Solar PV for Low Income Households

Solar Rates Business cases Phase 1 and 2

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VICTORIA State Government

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Structure

The problem

Solar $avers: an early program success

Business case to upscale support

Recommended path

Problem

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Energy poverty a recognised problem
… with private and public costs

> Hardship provisions
> Electricity and gas concessions
> Local community & adaptation plans
> Limited scale pilot programs offering non-retail electricity solutions

For some lower income households, lowest cost energy may include onsite renewables but this may be off limits:

> Inadequate household cash reserves
> Limited access to suitable credit
> Other disadvantages specific to sub-groups
> State support only for retail energy services

For these households, the existing retail-focused government interventions are inefficient and ineffective solutions.

Opportunity

About 52,000 owner occupier pensioners could be ready to benefit as a starting group

Darebin Solar $avers

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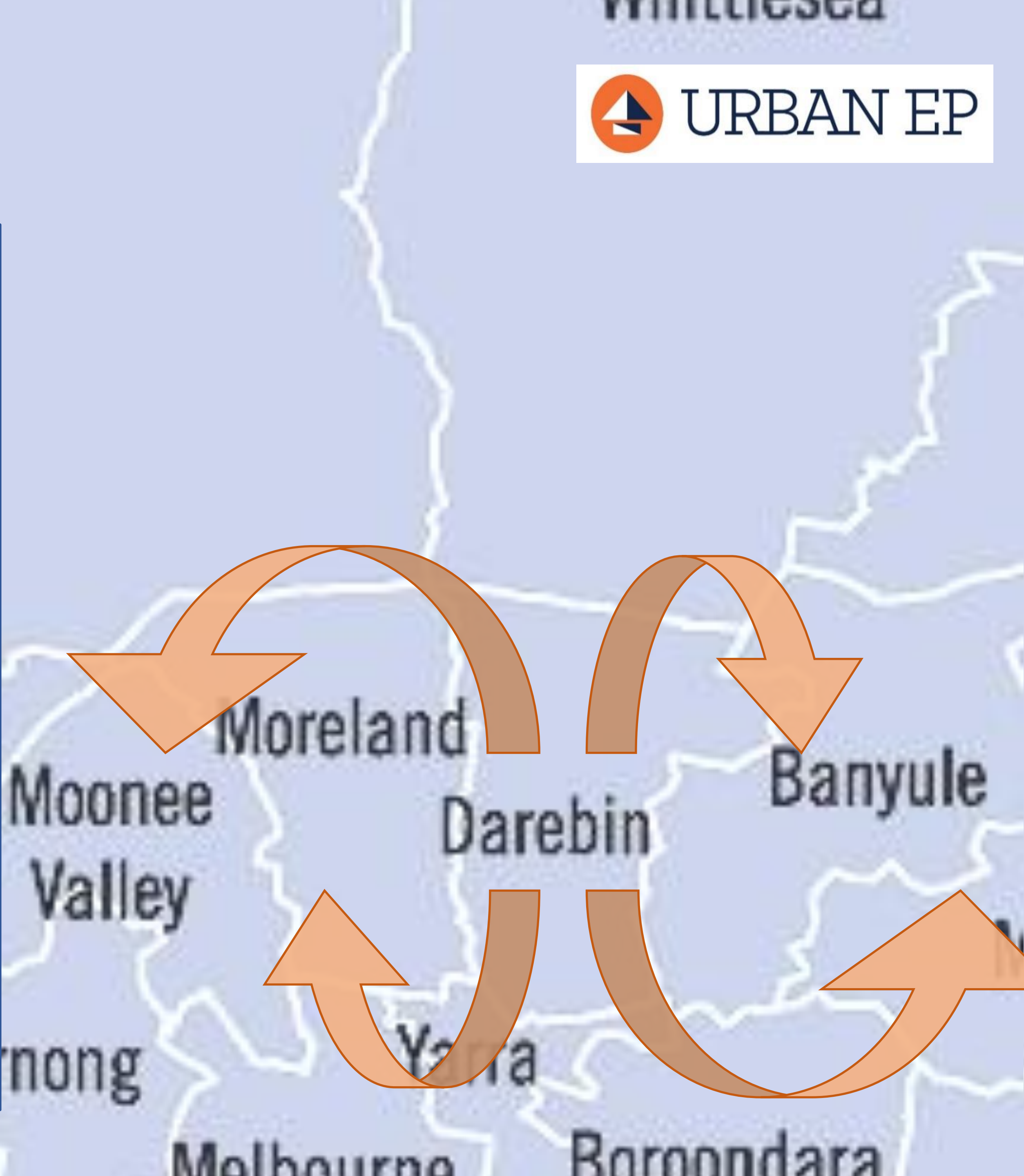
Outcomes:

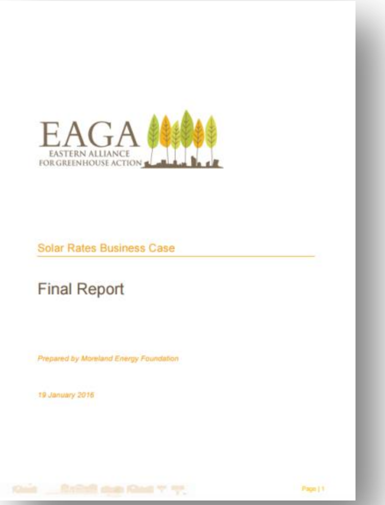
- 292 pensioner homes
- Paid for via cash reserve
- 0 % p.a. / 10 years
- Total installed capacity 545 kW
- Savings of $100 / year over loan years

Challenges to replicate beyond Darebin:

- Costs to recruit and engage
- Special Rates mechanism
- Reliance on council reserves



Solar Rates business case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Solar Rates Business Case

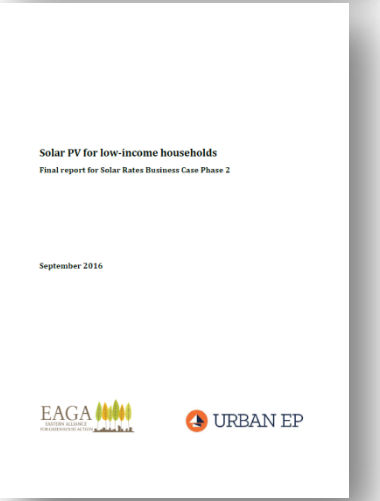
Final Report

Prepared by Moreland Energy Foundation

19 January 2016

Phase I

- ✓ Opportunity across lower income households
- ✓ Owner-occupier pensioners ideal to start with
- ✓ Threshold terms of 5 % p.a. / 10 years
- ✓ Risk to lender a dominant variable to address
- ✓ Evidence base for NEJF application


Solar PV for low-income households

Final report for Solar Rates Business Case Phase 2

September 2016

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Phase II

- ❑ The value proposition
- ❑ Viable financing models
- ❑ Roles and services in delivery
- ❑ Legislative constraints
- ❑ Longer term considerations

New Energy Jobs Fund

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> Application for funding to support project staff (2.5yrs)
> 20+ councils
    > Stream A - councils directly sponsoring installations (Special Charges)
    > Stream B - trialling bank loans directly to householder
> Bank Australia providing sub 5% loans, 10 yrs
> $50,000 default fund trial
> Shared services model, leveraging Alliances
> Up to 900 pensioner home owners
> Strong focus on trialling models and evaluation

