

Our ref: 7395708
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Shane Cremin
Griffin Energy
15th Floor
28 The Esplanade
Perth WA 6000

Dear Mr Cremin,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your interest in this project.

Your letter highlighted a number of issues which I have addressed below.

Net benefits:

Western Power has engaged ACIL Tasman to undertake a series of electricity market projections to assist in estimating the market net benefits, including new generation connections, required under the New Facilities Investment Test.

Under the Electricity Network Access Code 2004, Western Power has carried out preliminary Regulatory Test and New Facilities Investment Test assessments, which demonstrated that both tests satisfy the requirements. As part of the Code requirements, Western Power has also carried out public consultations on the preferred option and is currently assessing formal responses received. Upon completion of this process, Western Power will make a Regulatory Test submission to the ERA.

Connection of new generation:

The issue raised regarding the connection of new generation will not be completely resolved by the Mid West Energy Project. The connection of additional block loads, the general load growth and altered flows as a result of the 330 kV line, will provide the potential for additional generation to be connected to the area as it reduces the power exported from the area on the 132 kV system. However there will still be a need to provide reinforcement between Neerabup and Northern Terminal as the level of generation connecting to the mid west, or in the Neerabup region, increases. The connection of an additional 330kV line to Neerabup from Northern

Terminal can be achieved at low cost through a network reconfiguration and this reinforcement will be triggered by the connecting generator and will be progressed as part of the normal generator application process. Determining who will trigger the need for the reinforcement will be done in accordance with the Applications and Queuing policy.

Western Power would like to thank you for your support and if you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7421378
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Mr G F Stevens
129/60 Kilinda Drive
City Beach
WA 6015

Dear Mr Stevens,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your interest in this project.

Your suggestion to construct a 330 kV line between Muchea and Three Springs as part of the solution is noted. However, by building along the current alignment between Pinjar and Eneabba (via Regans and Cataby) rather than the Moora route, a more sustainable project solution can be delivered, which will meet the required timeframes. The reason for this is because Western Power has been able to minimise the environmental impacts by utilising an existing easement. This means, that although environmental approvals are still required for the project, the process will be shorter and more efficient. Western Power has already sought most of these approvals, and will continue to liaise with environmental stakeholders.

Western Power investigated several possible line routes before opting to use the existing 132 kV transmission line between Pinjar and Eneabba. This initial assessment was done in 2006 and reassessed in 2009, employing a revised sustainability, risk and cost assessment. This review confirmed that rebuilding the existing wood pole line between Pinjar and Eneabba represented the least cost, and most environmentally and socially acceptable line route option.

Although the existing line route passes through areas of environmental sensitivity, including four nature reserves, a National Park and several Environmental Protection Policy (EPP) wetlands, these are already degraded within the existing infrastructure corridor. The rebuild option therefore represents a significantly lower level of environmental impact than alternative routes passing through non-degraded environments, and consequently minimises environmental impacts and risks to project delivery. Preliminary cost estimates indicate that the project cost of the line replacement option is lower than for alternative routes to the east and west, and comparable to building 40m to the east side of the existing line. The rebuild option was therefore determined to represent the most acceptable and viable route option overall.

On behalf of Western Power I would like to thank you for your submission. If you have any further queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7413755
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Mr Brett Edwards
PO Box 44
Gingin
WA 6503

Dear Mr Edwards,

Mid West Energy Project – Southern Section

Thank you for your submission regarding the Mid West Energy Project, which involves replacing the existing 132,000-volt (132 kV) transmission line passing through your property on Lot 101 Brand Highway, Boonanaring, Gingin with a 330 kV line. On behalf of Western Power I want to assure you that we take your concerns very seriously and I have addressed these below.

1. We acknowledge that in the past Western Power has not always managed its relationship with landowners well. Throughout our dealings with landowners on past projects, they have often voiced their dissatisfaction about the way Western Power personnel and contractors have accessed their land. In light of this, we fully understand your concerns about this project.
2. I can assure you that, in relation to this project, our Project Officer, Neil Reedy will continue to maintain regular contact with you to keep you updated about the project and the access that is required to your land for construction of the new line. An example of this approach occurred recently when Neil contacted you to discuss our need to enter your land to undertake geotechnical investigations, and you advised that we should not enter as the ground was too wet. We heeded this advice and were able to make alternative arrangements.

From time to time, Western Power needs to access private property for various reasons – usually for powerline inspections and maintenance. Western Power is developing mechanisms to improve the ability of personnel and contractors to contact landowners prior to entering their property, along with training to ensure that they understand issues such as ground conditions, bio-security, spraying, cropping, and other agricultural activities, and the importance of closing and locking gates.

3. In terms of the Mid West Energy Project, land and access issues have been a major focus for Neil Reedy. Neil will continue to maintain contact with landowners affected by this line through all phases of the construction works and will then remain involved until restoration has been finalised. He is available to deal with any issues or concerns that you may have.
4. Unfortunately it is not possible to build a transmission line of this type and size along the road reserve. The line route has been chosen to replace the existing 132 kV transmission line on predominately the same alignment as this presented the overall least impact of all of the options that were considered.
5. Western Power investigated a number of options for the provision of additional power to the Mid West region, as well as several different transmission line routes. Of the transmission line route options considered, three were evaluated in detail, taking into account social, environmental, technical and cost impacts. This was done in 2007 and reviewed in 2009.
6. With respect to the possibility of health risks, Western Power designs, builds and operates all its facilities to comply with the guidelines for human exposure to power frequency electromagnetic fields (EMF). These guidelines have been established by the National Health and Medical Research Council of Australia (NHMRC) and the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), and are the same levels set by the World Health Organisation (WHO). The guidelines stipulate a 24-hour continuous exposure limit to EMF of 1000 milliGauss (mG). Typically, EMF readings taken at the edge of the easement for a line of this type are between 2 and 50mG. I suggest you visit our website www.westernpower.com.au for more information about EMF.
7. The transmission line currently on your property operates at 132 kV. Western Power is required by law to register an easement only for powerlines that operate at 200 kV or above. Whilst there is no easement registered for the existing transmission line on your land, Western Power will negotiate an easement and compensation will be paid for the new 330 kV line. I understand you have received information about this.

