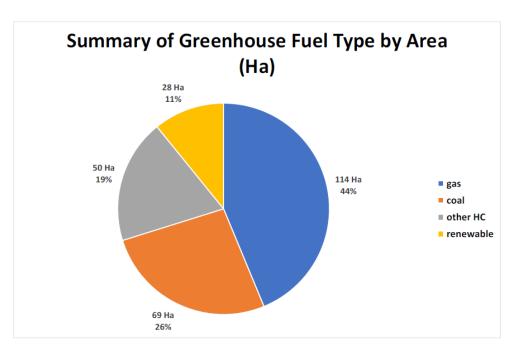


Figure 1: Greenhouse Fuel Type by Area 2022<sup>12</sup>

Natural gas is only available on the North Island, and it is becoming prohibitively expensive for growers. Growers who heat with natural gas capture the  $CO_2$  byproduct to boost plant production in their greenhouses. This improves yield and helps crops reach a marketable size.  $CO_2$  supplements photosynthesis, boosting growth rates and yields and improving plant productivity by 20-25%. This allows growers to produce more food faster, thus feeding more people at a lower cost. One of the key barriers to greenhouse decarbonisation is finding an alternative source of that  $CO_2$ .

Growers will switch fuel sources if natural gas becomes too expensive, but their yields will decrease without alternative sources of  $CO_2$ . Some growers already buy tanks of supplementary  $CO_2$ , especially those using non-gas heating sources. There are not many alternative sources of  $CO_2$ , and the supply chain is fragile, as evidenced by an acute shortage in early 2023.

The Government can support the industry's fuel transition by following through on its commitment to establish a regime to incentivise **carbon capture**, **storage and**, **critically**, **use** through the Emissions Trading Scheme, so long as more  $CO_2$  is made available for glasshouse use rather than all going to storage.

 $CO_2$  production and use can be part of the circular economy, as a byproduct of anaerobic digestion, which can also produce biogas as an alternative energy source. These infrastructure projects with co-benefits are part of the multi-layered solution for energy

9

<sup>&</sup>lt;sup>12</sup> DETA. (2022). "Covered Crops Decarbonisation Plan". Prepared for EECA, HortNZ, TNZ and VNZI.

<sup>&</sup>lt;sup>13</sup> Vegetables NZ, Inc., personal communication; Upflow. <u>Geothermal Food Systems</u>. Accessed 04/08/25.

and food security. As the Minister for Energy said in a recent speech to the Biogas Bridge Forum, "By enabling the production and use of renewable gas, we can decarbonise hard-to-electrify sectors, support regional energy resilience, all while creating new opportunities for regional innovation and investment." <sup>14</sup> Italy <sup>15</sup> and Ireland <sup>16</sup> are amongst countries which provide grants for biogas use, providing a model of investment from which New Zealand can draw inspiration.

## 7. Proposed Fuel Security Plan

This section responds directly to the consultation's discussion questions.

## 7.1. Vision for the fuel system

Q. 1 Do you support our vision for the fuel system? Why / why not?

#### YES, WITH CHANGES

HortNZ supports the vision for a fuel system resilient to disruptions.

However, it would be worth highlighting that some services are essential, and their access to fuel should be prioritised in times of disruption. While an aspiration that all people should have access to as much fuel as they want at all times is understandable, the Government's role is to ensure a strategic supply for the critical uses of fuel first. HortNZ views critical uses as those that are essential for the health of people first and the distribution of essential goods and services (such as food and medicine) second before the rest of the economy.

The following wording could be used:

Our vision is to have a fuel system that is resilient to disruptions, so that <u>essential services</u> people have access to fuel where and when they need it.

Q. 2 Have we identified the correct objectives for our liquid fuel security?

#### YES

HortNZ supports the objectives to improve energy independence, reduce vulnerabilities in our fuel supply chains, and minimise the impact of fuel disruptions.

Q. 3 Do you agree that the plan should be considered within the next 10 years, ie out to 2035? Why / why not?

#### YES

<sup>&</sup>lt;sup>14</sup> Hon. Simon Watts. (23 July 2025). "Speech to the Biogas Bridge Forum". Beehive.govt.nz.

<sup>&</sup>lt;sup>15</sup> European Commission. "<u>Italy's recovery and resilience plan</u>". Accessed 18/08/25.