Value proposition

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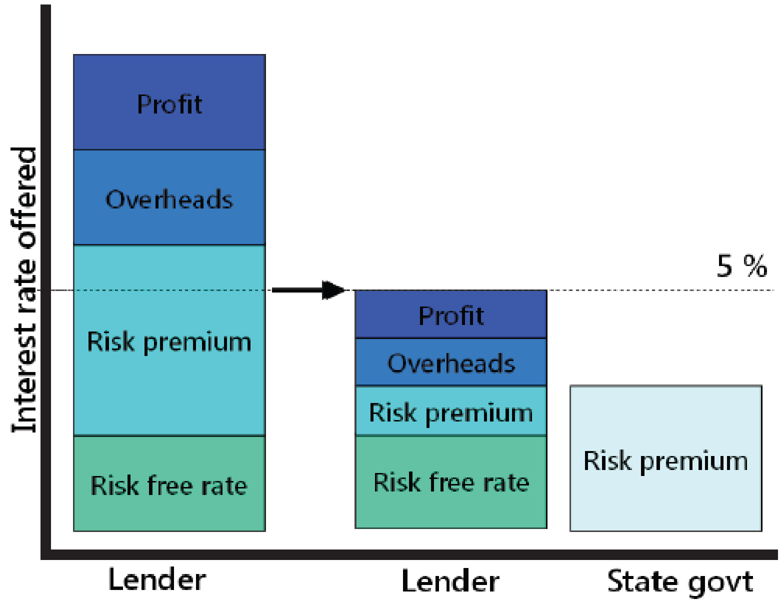
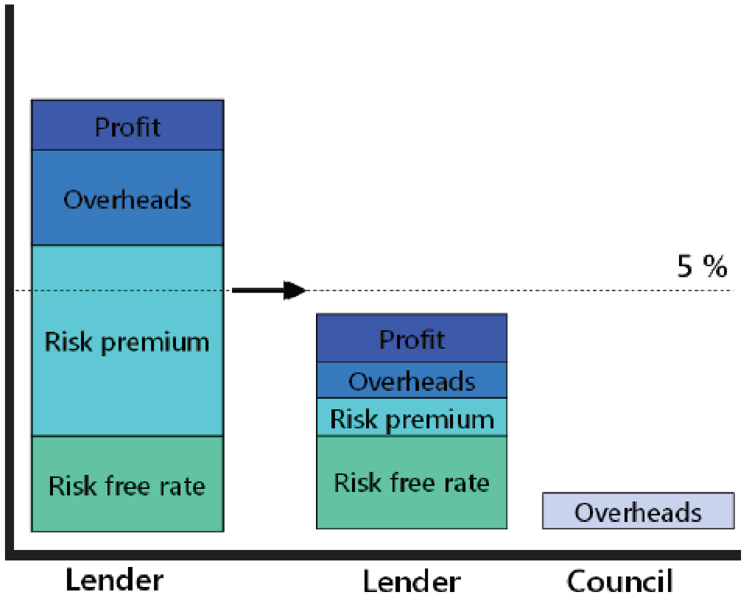
Owner occupier pensioners	• Lower energy costs now and in future • Empowered to partake in energy market transformation • Finance mediated by existing relationships
Local governments	• Welfare gains to least advantaged community members • Climate change mitigation and adaptation outcomes • Scale carries opportunity to share costs and experiences
State government	• Better designed welfare interventions • Energy welfare and climate change co-delivered • Real public savings • Wider, fairer stake in renewable energy • Option to adapt to social and public housing
Lenders	• Ability to lend responsibly to households in need • Enhanced social licence to operate

