

## Southern Exposure: an overview of PV/Diesel in Malaysia and Australia

Phil Maker  
<philip.maker@gmail.com>

Alaskan Center for Energy and Power

March 2015

### Abstract

A summary of efforts in Malaysia and Australia in the PV/Diesel/Battery area with Malaysia mostly winning (no comment re Alaska).



## Introduction

Overview of PV/Diesel/Battery work in:

1. Australia
2. Malaysia
3. Sky Cameras and Solar Forecasting

*"Remember that every view, is based on where you are looking from" – Uncle Phil*



## ARENA

ARENA [www.arena.gov.au](http://www.arena.gov.au) as approximately \$2.5 billion in funding to:

1. Fund renewable energy projects
2. Support research and development activities
3. Support activities to capture and share knowledge.

Projects larger than 26M\$:

- ▶ AGL Solar Project 166M\$
- ▶ Australian Solar Thermal Research Initiative 35M\$
- ▶ Australia-US Institute for Advanced Photovoltaics 33M\$
- ▶ Cooper Basin Enhanced Geothermal Systems Heat/Power 59M\$
- ▶ Kogan Creek Solar Boost project 34M\$
- ▶ Moree Solar Farm 101M\$
- ▶ NT SETuP Program 27M\$ (or 55M\$ total project)



## Northern Territory: SETuP

- ▶ >30 sites medium penetration with 9MW PV and no storage. Intended to reach 60% peak penetration/contribution with a fuel saving of around 15%.
- ▶ Single 1MW PV/Diesel/Battery site off (or 200% penetration in Alaskan) with an intended fuel saving of around 50%.
- ▶ Aiming to change the organisation and the technology.
- ▶ Sky Camera Forecasting
- ▶ Demand Management using Saturn South kit.

Main point to note is that: 35 x anything is a lot, 35 x 2w for commissioning means a few years work.

Contact: [Andrew Gray](#)



An overview of Malaysia.including 70% average penetration, etc. ...



- Yet another model for procurement (for us at least:<sup>1</sup>).
- ▶ 3 x Trial Systems at a target price of 15k\$.for 3..6 months.
  - ▶ Everyone must provide a price for a:
    - ▶ Trial system for 12 months.
    - ▶ Rollout out of from 1..10 units over the next 2 years.

<sup>1</sup>Thanks to Tim Powe



Why we do it, who does it and how they do it.  
All based on industrial input.



Who are the suppliers



## Conclusion

Nothing too controversial but:

- References to various projects.

*"Economics are the method;  
the object is to change the heart and soul" – Margaret  
Thatcher*

