



ICN VICTORIA and ESCO PACIFIC PROJECT INDUSTRY BRIEFING

VRET2 Horsham Solar Farm

22.03.2023 – BALLARAT

Welcome

Andrew Bradley

Senior Industry Liaison

ICN Victoria

Acknowledgement of Country

ICN Victoria would like to acknowledge the Traditional Custodians of the land, the Wadawurrung and Dja Dja Wurrung People People and pay respects to their Elders past, present and emerging and extend that respect to all Aboriginal and Torres Strait Islander People

Today's Program

- Welcome and Introduction
- ESCO Pacific – Introduction to Horsham Solar Farm project
- ESCO Pacific – Engineering, Procurement, Construction and O&M
- ESCO Pacific – Social Procurement
- ICN Victoria – Gateway Overview
- Q & A
- Networking

Event Page



Rhiannon Olle

Head of Development

ESCO Pacific

ESCO Pacific - Overview

- Leading Australian developer and asset manager of utility scale solar farms
- Shell acquired 49% interests in ESCO Pacific during 2019
- Over 2GW of solar development sites secured
- Strong track record of successfully developing and managing solar projects
- Five Solar Projects currently operational in Australia, total c. 600 MWdc



Ross River Solar Farm, QLD

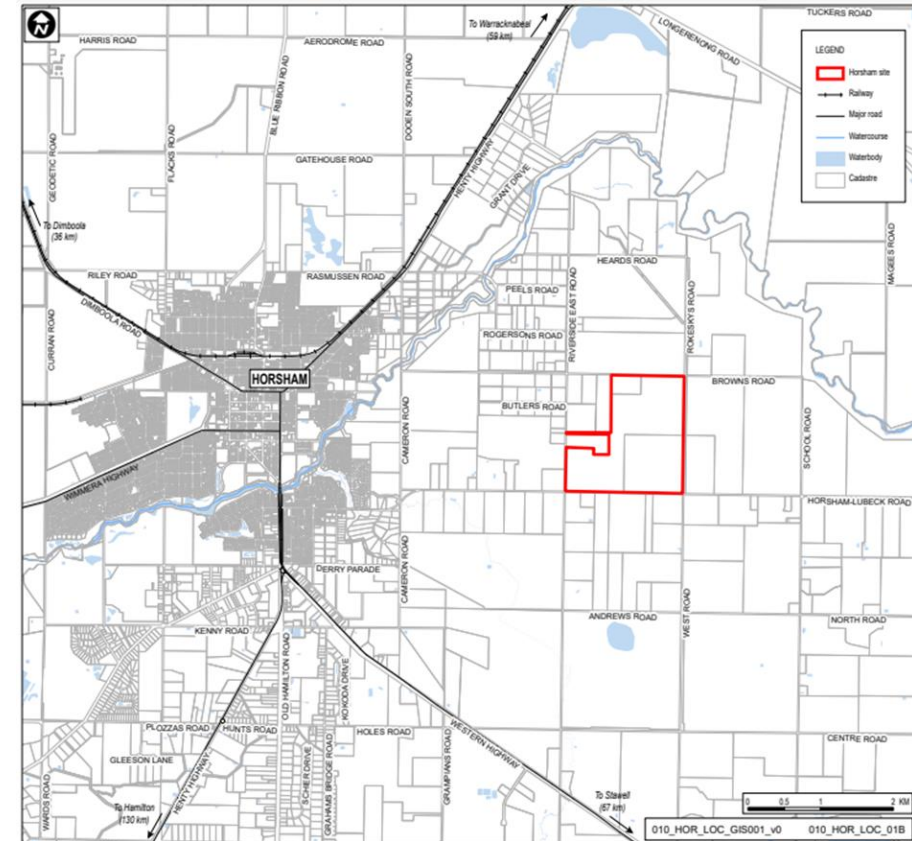
ESCO Pacific - Operational and Under Construction Solar Farms



Solar Farm	MW	EPC
Ross River	148 MW	Downer
Childers	75 MW	Biosar
Susan River	95 MW	Biosar
Finley	175 MW	Signal
Moura	110 MW	Metka
Wyalong (under construction)	75 MW	Metka
Glenrowan (under construction)	125 MW	UGL