Financing paths and interest rates



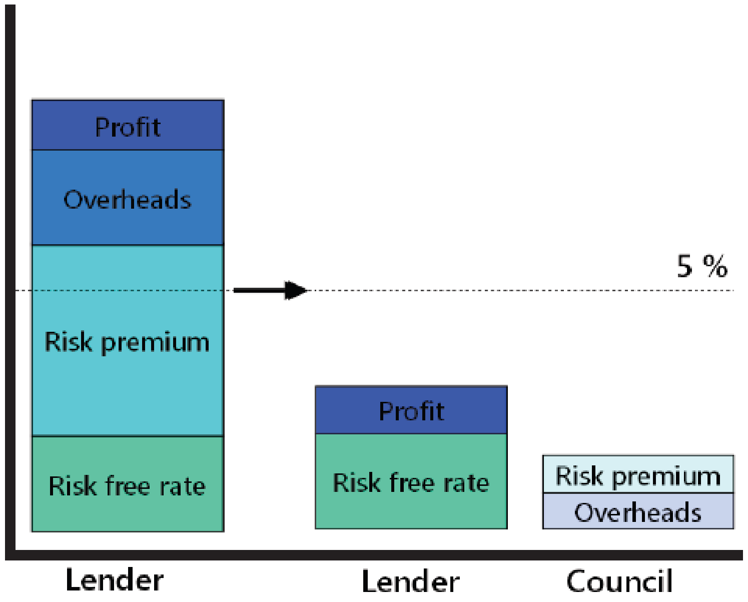
Private finance with Gov guarantee

Risk transferred to state



Council rates: EUA

Risk remains with lender, council acts as collection intermediary



Council rates: Special Charges + debt

Risks to lender diminished when council acts as borrowing intermediary

State government is a financial stakeholder

Accepting a solar loan means a lower retail electricity concession

→ ~$80 windfall gain to the state per year at home owner's cost

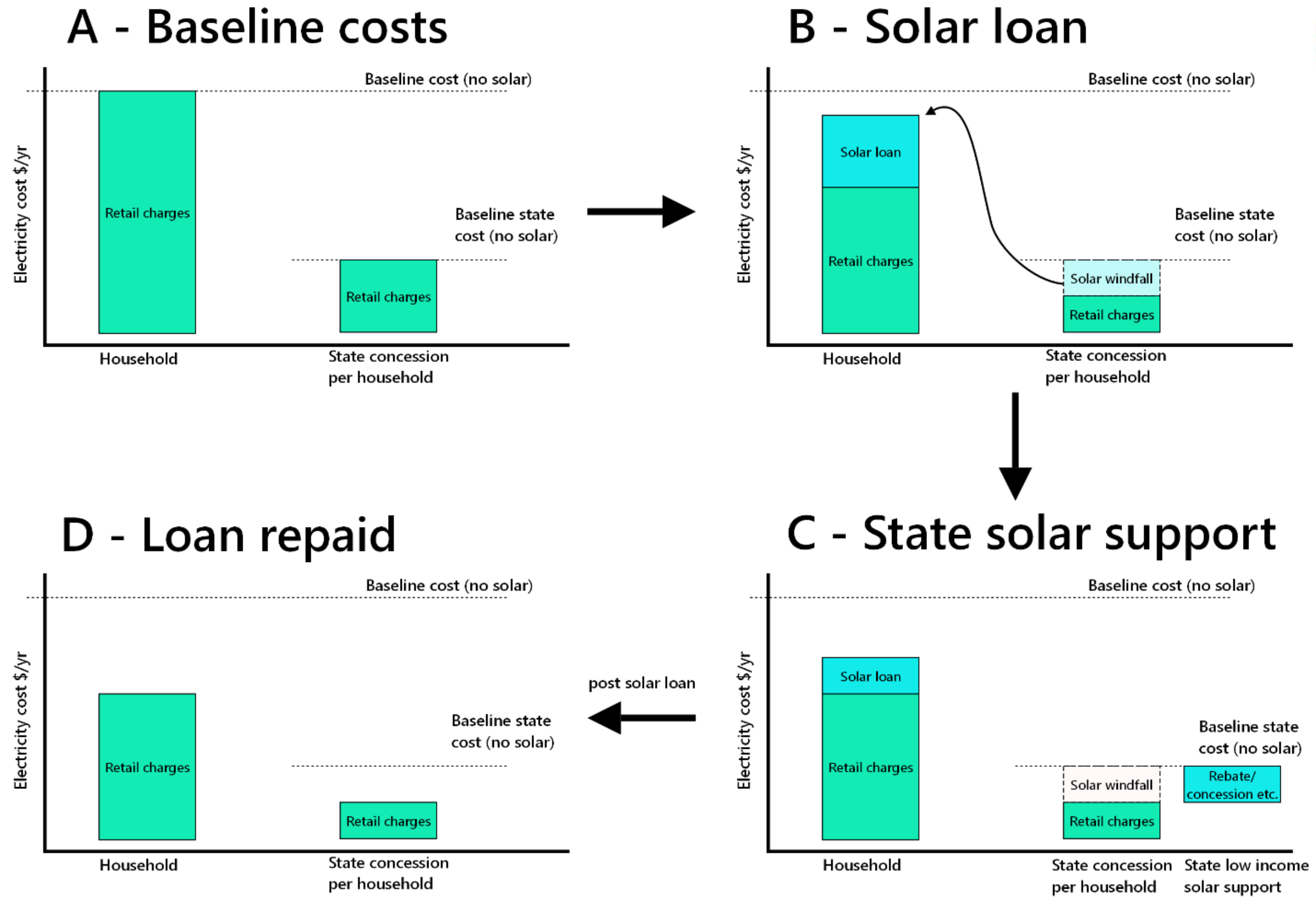
Home owner retains some risk, depending on their circumstances

