

Production Forest Methodologies for the Emissions Reduction Fund

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Webinar

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Background

6 initial ideas:

- Carbon sequestration in **long-rotation plantations**
- Carbon sequestration through **retention of plantations on economically marginal sites.**
- Carbon storage in **harvested wood products**
- Increasing carbon stocks in forests through **enhanced forest management**
- Use of **biomass** from harvesting and wood processing facilities for bioenergy
- **Fire management** in Southern Australia

Policy Setting

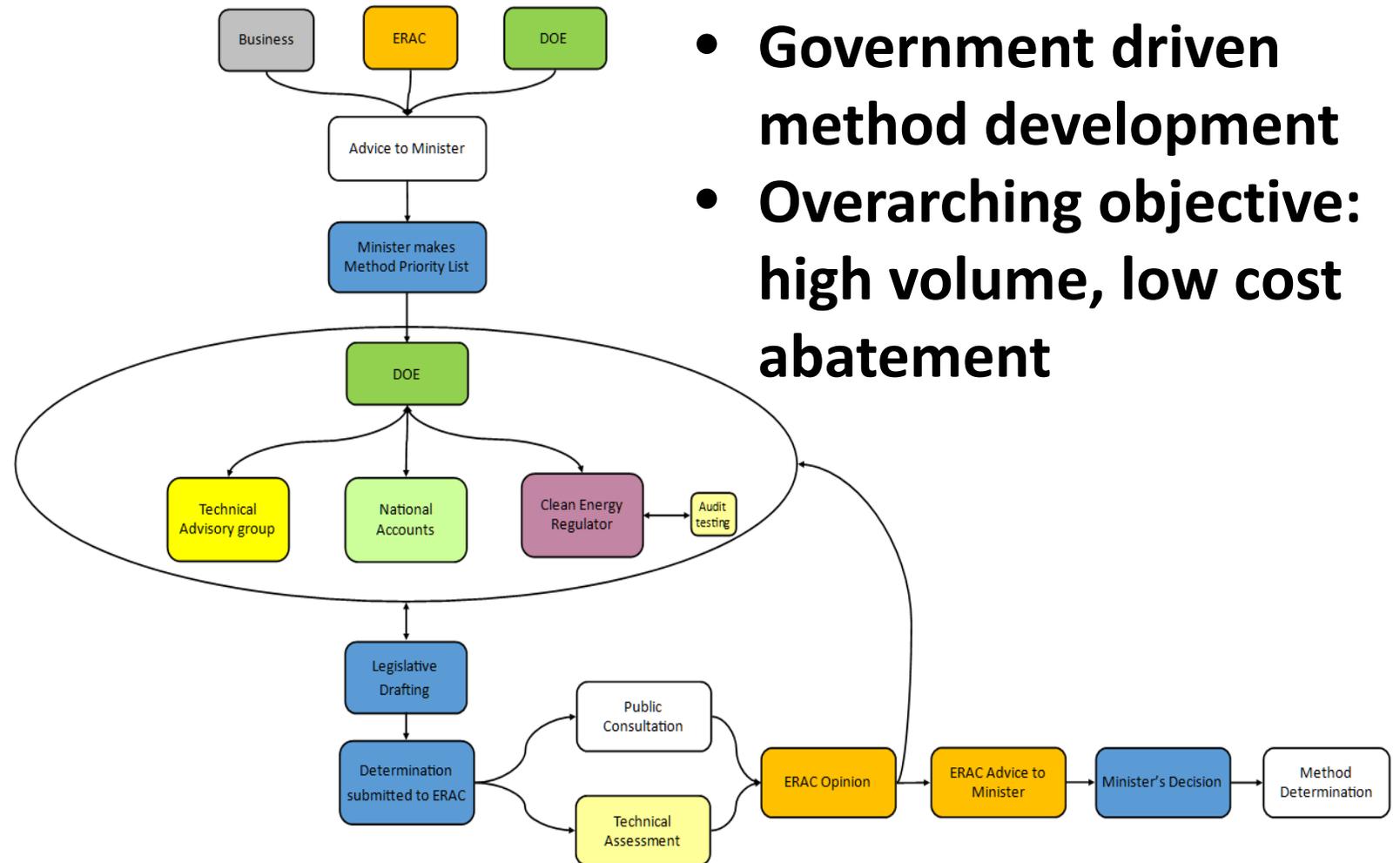
Carbon Farming Initiative

- Proponent driven method development
- Many ideas
- Government grants
- Industry/research funding