On behalf of Western Power I want to assure you that we have made and will continue to make every effort to progress this very important project with consideration for landowners, in a mutually satisfactory manner.

I hope the above information is useful to you. Should you have any queries about the Mid West Energy Project please do not hesitate to contact Douglas Thomson on 9326 6174 or via email to douglas.thomson@westernpower.com.au. Should your queries relate to construction issues and/or land access please continue to contact Neil Reedy on 9326 4108 or via email to neil.reedy@westernpower.com.au

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7389854
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Mr Robert Tana
Unit 2 – 2 / 4 Strutt Way
Noranda
WA 6062

Dear Mr Tana,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your support and interest in this project.

The proposed Mid West Energy Project is one of the most important infrastructure projects in Western Australia. It will provide the capacity to meet increasing demand for electricity and facilitate the connection of power generation sources to the network within the region. This means that the capacity, reliability and security of the South West Interconnected System will be greatly enhanced.

It is our intention to provide up-to-date information about the project on the Western Power web site as we move forward. However, should you have any specific questions regarding the project, please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7412237
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Steve Douglas
Chief Executive Officer
Mid West Development Commission
PO Box 238
Geraldton
WA 6531

Dear Mr Douglas,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your support and interest in this project.

Mid West network reinforcement:

The need for network reinforcement throughout both the Southern and Northern sections of the Mid West is acknowledged. However, Western Power must operate within a regulatory environment. The Northern Section (Stage 2) will be subject to a separate business case to Government and submission to economic regulation authority.

The milestones for Stage 2 are:

1. Scope of Stage 2 works will be reviewed by engagement with key stakeholders and ongoing planning studies leading to the selection of a preferred option.
2. Outcome of Western Power's Infrastructure Australia funding application.
3. Development of a preferred supply option for the Geraldton area.

Western Power will continue to work closely with industry, State Government, other stakeholders and community to optimise the development.

Please note that Infrastructure Australia published a report 'Getting the Fundamentals Right for Australia's Infrastructure Priorities' at the end of June 2010, where the Mid West Energy Project Stage 2 was identified as a project of priority under the National Electricity Grid theme. The project has been identified as having real potential and has been shortlisted by Infrastructure Australia.

Further engagement with Infrastructure Australia is proposed to clarify what supporting information is required to progress this project. Funding is being sought for the Northern Section double-circuit 330 kV line from Eneabba to Moonyoonooka.

Western Power will continue to engage with all key stakeholders and Infrastructure Australia to consider various scenarios. The scope of Stage 2 works will be reviewed by ongoing planning studies leading to the selection of a preferred option.

Network capacity:

Regarding your concerns about power requirements into the future being under-estimated, I would make the following comments. Western Power is in routinely in consultation with mining projects such as Extension Hill and Karara, as part of the planning process to establish power needs in the region.

In accessing the network's capability to meet demand, Western Power has considered three load forecast scenarios – 'low', 'central' and 'high'. The proposed solution however concentrates on the 'central' and 'high' load growth.

The load forecast has been broken down into two distinct components – underlying (natural) growth of the existing customer base and block load growth relating to the development of major new loads in the region (notably mining). The 'central' scenario includes committed block loads and a small number of the most likely prospective block loads. The 'high' forecast expands on the 'central' view by assuming more aggressive underlying demand growth and an additional number of highly prospective block loads.

By commissioning the new double-circuit transmission line with one circuit at 330 kV and the other at 132 kV, sufficient power will be available for the 'central' demand scenario. This can be reinforced at minimum cost, to operate both circuits at 330 kV when required to meet the 'high' scenario demand.

Provision for renewable energy connection:

The region north of Perth is highly prospective for wind generation. There are also major solar generation sources in the area. The proposed augmentation project will enable these renewable energy sources to be connected to the system. This will help Western Australia to meet its Renewable Energy Target (RET) obligations.

Reliability of the South West Interconnected System (SWIS):

The proposed Mid West Energy Project will reduce reliance of the region on the NW Natural Gas Pipeline to Bunbury and the 330 kV transmission line from power generated at Collie. By facilitating prospective power generation sources in the Mid West to connect to the network and providing the capacity to meet increasing demand for electricity, the reliability and security of the South West Interconnected System will be greatly enhanced. The Mid West Energy Project is therefore one of the most important infrastructure projects in Western Australia.

Supply reliability in Geraldton after Southern Section Enhancement

The loss of a single 132 kV line north of Three Springs is not expected to lead to voltage collapse and trigger the need for load tripping north of Three Springs, based on the current network configuration and load. The addition of a 330 kV line to Three Springs Terminal, together with a 330 / 132 kV transformer, will support the underlying load growth in the Geraldton area for some years.

However, based upon current project timing, the addition of block loads in the Geraldton area could result in voltage stability and line thermal loading issues by the end of 2014, under a 1:10 year peak summer load condition for a fault and loss of a 132 kV line north of Three Springs. Although the likelihood of such a scenario occurring is slim, it is prudent that Western Power plans to ensure the integrity of our network in the area, and have factored such a scenario into our planning.

