



2 October 2017

Low-Emissions Economy

Productivity Commission
PO Box 8036
Wellington 6143

Dear Mr Bailey,

Emsol Submission – Low Carbon Economy

Thank you for the opportunity to provide a submission on an Issues Paper entitled Low-emissions Economy, published by Productivity Commission, August 2017.

Emsol (trading name for Energy Management Solutions Ltd) was established in 2002 and is a consultancy specialising in helping large businesses of New Zealand achieve energy savings. Emsol's main areas of focus include energy efficiency in process heat and electricity. Emsol has also consulted on renewable energy opportunities and managed energy savings projects for small and medium size businesses.

Regarding Q11, the carbon reduction opportunity in process heat is significantly more than 35% from energy efficiency and renewable energy. During 2016-2017, Emsol completed in-depth process heat energy audits of 11 large food processing sites. This alone listed potential for energy savings between 7% and 48%. Most sites have potential of more than 25% coal, diesel, fuel oil, or natural gas savings.

These sites collectively have the potential to save 78 GWh per year of fossil fuels and 20,780 tonne of carbon dioxide equivalent.

One of the key opportunities relates to understanding heating load demands, temperature profiles, and the type of manufacturing process. Technologies and operations are changing and improving all the time, such as water heat pumps to higher temperatures or applications and maintenance of boiler systems. Opportunities for change require key decision makers (from site engineer to directors) understanding and applying opportunities at key times. Timing can be affected by product and seasonal changes, or changes in customers' demands in product quality requirements (for example the temperature of final washes on meat products).

Key barriers include key decision makers not understanding a full set of energy saving project options, including solutions that are practical and accurate with Return on Investment (ROI). Often there are risks associated with change, such as product quality and reliability. Each time proposals are sought from contractors for an energy saving project the cost can change by 20% or more, which effects ROI.

Finding and exhausting practical solutions including accurate ROI values will assist the uptake of energy saving process heat projects and programmes.

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Regarding other Questions, Emsol would be willing to discuss these further if you would like to follow up and get further feedback on these.

Emsol are energy management experts that specialise in working with mostly large energy users in New Zealand. We have helped our clients in the past 15 years achieve significant energy savings including 26.5 GWh per year in past 12 months.

Yours sincerely

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