

SOUTH AUSTRALIA TO VICTORIA INTERCONNECTOR UPGRADE

ABOUT THE PROJECT

The South Australia – Victoria Interconnector is located between the South East (South Australia) and Heywood (Victoria) substations and was constructed in 1988 to provide a point of connection and exchange between the South Australian and Victorian high-voltage transmission networks.

The interconnector comprises a 500 kV to 275 kV substation at Heywood in Victoria, and 275 kV lines from Heywood to the South East substation in South Australia.

Historically, this interconnector has mostly been used to import power into South Australia. However, over the past few years, with the addition of significant amounts of wind generation in South Australia, the interconnector is now also being used to export power from South Australia.

There are existing limitations on the interconnector's transfer capacity that will be addressed through this upgrade project. This will result in increased access to reliable, lower cost generation for South Australia, particularly at peak times. The project will also enable further development of South Australia's renewable generation resources.

Simply put, more electricity will be able to move between South Australia and Victoria.

This upgrade project will see a third electricity transformer installed at the Heywood substation in Victoria and a new series compensation site being built at Black Range in South Australia. Works will also be done on the 275 kV transmission lines from the Tailern Bend to South East substations in South Australia, other substations in the South-East region of South Australia, and other asset upgrading works.

The interconnector upgrade is a project of strategic state significance, and will provide net market benefits of over \$190 million over the life of the project by reducing generation dispatch costs over the longer term. These benefits will commence from the first year of operation.

THE STORY SO FAR

ElectraNet has followed a rigorous regulatory process to assess the need for the interconnector upgrade and find the most economical solution. The Regulatory Investment Test for Transmission (RIT-T) process for this project started over four years ago and included a three-stage public market consultation.

In 2013, the Australian Energy Regulator (AER) determined that the solution identified through the RIT-T process provided the maximum economic benefits and met the requirements of the investment test. Funding approval was received in March 2014, to proceed with the upgrades associated with the South Australia – Victoria Interconnector.

Since then, ElectraNet has been busy with the detailed planning and design to allow delivery of this important infrastructure project by July 2016.

NEW SERIES COMPENSATION SITE AT BLACK RANGE

In South Australia, the largest component of work will relate to the creation of a new series compensation site at Black Range, which is located about half way along the 275 kV transmission line running between the South East and Tailern Bend substations.