This will require some level of reinforcement or the use of Network Control Services (NCS) until such time as suitable reinforcement can be constructed in the area. Essentially until the network is reinforced to Geraldton, new block loads connecting to the network will be required to fund any required NCS and may help provide those services by providing interruptible loads or a localised generation solution. Western Power will also investigate securing network control services from existing customers in the Geraldton region. It is envisaged that NCS will be enabled during the high risk periods (e.g. peak demand during summer). Even then, the NCS will only be enacted to maintain system security in events such as a fault on a 132kV line to Geraldton. Western Power is currently engaging with potential major block loads to investigate options and ensure an acceptable solution can be reached. This would only be utilised under a network control services contract, and there would be substantial notice given to the customer prior to Western Power using it. A scheme similar to this is already in place in the Eastern Goldfields region.

On behalf of Western Power I would like to thank you for your support. If you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7400146
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Luca Castelli
Advanced Energy Resources
88 Tweeddale Road
Applecross
WA 6153

Dear Mr Castelli,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support and interest in this project is much appreciated.

The Mid West Energy Project is one of the most important infrastructure projects in Western Australia. It will provide the capacity to meet increasing demand for electricity and facilitate the connection of power generation sources to the network within the region. The area north of Perth is highly prospective for wind generation. There are also major solar generation sources in the region. The proposed solution will greatly enhance the capacity, reliability and security of the South West Interconnected System.

On behalf of Western Power I would like to thank you for your support. If you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7395594
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Rob Jefferies
Chief Executive Officer
Geraldton Iron Ore Alliance
PO Box 2394
Geraldton WA 6531

Dear Mr Jefferies,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support and interest in this project is very much appreciated by Western Power.

Meeting power demand – Stage 1:

In proposing the preferred option to augment the Mid West transmission network, Western Power has had discussions with key stakeholders in the region, such as Extension Hill. Western Power has carried out a detailed analysis of existing and projected future electricity needs in the region, which include:

- Major new mining operations.
- Load growth from the new port development and industrial estate at Oakajee.
- New wind, solar and other generation sources seeking to connect to the network.
- Underlying natural load growth in the Geraldton region.

In accessing the network's capability to meet demand, Western Power has considered three load forecast scenarios – 'low', 'central' and 'high'. Stage 1 (Southern Section) will initially involve reinforcement of the double-circuit transmission line from Neerabup to Eneabba, to operate with one circuit at 330 kV and the other at 132 kV. Analysis of future load demand indicates that this arrangement is sufficient to meet the 'central' load forecast. However, the second circuit can be upgraded to 330 kV at minimum cost to meet the 'high' load forecast when required.

Stage 2 (Northern Section):

Originally, the proposal was to build a double-circuit line from Pinjar to Moonyoonooka (Geraldton). In 2009 the State Government and Western Power reviewed the drivers and cost of this project, in light of revised demand projections following the Global Financial Crisis.

This review recommended the project be split into two stages, as follows:

Stage 1 – Neerabup to Eneabba (required by March 2013)

Stage 2 – Eneabba to Moonyoonooka, connecting Stage 1 through to Geraldton

The key drivers for Stage 2 (Northern Section) relate to the need to meet electricity demand for:

- Underlying natural load growth in the Geraldton region
- Growth from major new loads including the proposed new port and industrial estate developments at Oakajee, north of Geraldton and expansion to the Geraldton port
- New generation seeking connection to the grid

In December 2009 Western Power applied for Infrastructure Australia funding from the Australian Government to build Stage 2, based on a new 160 km double circuit 330 kV line from Eneabba to Moonyoonooka. Western Power continues to engage with Infrastructure Australia to progress this application. However, a number of options to meet future requirements have opened up and, over the next 12 months Western Power will conduct a more detailed planning assessment in consultation with key regional and industry stakeholders to determine the best method and timing for meeting future requirements.

Western Power must operate within a regulatory environment. The Northern Section (Stage 2) will be subject to a separate business case to Government and submission to economic regulation authority.

The milestones for Stage 2 are:

1. Scope of Stage 2 works will be reviewed by engagement with key stakeholders and ongoing planning studies leading to the selection of a preferred option.
2. Outcome of Western Power's Infrastructure Australia funding application.
3. Development of a preferred supply option for the Geraldton area.

Please note that Infrastructure Australia published a report 'Getting the Fundamentals Right for Australia's Infrastructure Priorities' at the end of June 2010, where the Mid West Energy Project Stage 2 was identified as a project of priority under the National Electricity Grid theme. The project has been identified as having real potential and shortlisted by Infrastructure Australia.

Western Power will continue to engage with all key stakeholders and Infrastructure Australia to consider various scenarios. The scope of Stage 2 works will be reviewed by ongoing planning studies leading to the selection of a preferred option.

Supply reliability in Geraldton after Southern Section Enhancement:

The loss of a single 132 kV line north of Three Springs is not expected to lead to voltage collapse and trigger the need for load tripping north of Three Springs, based on the current network configuration and load. The addition of a 330 kV line to Three Springs Terminal, together with a 330 / 132 kV transformer, will support the underlying load growth in the Geraldton area for some years.

However, based upon current project timing, the addition of block loads in the Geraldton area could result in voltage stability and line thermal loading issues by the end of 2014, under a 1:10 year peak summer load condition for a fault and loss of a 132 kV line north of Three Springs. Although the likelihood of such a scenario occurring is slim, it is prudent that Western Power plans to ensure the integrity of our network in the area, and have factored such a scenario into our planning.