Horsham Solar Farm - Introduction

- Horsham Solar Farm is a 118.8 MWac solar project
- Supported by the Victorian Government through the Victorian Renewable Energy Target Auction (VRET2)
- The project will contribute towards meeting Victoria's new renewable energy targets of 65% by 2030 and 95% by 2035
- The solar farm will supply enough renewable electricity to power approximately 55,700 Australian homes
- Approximately 230,000 PV Panels across 196ha site



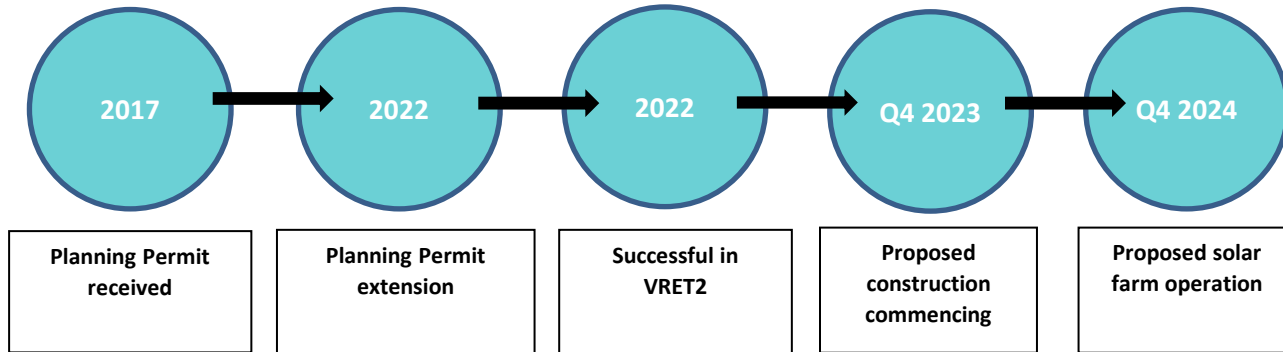
Why Horsham? - Site Selection

Why we selected this site?

- proximity to electrical infrastructure
- solar resource
- flat topography
- cleared land
- limited constraints: ecology, geotechnical & heritage

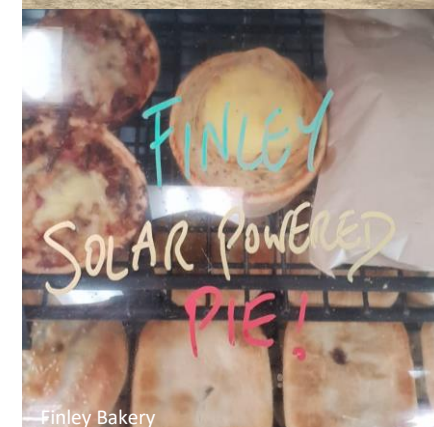


Horsham Solar Farm - Timeframe



Community and Economic Benefits

- Employment during construction and operation
- Training and business development opportunities
- Flow on effects (food and beverage services, fuel, accommodation, local equipment suppliers)
- Community Benefit fund
- Renewable energy



An aerial photograph of a large solar farm, showing rows of solar panels stretching across a field, with a dirt path cutting through them.