Emission Reduction Fund

- Government driven method development
- Overarching objective: high volume, low cost abatement



Market Opportunity

Emissions Reduction Fund contract portfolio

Released 17 December 2018

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\$2.55 billion scheme funding

\$476 million paid

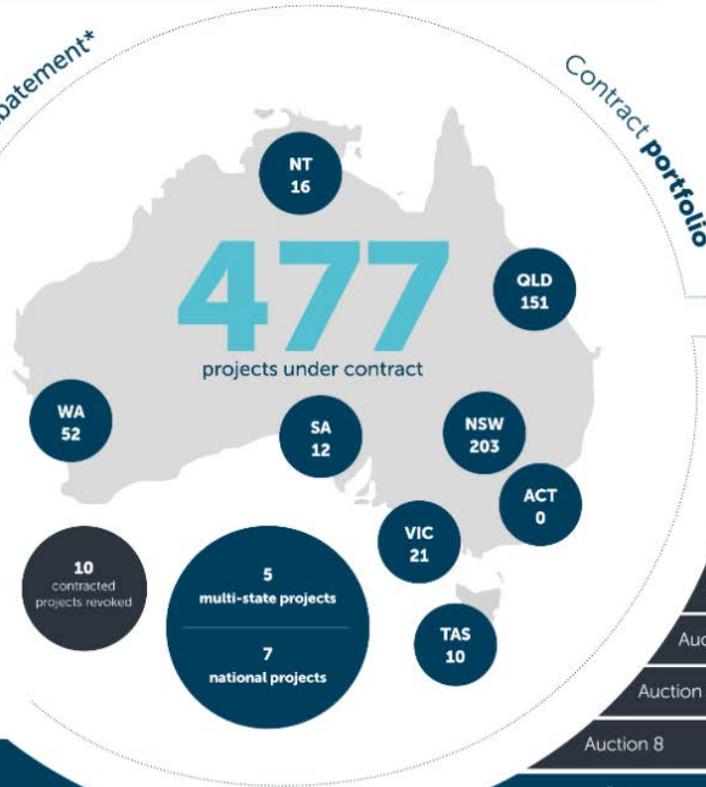
\$1.8 billion currently committed

Total remaining \$226 million



*Figures exclude volume terminated/lapsed contracts = 13.5 million tonnes

Total contracted abatement*



Vegetation	125.7 million tonnes
Landfill and waste	25.5 million tonnes
Agriculture	18.1 million tonnes
Savanna burning	13.6 million tonnes
Energy efficiency	5.2 million tonnes
Industrial fugitives	4.0 million tonnes
Transport	1.2 million tonnes

Portfolio of abatement **193** million tonnes

Average across portfolio **\$12**

Auction 1	\$13.95
Auction 2	\$12.25
Auction 3	\$10.23
Auction 4	\$10.69
Auction 5	\$11.82
Auction 6	\$13.08
Auction 7	\$13.52
Auction 8	\$13.87

1. Emissions Reduction Fund
2. Safeguard Mechanism
3. Voluntary Market

Emissions Reduction Fund



Assessment Framework

Minister Prioritises Method Development

Assessment Criteria

- Broad business support
- Likely volume of abatement
- Ease and certainty of estimated emissions
- The status of technology
- Social, environmental or economic impacts
- Alternative activity promotion measures

Standards are set in the CFI Act

Offsets Integrity Standards

- Additional
- Eligible
- Measurable and Verifiable
- Evidence-based
- Conservative

1. Carbon in Plantations

Three types of project activity

New plantations

- No plantation on the land for previous 7 years
- Establish by planting or seeding
- Rotations no more than 60 years long and no more than 2 years apart

Short to Long Rotation

- No rotation under way: establish a new long rotation
- Short rotation under way: complete the rotation and manage new rotation as a long rotation
- Short rotation under way: change management to long rotation

Farm Forestry

- Existing farm forestry projects can transition to method



1. Carbon in Plantations

Some limitations

- **Uses FullCAM** - simple but conservative
- Only in **National Plantation Inventory Regions**
- **Excludes** African Mahogany (NT) and Indian Sandalwood
- **Minister for Agriculture assessment** for adverse impact on agricultural production in the region (plantations notification)
- **> 600mm** water rule – water availability or reliability/water access entitlement
- Excludes plantations **currently managed** as part of a forestry **MIS**