This will require some level of reinforcement or the use of Network Control Services (NCS) until such time as suitable reinforcement can be constructed in the area. Essentially until the network is reinforced to Geraldton, new block loads connecting to the network will be required to fund any required NCS and may help provide those services by providing interruptible loads or a localised generation solution. Western Power will also investigate securing network control services from existing customers in the Geraldton region. It is envisaged that NCS will be enabled during the high risk periods (e.g. peak demand during summer). Even then, the NCS will only be enacted to maintain system security in events such as a fault on a 132kV line to Geraldton. Western Power is currently engaging with potential major block loads to investigate options and ensure an acceptable solution can be reached. This would only be utilised under a network control services contract, and there would be substantial notice given to the customer prior to Western Power using it. A scheme similar to this is already in place in the Eastern Goldfields region.

On behalf of Western Power I would like to thank you for your support. If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7411987
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Wilson Tuckey
P.O. Box 1781
Geraldton
WA 6531

Dear Mr Tuckey,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your interest and comments in relation to this project.

Western Power has identified that a major reinforcement of the existing transmission system in the Mid West is required. The existing transmission network does not have the capacity to meet the forecast electricity needs of existing and prospective customers. The proposed Mid West Energy Project (Southern Section) is intended to provide a viable solution to meet, in particular:

- Major new mining operations in the region.
- Load growth from the new port development and industrial estate at Oakajee.
- New wind, solar and other generation sources seeking to connect to the network.
- Underlying natural load growth in the Geraldton region.

Your letter raises a number of issues, which I have addressed below.

Pilbara gas for electricity generation:

Western Power does not have responsibility for generating power, which is the responsibility of generation companies. However, Western Power does have responsibility for constructing and maintaining a network to transmit and distribute electricity and to facilitate the connection of power generation sources to its network.

The proposed augmentation will provide the potential to diversify power generation, thereby relieving dependence on NW gas to generate power in the SW. The region north of Perth is highly prospective for wind generation. There are also major solar generation sources in the area. The 330 kV upgrade will enable these and other new generation sources in the Mid West region to be connected to the network, which cannot be connected at present because of capacity constraints on the existing 132 kV network.

It is worth noting that the ability to connect renewable energy generation sources to the grid in the Mid West will greatly assist Western Australia to meet its Renewable Energy Target (RET) obligations.

Visual pollution and agricultural inconvenience:

Western Power must operate within a regulatory environment. The proposed network will be constructed along an existing route which already has environmental approval. Any new works would be subject to the regulatory process which includes consultation with key stakeholders.

HVDC option:

Western Power has considered a number of alternative transmission systems, including HVDC. This technology is an economic option for point-to-point bulk transfer of power over very long distances. The high cost of converter stations at either end of the transmission line offsets the cost advantage of the transmission line. The economic break-even distance for HVDC transmission over traditional AC transmission is considered to be around 600 km.

The proposed augmentation entails the construction of a 200 km transmission line, with a possible further extension to 400 km total length. The network reinforcement will also include transmission lines to existing and prospective mining projects in the region. Various connection points along the route are also envisaged to provide access for wind, solar and other generation projects. Each transmission connection would require a converter station at both ends, thereby considerably adding to the overall cost.

Western Power does not consider HVDC to be a viable option due to the lack of financial advantage combined with higher technological risk and reduced flexibility to facilitate new connections.

Mid West Energy Project cost:

The cost analysis details in the Options paper shows that Western Power's preferred option is much less than the \$750M stated in your letter, and significantly lower than a HVDC line and converters

Network capacity:

In assessing the network capability to meet demand, Western Power has considered three load forecast scenarios – 'low', 'central' and 'high'. Initially, the double-circuit transmission line will operate with one circuit at 330 kV and the other at 132 kV. Load analysis indicates that this arrangement is sufficient to meet the 'central' load forecast. When required to meet the demand of new block loads, the second circuit can be upgraded to 330 kV at minimum cost.

Western Power also considered prospective generation in the Mid West region. The Mid West Energy Project system is designed to accommodate future load and generation forecasts.

If you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7396821
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Suzanne Ward
Chief Executive Officer
Mid West Regional Council
PO Box 3276
Bluff Point
Geraldton WA 6530

Dear Ms Ward,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your interest in this project.

A key driver for stage 1 of the project is to supply a number of new mining operations that are being actively pursued in the area (notably Karara), which will have significant impacts on the total demand for electricity. Western Power's proposed option reduces the risk to network users of a further major reinforcement in the region within a few years, with the potential risk of delays for future customer connections.

Your letter raises a number of issues, which I have addressed below:

Power generation capacity:

Western Power has responsibility for constructing and maintaining a network to transmit and distribute electricity and to facilitate the connection of power generation sources to its network. Western Power does not have responsibility for generating power.

Since the existing 132 kV network is operating close to its capacity limits, additional generation cannot be accommodated at present. Augmentation of the network to operate at 330 kV will enable additional generation to be connected from any source within the region.

Construction of new substations:

The Mid West Energy Project – Southern Section is specifically concerned with the upgrading of the Neerabup – Eneabba transmission line to 330kV. It also involves extending the supply from Eneabba to Karara mine site via Three Springs, which is funded by Karara Mining Limited and

will be leased by Western Power. We acknowledge that including reinforcement of the local distribution system by constructing a new zone substation in the Morawa/Perenjori area would improve reliability, and we are taking this option into account in our planning to improve supply to these communities.

It is true that including reinforcement of the local distribution system by constructing a new zone substation in the Morawa / Perenjori area would improve reliability. However, it is important to understand that Western Power must operate within a regulatory environment. At the present time there are not enough drivers to justify the considerable expenditure that would be required to construct a substation. Also, any upgrade of the Morawa / Perenjori distribution system is outside the scope of the current project.

Western Power will continue to monitor growth and subsequent demand for electrical power in the area. Once an upgrade of the network can be justified, Western Power will pursue the required regulatory process for an augmentation project.