Ravi Singh

CTO

ESCO Pacific

Engineering, Procurement, Construction and O&M of Horsham Solar Farm



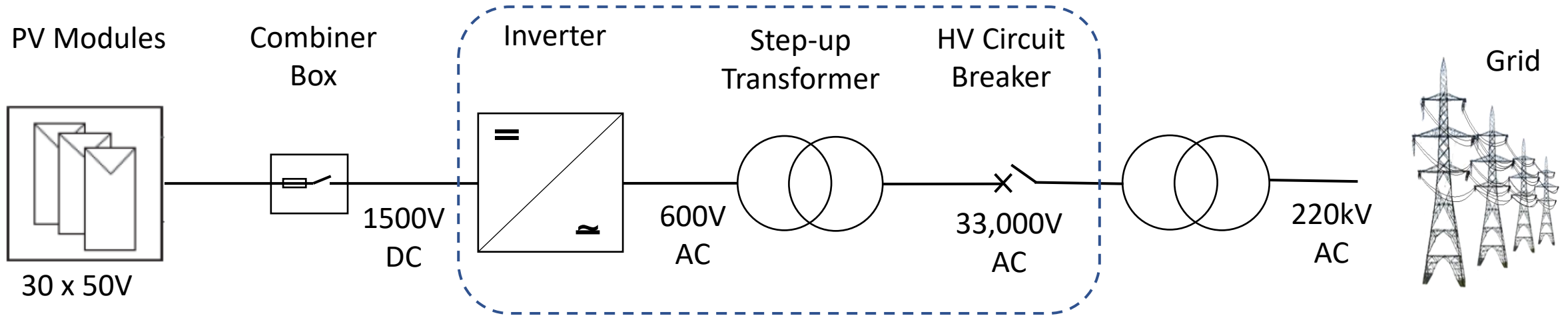
Building blocks of a Solar Farm

- ❑ DC system
 - PV modules
 - Trackers
 - Combiner Boxes
 - DC Cables
 - Inverters

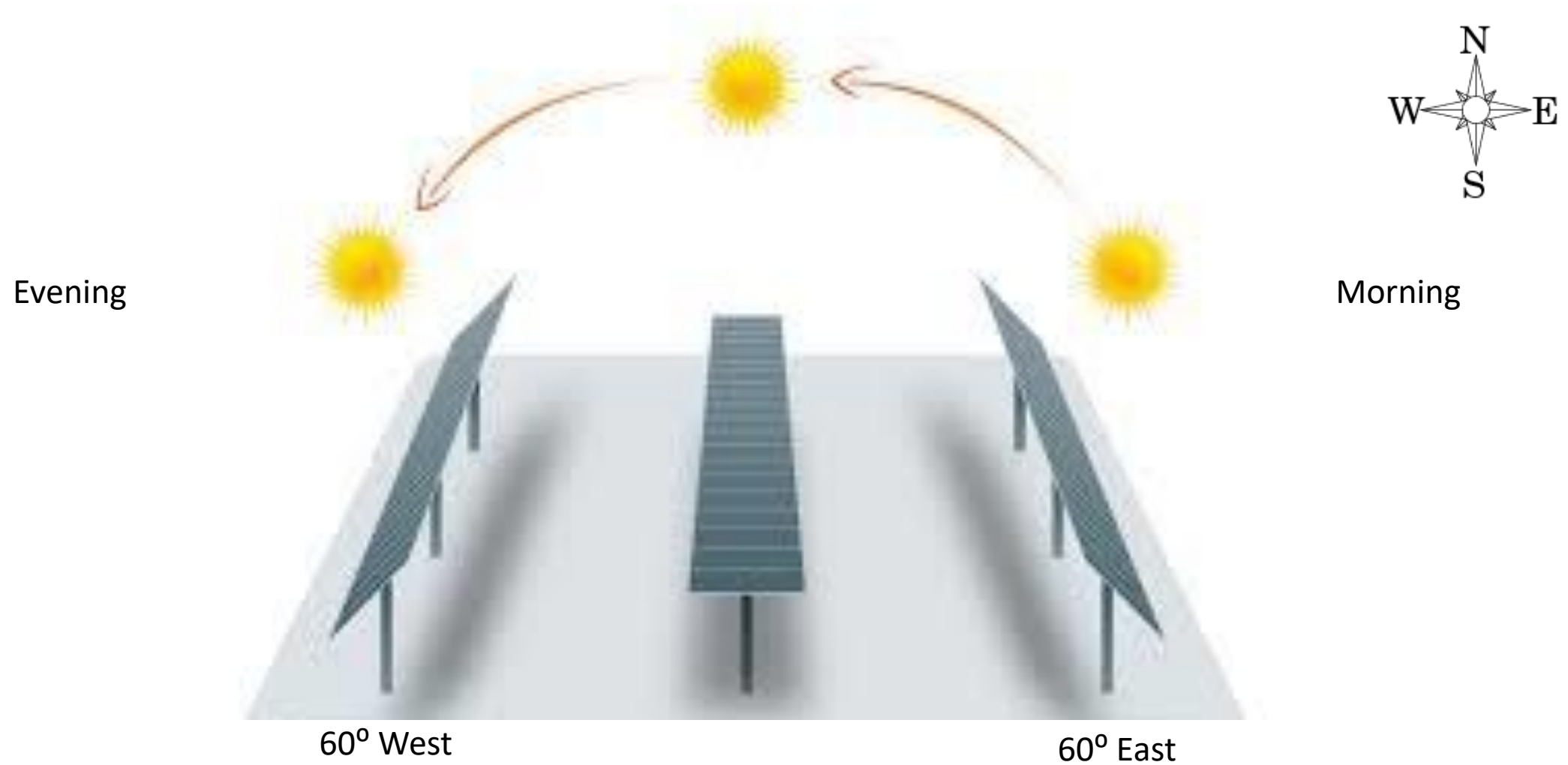
- ❑ AC System
 - Power Conversion Units
 - MV reticulation
 - Collection Station
 - Main HV/MV substation