Other Factors

Crediting period 25 years

Reporting period up to 5 years

Risk of reversal buffer 5% discount

Permanence period 100 or 25 years

- Short rotation with 25-year permanence period: **discounted by 25%**
- Other plantations with 25-year permanence period: **discounted by 20%**

Carbon storage in harvested wood products

The Opportunity

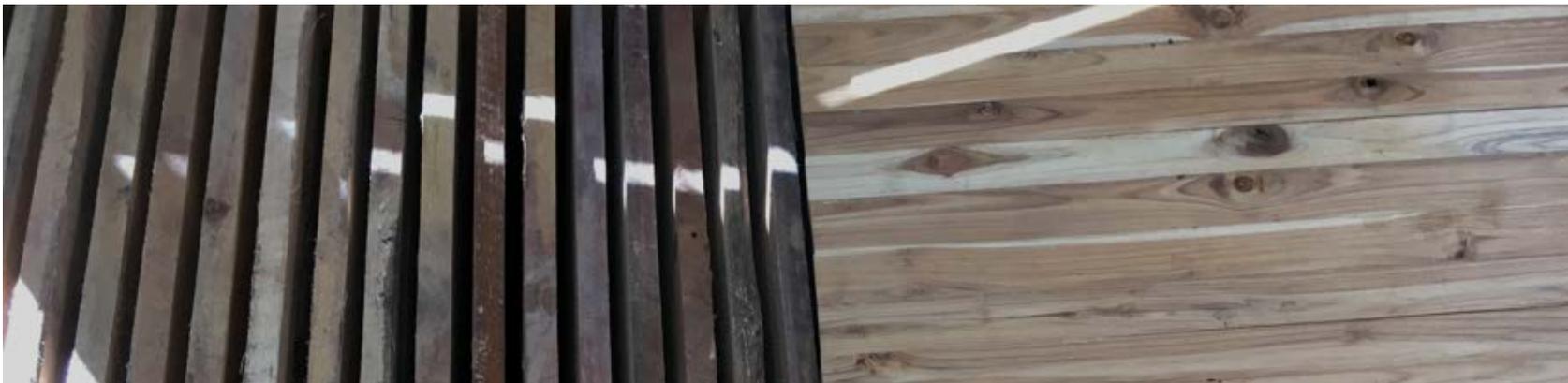
- Carbon is stored in HWPs- in service and in landfill

The Proposal

- C in HWPs make a material contribution to the abatement potential of projects
- Consistency with NGGI

The Outcome

- Carbon in HWPs from plantations in service included.
- Carbon in HWPs from other forests and in landfill not adopted.
- Issues with double counting in landfill methods



Increasing carbon stocks in degraded/at risk native forests

The Opportunity

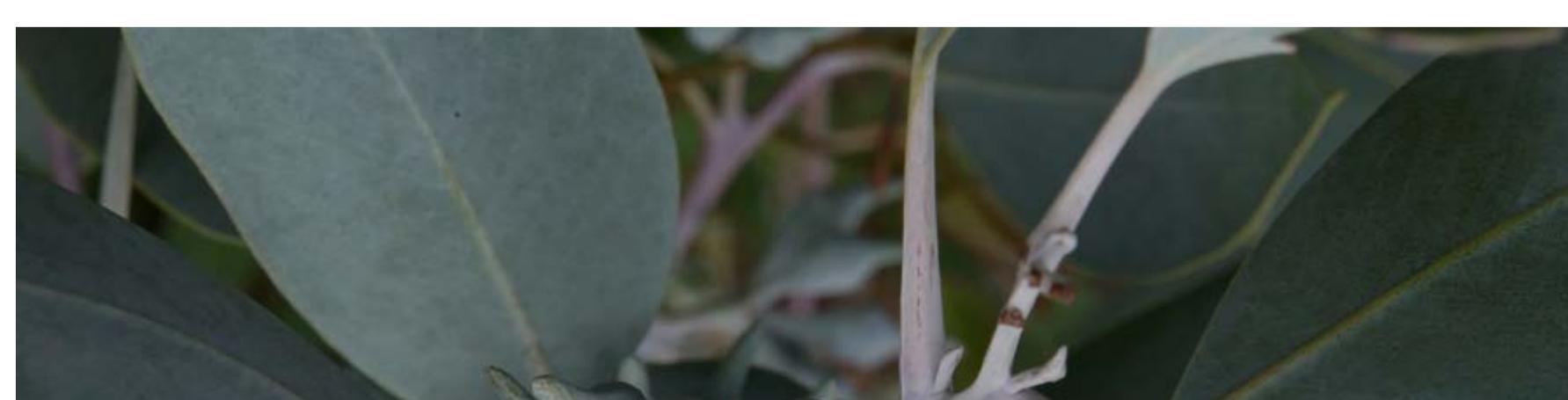
- Large areas of forest (tenure neutral) degraded or at risk of degradation
- Key causes: e.g. dieback, weed infestation