Climate change and future planning:

The region north of Perth is highly prospective for wind generation. There are also major solar generation sources in the area. The 330 kV upgrade will enable these and other new generation sources to be connected to the network. This will greatly assist Western Australia to meet its Renewable Energy Target (RET) obligations.

On behalf of Western Power I would like to thank you for your submission. If you have any further queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7398705
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Simon Middleton
Head of Strategy & Growth
Synergy
PO Box K851
Perth
WA 6842

Dear Mr Middleton,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support and interest in this project is greatly appreciated by Western Power.

I would like to elaborate on some points mentioned in your letter.

Diversity of loads and generation:

The proposed augmentation of the Mid West transmission network will substantially increase the power available to consumers and facilitate the connection of generation in the Mid West region. The expected diversity of load and generation types likely to be interested in connecting to the network requires that the transmission development does not favour any particular project. The Mid West Energy Project will accommodate a diverse range of loads and generators.

Expected load growth:

In assessing the network's capability to meet demand, Western Power has considered three load forecast scenarios – 'low', 'central' and 'high'. The proposed solution however concentrates on the 'central' and 'high' load growth.

The load forecast has been broken down into two distinct components – underlying (natural) growth of the existing customer base and block load growth relating to the development of major new loads in the region (notably mining). The 'central' scenario includes committed block loads and a small number of the most likely prospective block loads. The 'high' forecast expands on the 'central' view by assuming more aggressive underlying demand growth and an additional number of highly prospective block loads.

By commissioning the new double-circuit transmission line with one circuit at 330 kV and the other at 132 kV, sufficient power will be available for the 'central' demand scenario. This can be reinforced at minimum cost, to operate both circuits at 330 kV when required to meet the 'high' scenario demand.

The demand growth in Geraldton will not be fully addressed by Stage 1 of the Mid West Energy Project (Southern Section). Western Power is currently investigating the use of network control services (NCS) in the Geraldton area to ensure that demand is met until Stage 2 (Northern Section) is progressed.

The key drivers for Stage 2 relate to the need to meet electricity demand for:

- Load growth in the Geraldton region from existing customers
- Growth from major new loads including the proposed new port and industrial estate developments at Oakajee, north of Geraldton and expansion to the Geraldton port including the associated Extension Hill and Karara loads.
- New generation seeking connection to the grid (over 500 MW of wind and gas generation have made enquiries between Eneabba and Geraldton).

In December 2009 Western Power applied for Infrastructure Australia funding from the Australian Government to build Stage 2, based on a new 160 km double circuit 330 kV line from Eneabba to Moonyoonooka. Western Power continues to engage with Infrastructure Australia to progress this application. Infrastructure Australia published a report 'Getting the Fundamentals Right for Australia's Infrastructure Priorities' at the end of June 2010, in which the Mid West Energy Project Stage 2 was identified as a project of priority under the National Electricity Grid theme. The project has been identified as having real potential and has been shortlisted by Infrastructure Australia.

A number of options to meet future requirements have opened up and, over the next 12 months, Western Power will conduct a detailed planning assessment in consultation with key regional and industry stakeholders to determine the best method and timing for meeting future requirements. These options may include alternatives to network enhancements that will enable Western Power to provide the required network security.

Western Power must operate within a regulatory environment. Stage 2 will be subject to a separate business case to Government and submission to Economic Regulation Authority.

The milestones for Stage 2 are:

1. Development of a preferred supply option including timing for the Geraldton area.
2. Outcome of Western Power's Infrastructure Australia funding application.
3. Initiate the government and regulatory approvals process.

SWIS security & reliability:

The proposed augmentation will increase thermal capacity of the Mid West transmission system and facilitate the connection of power generation sources within the region. This will greatly enhance the security and reliability of the whole South West Interconnected System.

Karara Mining Limited will procure the funding, design, and construction of a new 180 km 330 kV transmission line between Eneabba and its mine site (via Three Springs terminal). Karara will own these assets and enter into a commercial arrangement under which Western Power will lease the assets and conduct network service provider functions under an agreed regulatory framework. Western Power will have full operational autonomy over the leased assets, and operate and maintain the assets as it does any other part of the SWIS. The ownership arrangement will not impede the connection of nor add additional costs to the delivery of covered services to all other SWIS users. The leased assets from Eneabba to Karara mine will be treated as part of the SWIS network, and as such will be available for access for other loads and generators.

Embedded Generation as Possible Supply Option:

Western Power supports your comments on embedded and standalone generation, which confirms the statements made in the published Options paper.

Voltage Level Selection:

330 kV double-circuit transmission lines are used throughout the SWIN. The proposed voltage meets the 'central' load forecast, while still providing the capability of being readily expanded to meet the 'high' load forecast.

Karara have chosen 330 kV as their preferred voltage level.

Single or double circuit design:

By commissioning the new double-circuit transmission line with one circuit at 330 kV and the other at 132 kV, sufficient power will be available for the 'central' demand scenario. This can be reinforced at minimum cost, to operate both circuits at 330 kV when required to meet the 'high' scenario demand.

Wind Farm Investment:

The coastal location between Pinjar and Geraldton provides a very prospective wind resource with wind load factors in excess of 40% (compared to 30-40% in most locations nationally) and relatively straight forward access to land. Western Power currently has enquiries from proponents seeking to develop over 1300 MW of wind generation in this locality. At present, the ability to develop wind farms along the Mid West coastal region is constrained by the weak nature of the existing network north of Pinjar. Augmentation of the Mid West transmission network would create significantly enhanced opportunities for large scale renewable generation projects to access the transmission network along the route length.