<sup>&</sup>lt;sup>16</sup> Government of Ireland. (2024). "National Biomethane Strategy". Gov.ie.

Fuel resilience is of critical importance, so 10 years is a suitably short time frame to catalyse immediate actions to get to an acceptable level of resilience. However, there should also be a strategy looking beyond 10 years because energy infrastructure can take far longer than a decade to plan, source investment, build and get running, especially when considering the desired transition to totally new forms of energy for shipping and heavy freight. This longer-term vision and planning could sit under the National Energy Strategy.

## 7.2. Resilience to global supply disruptions

Q. 4 Do you believe Focus area 1 addresses the challenges the fuel sector is facing? Why / why not?

#### **YES**

The key concern for resilience is that New Zealand is reliant on fuel imports, and we should be building our resilience by investing in our capacity to produce and use alternative fuels here. Even just using alternative fuels will require strategic infrastructure investment, like upgrading ports with bigger berths, so they can fit the larger ships that use low emissions fuels.

Q. 5 Do you believe the actions under Focus area 1 will improve New Zealand's fuel security? Why / why not?

#### **YES**

In particular, HortNZ supports more domestic fuel-diversity with electrification, hydrogen and biofuels.

HortNZ also supports information campaigns on fuel management and fuel switching. Bringing information to businesses and then allowing them to make the decisions that are right for them based on the best possible knowledge will be needed to fuel this energy transition. The Emissions Trading Scheme already provides a disincentive to continue using fossil fuels where alternatives are available. Support for transition through information (and critically co-investment) is a useful "carrot" that does not duplicate the function of the ETS "stick".

Q. 6 Are there any additional actions under Focus area 1 the Government could take to reduce dependence on imported fuels and improve our energy independence?

Co-funding or low interest loans for the energy transition would be an even more helpful Government action when the price tag of energy-switching is cost prohibitive for certain industries.

The cost of decarbonising a greenhouse is out of reach for many covered cropping businesses. Greenhouse growers heat with fossil fuels to produce healthy vegetables, such as tomatoes, aubergines and capsicums, which are almost entirely grown to feed New Zealanders. The cost of energy transition is estimated at \$500,000-\$1 million per

hectare of glasshouse,<sup>17</sup> and Government support is needed before this transition can take place. Those companies that have managed to transition away from fossil fuels did so with the support of the Government Investment in Decarbonising Industry (GIDI) fund, which no longer exists.

Another barrier to energy transition is that greenhouse growers on the North Island rely on natural gas as their heating source because they capture the  $CO_2$  and pump it into the greenhouses to increase yields. Without an alternative source of  $CO_2$ , it is difficult to make the economic case to transition. The Government's energy strategies should include  $CO_2$  capture for use for food production.

New Zealand doesn't currently produce enough energy domestically to meet our total demand, but we have the ability to improve our resilience through further local generation. Geothermal is part of the solution, but it is expensive with high risks. Government insurance to de-risk geothermal exploration is needed to make this a viable energy option, as will be discussed in HortNZ's submission on the draft Geothermal Strategy for New Zealand.

#### 7.3. Domestic resilience

Q. 7 Do you believe that Focus area 2 addresses the challenges the fuel sector is facing? Why / why not?

#### YES, WITH CHANGES

HortNZ agrees that port infrastructure and road networks are key considerations for the ability to distribute imported liquid fuels.

#### **Ports**

Ports need upgrades to be able to receive and refuel boats that use alternative fuels, including longer and deeper berths.

#### Road network

Roads that provide critical lifelines should be prioritised for maintenance and repair when there are disruptions from adverse events. This includes roads that are critical for the movement of fuel and other critical goods like food.

Q. 8 Do you believe actions under Focus area 2 will improve New Zealand's fuel security? Why / why not?

#### **YES**

HortNZ particularly supports the action to "Identify opportunities to improve readiness and response arrangements for the fuel sector through the development of the *Emergency Management Bill*".

<sup>&</sup>lt;sup>17</sup> Vegetables NZ Inc. analysis (2024)

Q. 9 Are there any additional actions under Focus area 2 the Government should do to enhance domestic resilience of critical infrastructure?

No additional comments.