- ❑ Monitoring & Control
 - SCADA
 - Security System
 - Protection and Metering

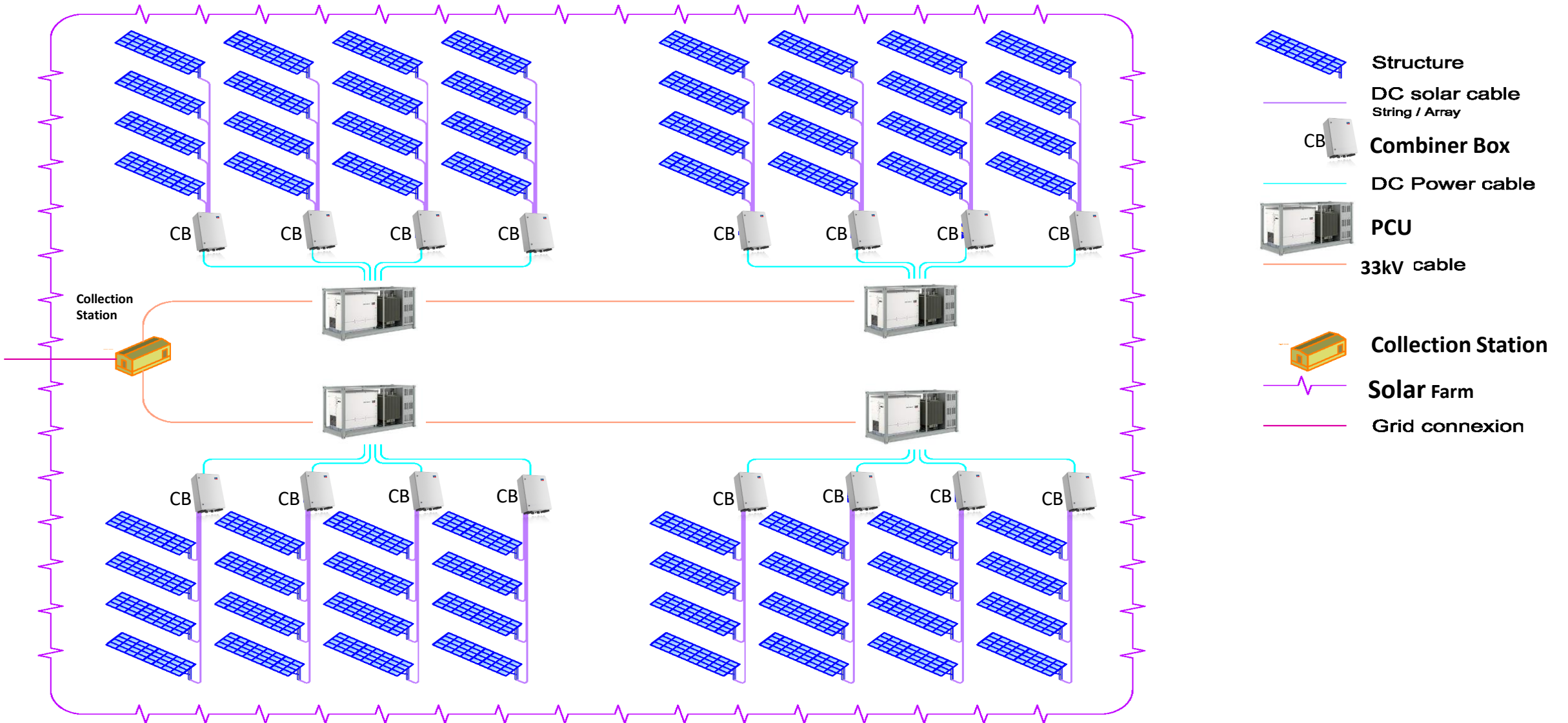
Building blocks of a Solar Farm



Rotation of PV modules mounted on horizontal axis tracker



Typical layout of a solar farm



Example: 175MW Finley Solar Farm



ESCO

Pacific

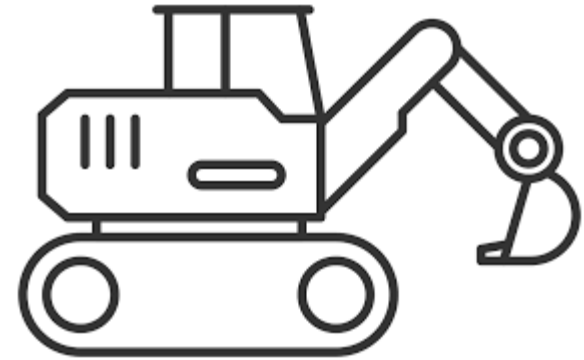
Finley Solar Farm

Construction – Work Packages

- Civil works
- Mechanical works
- Electrical works
- Plant and equipment hire
- Labour hire
- Logistics
- Engineering services
- Landscaping
- Material supply
- Operation & Maintenance services

Construction - Civil works

- Civil survey
- Perimeter fence and gate
- Clearing & grubbing
- Cut and fill
- Site access road and internal roads
- Hardstand/laydown area
- Temporary construction facilities
- Foundations for PCUs, Auxiliary Transformer and Diesel Generator set
- Operation & Maintenance buildings



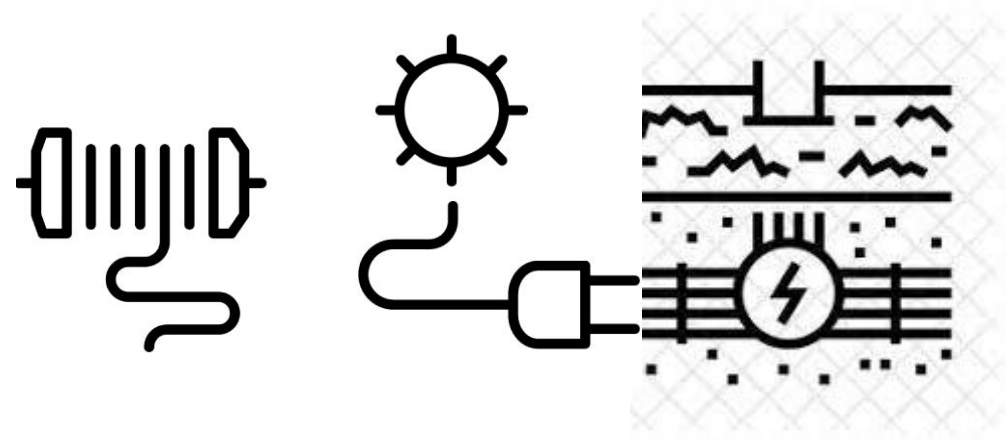
Construction: Mechanical works

- ❑ Pull-out test for piles
- ❑ Installation of various equipment:
 - Piles
 - Trackers
 - PV modules
 - Combiner boxes
 - PCUs
 - Collection station
 - Weather stations



Construction: Electrical works

- ❑ 1500V DC string cabling (modules → Combiner Boxes)
- ❑ 1500V DC array cabling (Combiner Boxes → PCUs)
- ❑ 33kV cabling (PCUs → Collection Station)
- ❑ Fibre Optic and other communication cabling
- ❑ LV cabling
- ❑ Earthing
- ❑ Trenching & backfilling
- ❑ Cable terminations and testing



Construction: Miscellaneous Services

- Plant and equipment hire
- Labour hire
- Logistics
- Engineering services
 - Surveying
 - Geotechnical
 - Topography
 - Hydrology
 - Dilapidation survey
- Landscaping



Material supply

- General hardware - electrical and mechanical
- Quarry material
- Water trucks
- DC combiner boxes
- Water tanks
- Prefabricated buildings
 - O&M building
 - Storage building
 - Temporary office buildings