Preference for 330 kV double circuit option:

Western Power identified and evaluated a number of options to increase the power transmission capacity in the Mid West region to meet the forecast increased electricity demand, together with a forecast increase in electricity generation in the region. All viable options have been assessed as similar in terms of benefit delivery (i.e. meet forecast need). Western Power has compared the Net Present Cost (NPC) of alternative transmission options, including the works required to meet both the 'central' case and 'high' case load forecasts.

The preferred option maximises net benefits as it:

- Has a NPC that is comparable with other options capable of supplying the 'central' case load forecast.
- Offers a significantly lower cost option for supplying the 'high' case load forecast.
- Delivers additional non-economic benefits compared to the other options.
- Delivers similar benefits to those who generate, transport and consume electricity in the SWIS as other alternatives.

The 330 kV double-circuit option is the only option that meets the 'central' case load forecast and can be readily uprated to meet the 'high' case load forecast.

On behalf of Western Power I would like to thank you for your support. If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7399166
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Tim Koehler
Mob: 0427 378 202

Dear Mr Koehler,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your interest and comments regarding the project.

Your suggestion to upgrade the 132 kV line through Moora is noted with interest. However, in response I would make the following comments.

As a utility which provides major infrastructure in the State for essential services, Western Power must operate within a regulatory environment. This required Western Power to undertake a Regulatory Approval process required under the Electricity Networks Access Code 2004, in relation to the Mid West Energy Project.

Western Power investigated a number of options for the provision of additional power to the Mid West region, as well as several different transmission line routes. Of the transmission line route options considered, three were evaluated in detail, taking into account social, environmental, social, technical and cost impacts. This was done in 2007 and reviewed in 2009.

By rebuilding along an existing alignment, our impacts are confined to an already disturbed area, reducing the environmental impact compared to constructing an entirely new alignment. Preliminary cost estimates indicate that the project cost of the line replacement is lower than alternative routes. As such, Western Power identified the rebuild option as the most acceptable and viable option overall.

The eastern route through Moora would require new environmental approvals, which could take 2 to 3 years to complete. This is likely to result in unacceptable delays to the progress of major mining projects in the Mid West.

The proposed Mid West Energy Project (Southern Section) is intended to provide a viable solution to meet, in particular:

- Major new mining operations in the region.
- Load growth from the new port development and industrial estate at Oakajee.
- New wind, solar and other generation sources seeking to connect to the network.
- Underlying natural load growth in the Geraldton region.

In accessing the network's capability to meet demand, Western Power has considered three load forecast scenarios – 'low', 'central' and 'high'. The proposed solution however concentrates on the 'central' and 'high' load growth.

The load forecast has been broken down into two distinct components – underlying (natural) growth of the existing customer base and block load growth relating to the development of major new loads in the region (notably mining). The 'central' scenario includes committed block loads and a small number of the most likely prospective block loads. The 'high' forecast expands on the 'central' view by assuming more aggressive underlying demand growth and an additional number of highly prospective block loads.

By commissioning the new double-circuit transmission line with one circuit at 330 kV and the other at 132 kV, sufficient power will be available for the 'central' demand scenario. This can be reinforced at minimum cost, to operate both circuits at 330 kV when required to meet the 'high' scenario demand.

The region north of Perth is highly prospective for wind generation. There are also major solar generation sources in the area. These renewable energy and other local generation sources can be connected to the proposed system. Enquiries regarding generation or load connections can be made to Patrick Ragan, Team Leader, Access Solutions Section, telephone number (08) 9326 4891, email: patrick.ragan@westernpower.com.au

On behalf of Western Power I would like to thank you for your submission. If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7399807
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Mr John Kerwan
Director Land Planning & Spatial Information
BP3-1-A052
Department of Defence
Canberra ACT 2600

Dear Mr Kerwan,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your support for this project.

It is normal practice for Western Power to work closely with key stakeholders, including the Department of Defence. Our Project Officer Mr Neil Reedy will continue to liaise closely with your Mr Gary Lee as the project moves forward.

I can confirm that the height of Structure No 73 with coordinates 386807.527m E, 6536144.5111m N has been reduced to a maximum height of 54m as requested. As previously indicated by Mr Reedy, Western Power will also provide RAAF AIS with 'as constructed' details after the structure locations are pegged by our surveyor. It may be necessary to alter some of the locations slightly to avoid fences/tracks etc that are not shown on our GIS system. However, we anticipate that any adjustments will only be a few metres in any direction.

Western Power will keep Pearce RAAF Base fully informed of project details, including the commencement date and the location of construction equipment such as cranes etc.

If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7401477
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Mr Tony Brun
Chief Executive Officer
City of Geraldton-Greenough
PO Box 101
Geraldton WA 6531

Dear Mr Brun,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your support and interest in this project.

Western Power has identified that major reinforcement of the existing transmission system between Neerabup and Eneabba in the Mid West is required in order to meet the forecast electricity needs of existing and prospective customers.

Current predictions of underlying natural load growth in the Geraldton area can be met by the existing transmission lines until approximately 2015/16 with only minor works required to address voltage constraints. Please be assured that we will continue to work with you, and the local community to ensure that electricity supply needs are met.

Your submission includes some comments and highlights a number of issues, which I have addressed below.

Mid West Energy Project:

This is one of the most important infrastructure projects in Western Australia.

Originally, the proposal was to build a double-circuit line from Pinjar to Moonyoonooka (Geraldton). In 2009 the State Government reviewed the drivers and cost of this project, in light of revised demand projections following the Global Financial Crisis.