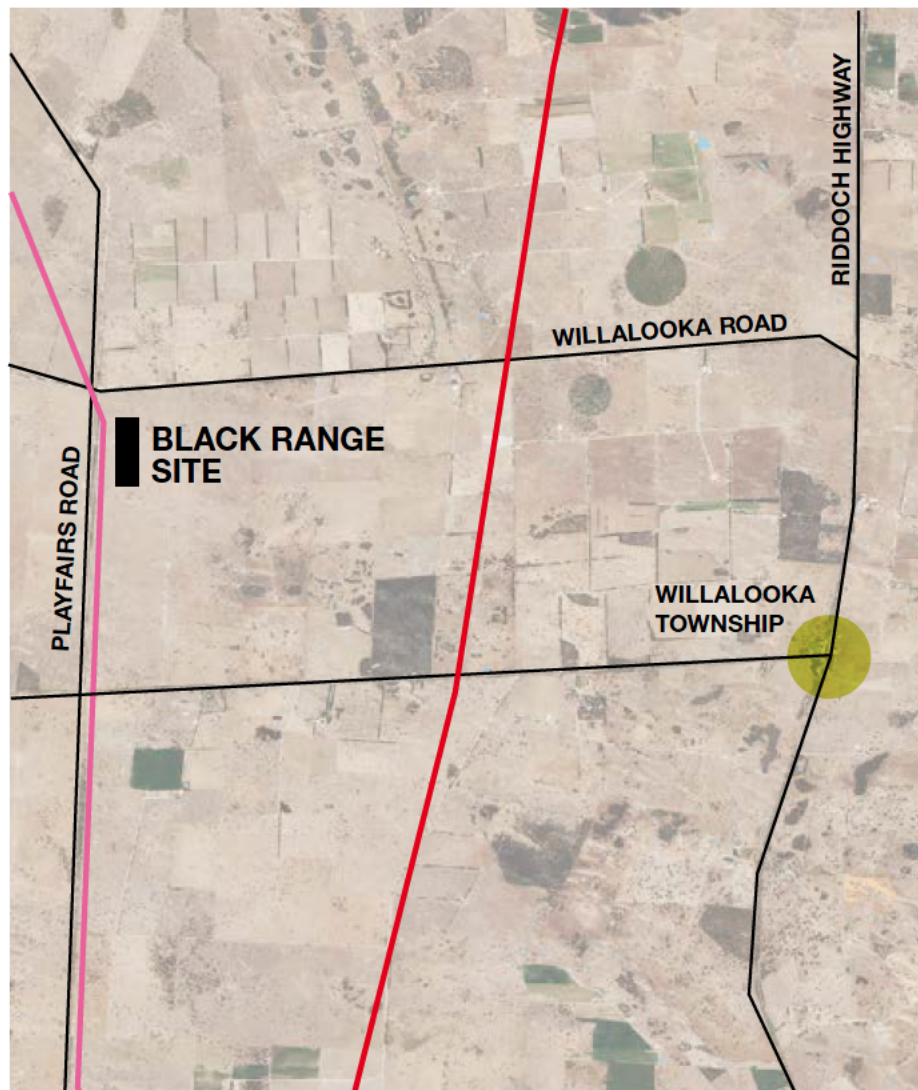
Black Range is approximately 35 kilometres south of Keith, near the township of Willalooka. The site sits alongside the existing transmission line, near the intersection of Playfairs and Willalooka Roads. It is surrounded by farming land and a thick vegetation border.

The site has been owned by ElectraNet and identified for this purpose for almost 20 years.

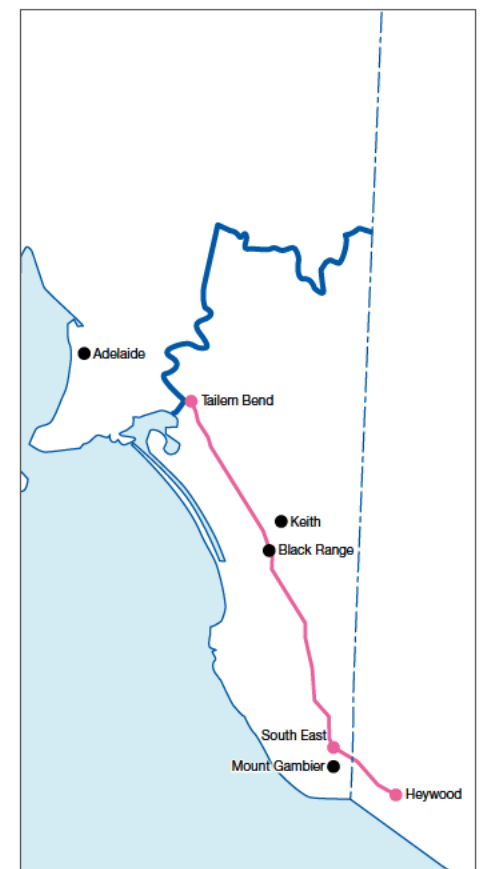
The development at Black Range will represent the first time series compensation will be used within the South Australian transmission network.