Operation & Maintenance

- Vegetation management
- PV module cleaning
- Thermographic analysis
- Calibration of various devices
- Periodic visual and electrical/mechanical checks
- Maintenance of all site communication and data equipment
- Maintenance of all civil and building infrastructure



Helen Kennedy

Community & Stakeholder
Manager

Michelle Croker

Community Engagement &
Stakeholder Adviser

ESCO Pacific

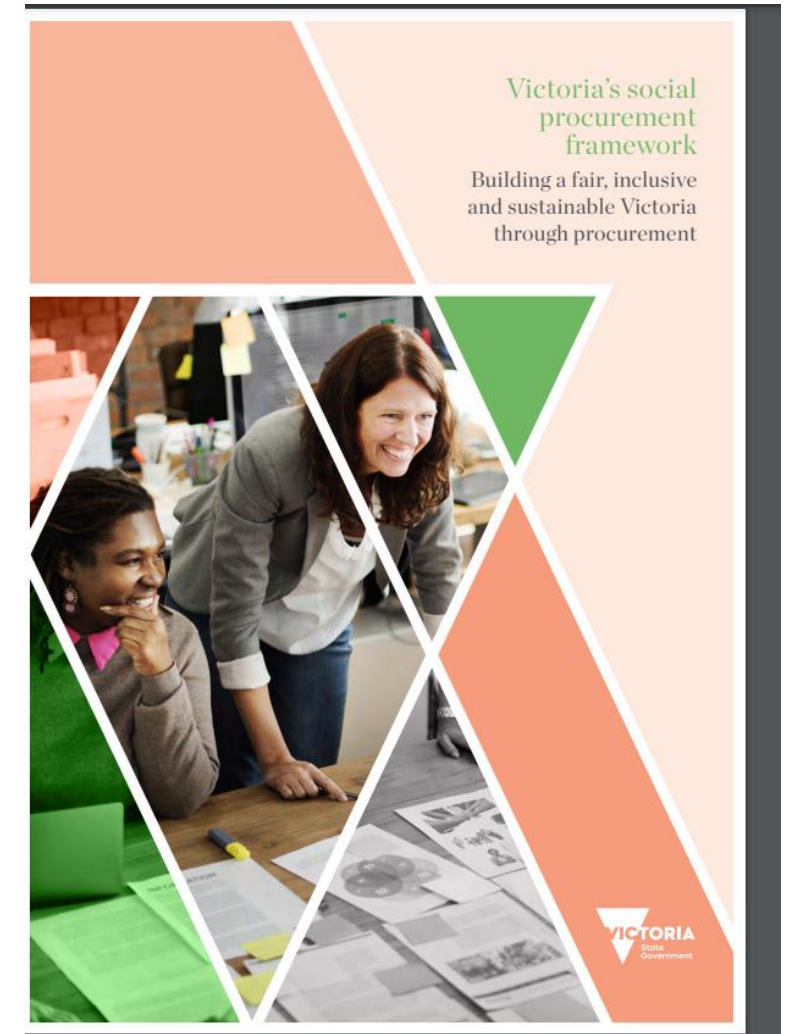
Horsham Solar Farm – Social Procurement

Social procurement is when organisations use their buying power to generate social and/or sustainable value above and beyond the value of the goods, services, or construction being procured.

Horsham Solar Farm (HSF) is one of 6 successful projects under the state government's Second Victorian Renewable Energy Target auction (VRET2).

VRET2 will drive new investment, create hundreds of jobs and contribute to the target of sourcing 100% renewable electricity for all Victorian Government operations by 2025.

All VRET2 projects must meet their social procurement commitments as agreed with the State in their VRET2 contracts.



Horsham Solar Farm – Social Procurement Objectives

- Opportunities for Victorian Aboriginal people and Aboriginal business sectors
 - Opportunities for Victorians with a disability
 - Opportunities for disadvantaged Victorians
 - Sustainable Victorian social enterprises
-
- Supporting safe and fair workplaces
 - Women's equality and safety

Horsham Solar Farm – Social Procurement Example

Opportunities for Victorian Aboriginal people

A specific target will be confirmed. Previous projects have used 1.5%

Spend Opportunities	Employment Opportunities	Resources
Purchasing from Victorian Aboriginal businesses	Employment of Victorian Aboriginal people	Kinaway Chamber of Commerce– https://kinaway.com.au

Horsham Solar Farm – What does Social Procurement mean for Contractors?