This review recommended the project be split into two stages, as follows:

Stage 1 (Southern Section)

The preferred option for the Mid West Energy Project (Southern Section) is a 330 kV double circuit transmission line from Neerabup to Eneabba, initially with one circuit energised at 132 kV and the other at 330 kV, and a new terminal substation at Three Springs. Western Power has

had discussions with key stakeholders in the region, and has carried out a detailed analysis of existing and projected future electricity needs in the region, which include:

- Major new mining operations
- Load growth from the new port development and industrial estate at Oakajee
- New wind, solar and other generation sources seeking to connect to the network, and
- Load growth in the Geraldton region from existing customers.

By commissioning the new double-circuit transmission line with one circuit at 330 kV and the other at 132 kV, sufficient power will be available for the 'central' demand scenario. This can be reinforced at minimum cost, to operate both circuits at 330 kV when required to meet the 'high' scenario demand.

Western Power currently has enquiries from proponents seeking to develop over 1300 MW of wind generation in this locality. At present, the ability to develop windfarms along the Mid West coastal region is constrained by the weak nature of the existing network north of Pinjar. Augmentation of the Mid West transmission network would create significantly enhanced opportunities for large scale renewable generation projects to access the transmission network, along the route length.

Stage 2 (Northern Section) – Supply to Geraldton

The key drivers for Stage 2 relate to the need to meet electricity demand for:

- Load growth in the Geraldton region from existing customers.
- Growth from major new loads including the proposed new port and industrial estate developments at Oakajee, north of Geraldton and expansion to the Geraldton port including the associated Extension Hill and Karara loads.
- New generation seeking connection to the grid (over 500 MW of wind and gas generation have made enquiries between Eneabba and Geraldton)

In December 2009 Western Power applied for Infrastructure Australia funding from the Australian Government to build Stage 2, based on a new 160 km double circuit 330 kV line from Eneabba to Moonyoonooka. Western Power continues to engage with Infrastructure Australia to progress this application. Infrastructure Australia published a report 'Getting the Fundamentals Right for Australia's Infrastructure Priorities' at the end of June 2010, in which the Mid West Energy Project Stage 2 was identified as a project of priority under the National Electricity Grid theme. The project has been identified as having real potential and shortlisted by Infrastructure Australia.

A number of options to meet future requirements have opened up and, over the next 12 months, Western Power will conduct a detailed planning assessment in consultation with key regional and industry stakeholders to determine the best method and timing for meeting future requirements. These options may include alternatives to network enhancements that will enable Western Power to provide the required network security.

Stage 2 will be subject to a separate business case to Government and submission to Economic Regulation Authority.

The milestones for Stage 2 are:

1. Development of a preferred supply option including timing for the Geraldton area.
2. Outcome of Western Power's Infrastructure Australia funding application.
3. Initiate the government and regulatory approvals process.

Network reliability and capacity:

In assessing the network's capability to meet demand, Western Power has considered three load forecast scenarios – 'low', 'central' and 'high'. The proposed solution concentrates on the 'central' and 'high' load growth.

The load forecast has been broken down into two distinct components – underlying (natural) growth of the existing customer base and block load growth relating to the development of major new loads in the region (notably mining). The 'central' scenario includes committed block loads and a small number of the most likely prospective block loads. The 'high' forecast expands on the 'central' view by assuming more aggressive underlying demand growth and an additional number of highly prospective block loads.

Forecast load demand scenarios are outlined in Table 4 in the revised Options paper.

The projected population growth figures shown in Table 2 in the revised Options paper, which are based on Australian Bureau of Statistics data, have been used to estimate the underlying (natural) power demand in the region. We also considered figures supplied by the Department of Housing, and crosschecked them with our forecasting information to ensure that their higher level of population growth could be met. These figures cater for the higher growth scenario proposed in your submission, and the proposed reinforcement and timings can supply this load growth. In any case, the preferred transmission solution, nor the forecast required in service date would be impacted by the higher population forecasts. Depending on where future development occurs, some distribution reinforcements may be required in localised areas to provide for the specific developments.

There are two standard measures of supply reliability:

- *System Average Interruptions Duration Index or **SAIDI** which is the average total duration of outages per customer per year (in minutes).*
- *System Average Interruptions Frequency Index or **SAIFI** which is the average number of interruptions per customer per year.*

The City of Geraldton-Greenough is home for about 14,600 customers - more than 80% of the population in the Geraldton region. Customers in Geraldton-Greenough experience levels of supply reliability (in terms of minutes lost per annum) comparable with customers in other urban areas of the Western Power grid.

In terms of outage duration (SAIDI), the reliability of power supplies in Geraldton-Greenough over the 2009/10 financial year (430 minutes) compares favourably with customers in other urban areas of the South West Interconnected System (SWIS) (467 minutes).

The 2009/10 SAIFI figure (5.17) is high because of a transmission fault at Geraldton Substation on January 28, 2010. Although this was only one incident (and an unusual one) the on/off switching which took place as supplies were progressively restored, added to the SAIFI.

Current predictions of underlying natural load growth in Geraldton can be met by the existing transmission lines until approximately 2015/16 with minor works to address voltage constraints (see Northern Section issues section). This date may be brought forward to accommodate any major loads/generators, such as Oakajee, as required.

Northern Section issues:

Western Power is currently investigating the use of Network Control Services (NCS) and the use of interruptible connections in the Geraldton area to ensure that demand is met until Stage 2 is progressed. Western Power is also developing options to prepare a business case for Stage 2. Current predictions of underlying natural load growth in Geraldton can be met by the existing transmission lines until approximately 2015/16 with minor works to address voltage constraints (see below). This date may be brought forward to accommodate any major loads / generators, such as Oakajee.

