

News

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Opinion

## Talking Point: Where there's smoke, there's forest

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A Forestry Tasmania regeneration burn off in the Huon Valley.

Source: News Limited

### **SMOKE pollution from biomass combustion is the most significant environmental health issue in Tasmania.**

The smoke comes from woodheaters, burning to reduce bushfire fuel and using fire to remove debris after logging and land clearing.

With care, developing forest bioenergy has potential to improve the health of many Tasmanians. Here's why.

Recent change to the renewable energy target — that mandates the fraction of Australian electricity production from renewable sources — raises a possibility of using native forest and plantation residues as a fuel.

This has been criticised by environmentalists so pursuing it is certain to inflame Tasmania's forest wars.

Yet the chance to modernise domestic wood heating and change landscape fire management to improve air quality and greenhouse gas pollution has received limited consideration in the debate.

Over 25 per cent of the state's 200,000 households use woodheaters, reflecting a combination of the cold climate, abundant wood supply, and affordability relative to the increasingly expensive cost of electricity and natural gas.

Affordability is particularly important given the relative socio-economic disadvantage of many Tasmanian families.

Poor operation of heaters, even those with modern designs, causes inefficient combustion resulting in winter-long poor air quality in many Tasmanian towns.

Smoky air has a substantial health toll, demonstrated by the 2000 state government buy-back scheme that halved the number of woodheaters in Launceston, resulting in a drop in annual deaths, and better community health.

Burning landscapes to reduce fuel loads is a core strategy for reducing the risk of bushfires in Tasmania.

After the 2013 Dunalley fire disaster the State Government has launched a major burning program on public and private lands. This target poses challenges, including the management of smoke, the risk of uncontrolled fire, and fitting ambitious annual targets into limited windows of safe weather patterns for planned burning.

Burning forest residues is routine in regenerating native forests after logging, providing a cheap, effective way to create a seedbed by removing ground cover, providing nutrients and, in some cases, eliminating soil pathogens. Some foresters claim burning forest debris is ecologically essential for eucalypt regeneration after logging, but the basis for this claim is scientifically poorly established.

A potential solution to reduce health impacts of woodheaters, fuel reduction and forest regeneration burning is the development of newer forms of bioenergy.

Instead of burning forest debris to regenerate logged areas and reduce fire hazard, the energy in the biomass could be extracted and burnt in micro-power plants, creating electricity and heat for industry and homes. Such integrated use of biomass is mainstream in Sweden, where logging debris is used for heat and electricity production.

Forest thinning is a key strategy to reduce fire hazard in western US that has advantages over fuel-reduction burning, including the absence of smoke, avoidance of the risk of escaped fires and opportunities for both timber and biomass fuel harvest.

Biomass can be refined into pellets for combustion in specially designed burners that have revolutionised hot water and home heating through increased energy efficiency, providing a highly controllable heating source more akin to gas or oil than wood.

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Using wood pellets for domestic heating could substantially decrease power consumption for heating, improve air quality and reduce carbon dioxide emissions, but falls outside the biomass provision of the revised RET because it does not involve electricity generation. Thus, the domestic pellet industry will not benefit from the RET economic stimulus.

This is unfortunate because domestic pellet heating is more efficient than larger bioenergy electricity production which has a low conversion rate (20 to 30 per cent) and produces huge volumes of hot water that is wasted unless there is special infrastructure and a market to enable it to be used.

The production of biomass pellets has a catch — the need for building infrastructure for increased pellet production and a need for subsidies for homes to convert to burn pellets, a more expensive option than wood.

In Tasmania there is a small wood pellet industry that uses sawdust from timber milling but this factory cannot meet current small demand, resulting in pellet imports from New Zealand.

Government investments could kickstart the industry and would be justified in terms of greenhouse gas reduction, improved fire management and improved public health.

Without environmental controls there is risk in establishing a pellet industry if the sole motivation is profitability. In this case, rather than using forest residues or thinnings to reduce fire hazard, the industry could be driven to harvest native forests to supply the rapidly growing global wood pellet market supplying converted coal electricity generators.

To substantially reduce UK carbon dioxide emissions the Drax power plant is now fuelled by biomass pellets from south-eastern US forests and plantations. Such large-scale harvests are raising concerns about the impact the region's forest biodiversity.

All sides of the debate about biomass energy and forestry in Tasmania can agree the current situation is less than ideal. Yet embracing new uses of forest biomass energy entails economic and environmental risk and demands leadership and social trust. Given Tasmania's reputation for divisive environmental debates, leading this reform is not a journey for the faint-hearted.

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