- The intention of social procurement commitments is to ensure there are opportunities for all Victorians to participate in the workforce.
- Each social procurement objective will have a measurable participation commitment.
- Social procurement areas and commitments are not inherently mutually exclusive. For example, a commitment to deliver Opportunities for disadvantaged Victorians may overlap with commitments made for Opportunities for Victorians with a disability.
- Contractors are encouraged to consider how their business may help meet social procurement commitments across the objectives. It is not the only measure but will help strengthen your bid.

Horsham Solar Farm – Social Procurement Resources

Aboriginal participation - Kinaway Chamber of Commerce– <https://kinaway.com.au/>

Social enterprise - Social Traders - <https://www.socialtraders.com.au/>

ESCO Community and Stakeholder Engagement Manager

ICN Victoria Social Procurement [Webpage and Gateway](#)

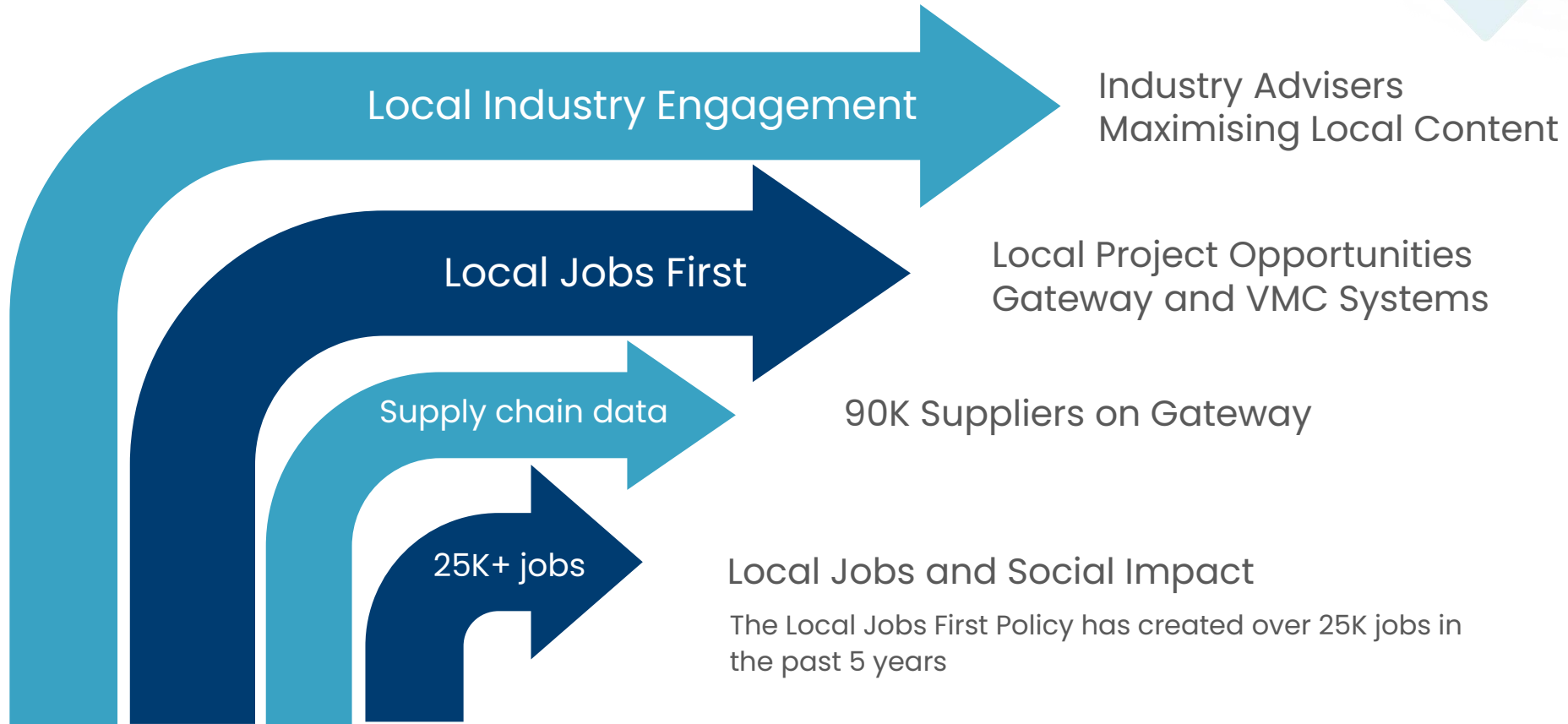


Andrew Bradley

Senior Industry Liaison

ICN Victoria

Helping Local Win





What are you looking for?