- May reduce interest and uptake across the 52,000 homes
- May stymie the gains for household, concessions and climate action

Victorian Government may want to:

> share the risk in accordance with the benefit

> improve the efficiency and equity of retail-only concessions


A - Baseline costs
Baseline cost (no solar)
Electricity cost $/yr
Retail charges
Baseline state cost (no solar)
Retail charges
Household
State concession per household
B - Solar loan
Baseline cost (no solar)
Electricity cost $/yr
Solar loan
Retail charges
Baseline state cost (no solar)
Solar windfall
Retail charges
Household
State concession per household
D - Loan repaid
Baseline cost (no solar)
Electricity cost $/yr
Retail charges
Baseline state cost (no solar)
Retail charges
Household
State concession per household
post solar loan
C - State solar support
Baseline cost (no solar)
Electricity cost $/yr
Solar loan
Retail charges
Baseline state cost (no solar)
Solar windfall
Retail charges
Rebate/ concession etc.
Household
State concession per household
State low income solar support

Combined state energy concessions + solar loans

Scale constraint: cash reserves

Scale constraint: debt appetite

Scale constraint: household benefit

Finance path and interest rate	Household net savings (during loan, per year)	Household net savings (after loan, per year)	Concession savings (after loan, per year)
Council reserves: 0 %	$161 - $282	$409 - $536	$87 - $109
Council borrows: 1.5 %	$135 - $253	$409 - $536	$87 - $109
2.5 %	$116 - $233	$409 - $536	$87 - $109
Direct bank loan: Up to 5 %	$68 - $181	$409 - $536	$87 - $109

Shared services to deliver at scale

Pursue an ongoing statewide offering with:

1. Flexibility to aggregate with councils and partners
2. Ongoing improvements on loan terms
3. Inclusion of efficiency and thermal comfort benefits over time.

Seek MAV to:

- provide procurement services to the NEJF pilot
- engage with the state government on support and legal reform

Also engage MAV or banks to source funds at low interest rates, and test options to offload debt in line with debt tolerances.

Work with Sustainability Victoria to identify and deliver integrated and complementary services.

Recommended path

1. State government to consider a rebate in line with concession savings.

To aid uptake and create a buffer for households as they repay the loan.

2. Lower the Special Rates legal requirements for ‘opt in’ solar programs.

To make it easier for councils to use special rates with council reserves and other funding sources.

3. Leverage the capabilities of MAV and Sustainability Victoria.

4. Continue to drive improvement.

- Seek best possible sources of finance and lending terms
- Build on the program to bring benefits for other low income segments
- Apply knowledge gained to realise other energy and welfare benefits.

Thank you!

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Solar rates business case reports and related material:
https://eaga.com.au/projects/solar-rates/