## 7.4. Supporting domestic fuel alternatives

Q. 10 Do you believe Focus area 3 addresses the challenges the fuel sector is facing? Why / why not?

#### **YES**

HortNZ agrees that investing in low-carbon alternative fuels can be risky, but it is essential given present and expected market conditions. International agreements and the expectations of major export markets, including the EU, are driving an international push toward alternative fuels. New Zealand's capability to accept ships in our ports, and ideally refuel ships, that use alternative fuels will bolster our place on international shipping networks. This is important to reduce our reliance on imported fuels with the added benefit of contributing to doubling exports.

Q. 11 Do you believe actions under Focus area 3 will support investment in domestic production of low-carbon alternative fuels?

#### **YES**

In particular, HortNZ supports the Low Emissions Heavy Vehicle Fund given the importance of road transport for distributing fruits and vegetables and Government support for uptake of heavy goods vehicles with alternative fuels.

#### **Domestic road transport**

The *Fuel Security Study* shows that accelerating the transition to zero-emission vehicles is one of the best options to reduce our vulnerability to disruptions of petrol and diesel supply at a reasonable cost, <sup>18</sup> so HortNZ supports focus on this objective.

The Fuel Security Study also notes that the EV trucks covered by the Low Emissions Heavy Vehicle Fund are not heavy enough to meet the general definition of "heavy trucks" (30 tonnes). <sup>19</sup> Trucks used to transport fruits and vegetables would typically weigh more, so they may be better suited to hydrogen fuel cell (HFC) technology than electrification Barriers to using alternative fuels for heavy freight could include sufficient heavy vehicle charging stations or refuelling stations for hydrogen-based fuels and the availability of sufficient electricity or fuel. <sup>20</sup>

#### **Ports**

<sup>&</sup>lt;sup>18</sup> Envisory, Castalia. (2025). *Fuel Security Study*. Prepared for MBIE. (p. viii-ix)

<sup>&</sup>lt;sup>19</sup> Envisory, Castalia. (2025). *Fuel Security Study*. Prepared for MBIE. (p. 70)

<sup>&</sup>lt;sup>20</sup> Microsoft Word - ERP2 National Road Carriers - JT mark up, TM edits

Special Economic Zones could be useful to facilitate location-specific projects that enhance fuel security like port upgrades and the infrastructure to bunker with alternative fuels at ports.

We also support the planned action to, "Investigate whether there are regulatory barriers impeding the use of alternative fuels in the shipping and aviation sectors that improve fuel security".

Q. 12 Are there any additional actions under Focus area 3? Is there more the Government can do to support development of domestic production of low-carbon alternative fuels?

No additional comment.

## 7.5. Resilience in a transitioning market

Q. 13 Do you believe Focus area 4 addresses the challenges the fuel sector is facing? Why / why not?

#### YES

No additional comment.

Q. 14 Is there a role for government to minimise risk of stranded assets or underinvestment?

#### **YES**

The ETS is driving greenhouse growers to look to energy transition, but there is a risk that growers will not be able to invest in the transition because the costs are too high, and there are no alternative sources of  $CO_2$  needed for plant productivity.

To enable the energy transition of the glasshouse sector, the Government can ensure infrastructure or sustainability funding criteria provides for greenhouse decarbonisation. The Government can also support the use of captured  $CO_2$  and alternative  $CO_2$  sources through the design of the carbon capture, storage and use regime. That key piece – "use" – needs to be thoroughly considered, or else there's the potential for an adverse policy incentive to bury all captured  $CO_2$  underground when there is an essential market that uses it for our domestic food supply.

Q. 15 Are there other actions the government should be doing under Focus area 4?

Given the unachievable cost of energy transition for greenhouse growers and the increasing pressure of the ETS and rising energy costs, there is a risk that businesses growing New Zealand's fresh vegetables will exit the market. This would reduce supply and increase the price of fresh tomatoes, lettuce, herbs, cucumbers, and other greenhouse-grown crops for New Zealand consumers. To create resilience in that transitioning market, greenhouse growers need co-investment for the energy transition.

## 7.6. New Zealand's national energy strategy

Fuel is just one part of the picture when it comes to energy sources that will meet Zealand's growing energy demand. The national plan for fuel security should sit within a national, enduring energy strategy. While MBIE was progressing work on a National Energy Strategy at least as recently as 2024, it is not yet publicly available. HortNZ's vision would be that the national strategy would consider how much energy New Zealand will need into the future, which energy resources we already have, the resilience of those resources, and a plan to meet projected demand if not already covered by existing resources.