The Proposal

- A generic 'improved management method' allowing proponents to tailor the project activity to their specific situation

The Outcome

- Not adopted
- Low abatement/ha (although large areas),
- Inadequate evidence and issues with baseline setting



Carbon in harvesting residues

The Opportunity

- Large volumes available
- Residues decay or burn in the forest
- Large-scale electricity generation is not covered by IEFE or Facilities Method

The Proposal

- Biomass from sustainable harvest operations (whether native or plantations), or wood-processing residues for baseload energy generation and displacement of FF

The Outcome

- Not adopted
- Double counting in “IEFE”, “Facilities” and other methods.
- Overlap with RET
- Politically challenging



Carbon in processing waste

The Opportunity

- Residues burnt to waste or short-lived products

The Proposal

- Generate new composite products

The Outcome

- Not adopted
- Use of non-wood materials still dominates
- Production capacity still being developed domestically



Emissions reductions from fire management

The Opportunity

- GHG abatement via fire suppression activities in bushfire-prone areas

The Proposal

- None developed

The Outcome

- Not progressed
- Difficult baselines
- Lack of data for quantifying abatement
- Cost and time to develop



The results

One ERF method for production forests

- New plantations
- Plantation converted from short to long rotation
- Farm Forestry
- Harvested wood produces from plantations while in service.

.....with room for improvement

.....and still more opportunities for abatement



Carbon Credits (Carbon Farming Initiative— Plantation Forestry) Methodology Determination 2017

I, Josh Frydenberg, Minister for the Environment and Energy, make the following determination.

Dated 10 August 2017

Josh Frydenberg
Minister for the Environment and Energy

How to improve the plantation methodology

- **Baseline** – Exploring the potential of a zero baseline for short-rotation stands that are not viable to replant;
- **HWPs in landfill** – reviewing new research and reconsidering the inclusion of HWPs in landfill in the scope of the method.
- **Ministerial Assessment of impacts on Agricultural land** - reconsider the need for this assessment.
- **600mm rainfall limitation** - The rule should be consistently applied to all tree planting projects or removed. If retained DAWR should expedite Commonwealth-State discussion across all NPI regions to provide advice to proponents and improve on line information to assist with decision making.
- **NPI regions** - review the NPI boundaries to ensure that they capture all suitable plantation areas, with a particular focus on areas with existing plantations. Include NPI regions boundaries in the CFI mapping tool.

What other opportunities are there?

- **Greenfield activities** – allowing greenfield activities (such as replacing a coal powered station with a biomass powers station) where these are within one entity's operations, so as to avoid leakage.
- **Limits on energy generation** - revising the limits on energy generation in the IEFÉ method, to allow for activities that generate electricity greater than the current restriction of 30 megawatts to increase demand for biomass feed stock from plantation forests, including project registered under the ERF Plantation Forest Method; a double win for abatement.

What other opportunities are there?

- **Residues from harvesting** – reviewing the scope of the Renewable Energy Act rules with respect to energy crops, and how this could be revised to bring it in line with the CFI Regulation. This could enable broader participation in renewable energy activities, both under the RET and ERF industrial methods.
- **Opportunities to generate abatement through enhanced management of native forests, taking a landscape approach.**

What other opportunities are there?

- Abatement potential associated with the use of biomass for bioenergy unrealised through all of the current policy approaches.
 - Research from this project, and others (e.g Australian Biomass for Bioenergy Assessment - ABBA) shows significant volumes of forestry biomass have significant potential for a range of uses but are a net loss to the industry and a lost abatement opportunity.
 - Further promoting the potential of use of sustainably sourced woody biomass for renewable energy displacing fossil fuels and the development of new generation value-added products such as biomaterials, biochemicals and bioenergy from Australian renewable wood fibre.
 - Further research into opportunities for strategically aligning the plantation sector, including ERF plantation projects, and options for Bioproducts hubs

Acknowledgements

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