The electricity transmission network extends across some 200,000 square kilometres of diverse and rugged terrain. A complete network map is available from electranet.com.au

BLACK RANGE SERIES COMPENSATION SITE LOCATION



KEY ELEMENTS OF THE SA-VIC INTERCONNECTOR



- 275kV Substation
- 132kV Substation
- Existing 275kV Transmission Line
- Existing 132kV Transmission Line

SNEAK PEAK OF THE BLACK RANGE SITE

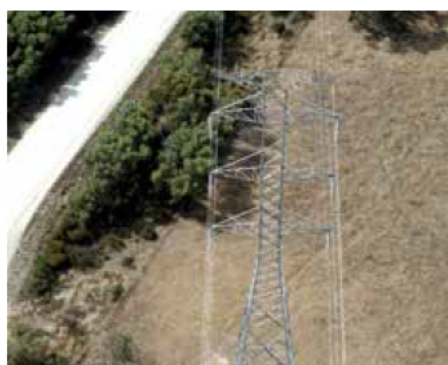
The new Black Range site will be approximately 200 metres long by 60 metres wide and will be surrounded by a security fence.

Within the site, six elevated platforms will stand approximately five metres tall, allowing the transmission line's conductors to feed in and out of the series capacitors.

Two small control and amenities buildings, as well as a 60 metre radio communications tower will also sit within the site.

The majority of components will be of galvanised steel and the new structures will catch the light for a little while.

The zinc coating typically oxidises and dulls after around six months of exposure to the elements.



CONSTRUCTION MANAGEMENT

As construction commences on site, you may notice additional heavy vehicle movement as materials are being transported. Noise, dust, traffic and other potential construction issues will be identified and managed from the outset. Notification will be provided to residents prior to significant works taking place. Once in normal operation, vehicle movements in and around the substation are typically as few as once or twice a month.

TWO MINUTE TECH TUTORIAL

WHAT ARE INTERCONNECTORS?

Interconnectors are high-voltage transmission lines that transport electricity between regions. Interconnectors in the National Electricity Market, of which South Australia is a part of, facilitate the transfer of electric power between states. This means that power can flow from lower-priced to higher-priced region, when the need arises.

By enabling interstate trading of power, interconnectors potentially increase competition in generation and promote greater security of supply.

WHAT IS SERIES COMPENSATION?

Series compensation of a transmission line has the effect of electrically reducing

the line length. Shorter transmission lines facilitate improvement in stable power transfer and voltage management as the line inductance is reduced.

WHAT ARE SERIES CAPACITORS?

Series capacitors are electrical components used to store energy. They can be placed anywhere between transmission lines, although they are commonly installed in the middle. In this case, the capacitors will be placed between the Tailm Bend and South East substations. This will require a station to be built to house the capacitors. When installed on a transmission line, series capacitors provide series compensation for the respective line.



TIMELINE

| | | |
|---------------------|--|--|
| Q4, 2014 – Q1, 2015 | | <ul style="list-style-type: none"> Development Approval for new Black Range site to be sought |
| Q1 – Q2, 2015 | | <ul style="list-style-type: none"> Detailed engineering design and construction management planning will continue |
| Q2 – Q4, 2015 | | <ul style="list-style-type: none"> Civil works at Black Range to create the site's access driveways and bench, followed by round works such as the installation of drainage, guttering, security fencing and infrastructure foundations |
| Q4, 2015 – Q1, 2016 | | <ul style="list-style-type: none"> Works continue at Black Range to install upright electrical equipment such as gantries, circuit breakers, series capacitors and support buildings |
| July 2016 | | <ul style="list-style-type: none"> Energisation of the new Black Range series compensation site. Upgrade of the SA-VIC Interconnector is complete |

KEEP UP TO DATE

If you have any queries, feedback or would like to know what's happening on the project, please contact ElectraNet's Community Engagement Consultant at community.liaison@electranet.com.au, toll-free on 1800 890 376 or visit electranet.com.au.

You may also write in to
PO Box 7096
Hutt Street Post Office,
Adelaide SA 5000

COMMUNITY DROP-IN DAY

You're invited to attend a community drop-in day and learn more about the proposed Black Range series compensation site. It will be a great opportunity to see what is planned, ask questions and share feedback.

DATE: Friday, 26 September 2014

TIME: Drop-in anytime from 3pm to 6pm

LOCATION: Willalooka Tavern, 3449 Riddoch Highway, Willalooka