

# Daly River High Penetration Power System

NOV 2017 Newcastle Microgrid Symposium  
PowerWater



## Daly River High Penetration Power System

### Agenda

- Project Background
- Operational Context
- Design overview
  - Modelling
  - Energy Storage System
  - PV array
  - Control System
- Protection
- Other Challenges
- Results
- Future Outlook



## Project Background

### Facilitators

- Diesel OPEX
- Previous Renewables Experience
- ARENA / NTG Funding



## Operational Context

### Environment

- Climate
- Remoteness
- Skills
- Project site selection



## Design Overview

### Design choices

- System Performance Modelling (Operational Intent)
- Energy Storage System
- PV array
- Control System



## Protection Design and Testing

### Implementation

- Overview
- Design
- Testing



## Other Challenges

New Challenges and Resolution

- Ferroresonance
- Harmonics



## Performance Results

Operational Experience

- TBA





## Future Outlook

### Remote Operations Energy Strategy

- Additional systems
- Cost trends



## Thankyou

- Questions
- Contacts