Projects

Suppliers

?

What kind of work or project?



State



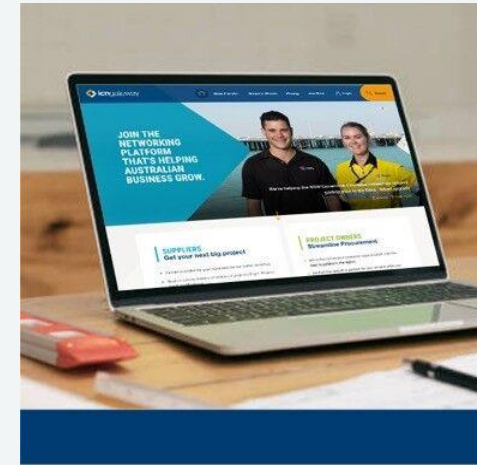
Region



Search

Register and maximise your profile

Gain visibility to project opportunities as they are published



✓ Online Workshop

✓ Regular newsletters

✓ Targeted audience

Submit an EOI

Project Overview

Work Packages

About the Project

ESCO's Horsham Solar Farm is situated on 196 hectares of grazing and cropping lands, approximately 5 km east of Horsham in Victoria. The project will export a maximum of 118.8MWac power to the grid and comprise approximately 230,000 solar photovoltaic (PV) modules, installed on ground-mounted single axis horizontal tracking structures. Direct Current (DC) electricity generated by various groups of PV modules is combined and fed into solar inverters which invert DC electricity into Alternating Current (AC) electricity. This electricity will then be fed into a 33kV reticulation system before being centrally dispatched to the electricity network via a newly built transformer substation connecting solar farm directly to the 220kV bus at existing Horsham Terminal Substation owned by the Ausnet.

The solar farm consists of the following major equipment:

- 220/33kV Main Transformer Substation
- 220kV underground cable between Solar Farm and Horsham Terminal Station
- Collection Station consisting of 33kV switchgear, Protection, metering, control and communication equipment
- AC and DC auxiliary power supply system, all mounted inside a prefabricated building
- PV modules
- Trackers
- Piles
- Combiner Boxes
- Power Conversion Units (PCUs) consisting of inverters, transformers and Ring Main Units, all mounted on a metal skid
- SCADA system
- Security System



Project at a glance

- VIC Australia
- Development
- ESCO PACIFIC HOLDINGS PTY LTD

Contact Details

- Garry Holding
Industry Adviser - Ballarat
- +61 418 994 288
 - Send email

Project Overview | **Work Packages**

Work Package | Documents | Full Scope EOI

General

+ Any Opportunities	→ Create EOI Closes: 01 Mar 2024 (AEDT)
+ Civil Works	→ Create EOI Closes: 01 Mar 2024 (AEDT)
+ Electrical Works	→ Create EOI Closes: 01 Mar 2024 (AEDT)
+ Labour Hire	→ Create EOI Closes: 01 Mar 2024 (AEDT)
	→ Create EOI Closes: 01 Mar 2024 (AEDT)

ICN VICTORIA

Social Procurement Program



EDUCATION



CONNECTIONS



REPORTING

**Social Procurement Advice | Rebecca Lee
Building Equality Policy | Janelle Williams
vicspteam@icnvic.org.au**



icnvic.org.au

CONNECT

Key Contacts and Channels



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[@icnvic](https://www.linkedin.com/company/icnvic)



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Question time

- Rhiannon Olle – Head of Development, ESCO Pacific
- Ravi Singh – CTO, ESCO Pacific
- Michelle Croker – Community Engagement & Stakeholder Adviser, ESCO Pacific
- Helen Kennedy – Community & Stakeholder Manager, ESCO Pacific

Additional Questions

Please email:

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Thank you.



Helping Local Win

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