Some of the initiatives we have in place, or are planning in response to the concerns you raise are detailed below:

- Western Power is installing additional 11 kV feeders to accommodate additional load growth in the industrial areas.
- Although the Durlacher substation has reached capacity limits, Rangeway substation is able to pick up the new loads.
- Requirements for Geraldton Port and Asia Iron are been considered at the moment.
- The Webberton area currently has sufficient capacity to supply the area, and Western Power will continue to monitor network data.
- There is currently no immediate significant load growth indicated in the CBD area. However, we are aware of some potential future developments in the area and are continuing to determine the exact details and timing of such projects. We will continue to work closely with developers and the City of Geraldton-Greenough to progress distribution requirements. In the last year, we undertook a local network enhancement project (installed ducting in the CBD area) in anticipation of some of this future development.
- The previous anticipated load growth in the Narngulu area was not realized, and as such the rudds Gully substation project was deferred. We are currently revising our reinforcement strategy for the Geraldton region and will be in contact with the City of Geraldton-Greenough as more information becomes available. The existing feeders in the area have the capacity to cater for forecast load growth in the interim.
- A new feeder was installed in the Place/Flores area over the past year, which provides adequate access for new businesses. Notwithstanding this, there may be local connection requirements which will be addressed on an individual customer basis.
- Western Power will address capacity issues in Bluff Point, Spalding, Webberton, Strathalbyn, Beresford, Wonthella, as follows:
 - *Short term:* Install new Pass Street feeder to create additional capacity (to be commissioned summer 2010).

- *Medium term:* Install new Strathalbyn and Beresford feeders to create additional capacity (by summer 2011).
- *Long term:* Install additional distribution feeders as required.

Supply reliability in Geraldton after Southern Section Enhancement

The loss of a single 132 kV line north of Three Springs is not expected to lead to voltage collapse and trigger the need for load tripping north of Three Springs, based on the current network configuration and load. The addition of a 330 kV line to Three Springs Terminal, together with a 330 / 132 kV transformer, will support the underlying load growth in the Geraldton area for some years.

However, based upon current project timing, the addition of block loads in the Geraldton area could result in voltage stability and line thermal loading issues by the end of 2014, under a 1:10 year peak summer load condition for a fault and loss of a 132 kV line north of Three Springs. Although the likelihood of such a scenario occurring is slim, it is prudent that Western Power plans to ensure the integrity of our network in the area, and have factored such a scenario into our planning.

This will require some level of reinforcement or the use of Network Control Services (NCS) until such time as suitable reinforcement can be constructed in the area. Essentially until the network is reinforced to Geraldton, new block loads connecting to the network will be required to fund any required NCS and may help provide those services by providing interruptible loads or a localised generation solution. Western Power will also investigate securing network control services from existing customers in the Geraldton region. It is envisaged that NCS will be enabled during the high risk periods (e.g. peak demand during summer). Even then, the NCS will only be enacted to maintain system security in events such as a fault on a 132kV line to Geraldton. Western Power is currently engaging with potential major block loads to investigate options and ensure an acceptable solution can be reached. This would only be utilised under a network control services contract, and there would be substantial notice given to the customer prior to Western Power using it. A scheme similar to this is already in place in the Eastern Goldfields region.

Consumer connection problems

Issues regarding a number of businesses and projects have been listed in your submission.

During 2009 and early 2010, Western Power received complaints about a number of our projects in Geraldton and the Mid West which had not been completed in a timely manner. We are currently compiling a list of the specific jobs and their status/completion dates, which we will make available to you shortly. Other items to note include:

- Some complaints were associated with *Building the Education Revolution* (BER) works. Western Power is working closely with Building Management and Works to deliver the entire BER program within the SWIS and no delays to the occupation of BER buildings are anticipated because of current or future power upgrades. However, Western Power has had to recently imposed an indefinite suspension on all works being carried out by a contractor. This may impact on completion dates for some BER projects, however the extent of any delays are not yet known.

- Western Power is working closely with the contractor to ensure its practices and procedures are improved to enable a lifting of the suspension. The suspension will impact some customers in the Geraldton-Greenough region. Customers have been, or will be advised. Western Power is currently working on a plan to reduce the impact on customers from the suspension.
- The branches responsible for designing, quoting on and constructing customer-funded projects have been restructured and brought together under one management stream.
- Following the termination of the Power Alliance (Tenix-Downer) in February 2010, construction work in the North Country area is now performed by distribution delivery partners Jemena (based in Northam), Thiess (based in Geraldton) and by Western Power crews from Geraldton and Northam. With this arrangement there is adequate capacity and capability for construction work to be carried out in a timely manner.
- Supporting the construction change, Western Power has been able to significantly reduce the time taken to issue designs and quotes for customer-driven work in the North Country region. The average turnaround time for issuing a design and quote is now just under one month.

Northampton power capacity

Your submission highlighted a specific problem in Northampton, where IGA was unable to open due to insufficient power capacity. Western Power notes that the power supply to the Northampton IGA was energised on 9 July 2010.

Capacity in Kalbarri – Northampton

Western Power plans to address capacity issues in Kalbarri and Northampton as follows:

- *Short term:* Deploy peak lopping generation as required to support distribution feeders during peak load periods until summer 2012.
- *Medium term:* Install Static Synchronous Compensators (STATCOMs) by summer 2012.
- *Long term:* Northampton zone substation by summer 2017.

Reliability in Kalbarri-Northampton

Over the summer there were also a series of outages caused by lightning and the failure of high voltage tee-offs. The latter issue has been addressed.

Western Power's strategies to improve reliability in the short to medium term include:

- Continuation of the silicone-coating of pole-top equipment program to prevent flashovers and pole top fires caused by salt build-up on insulators.
- The installation of surge arrestors under the Lightning Mitigation Program.
- The strategic placement of automatic reclosers to reduce the impact of faults.

Appointment of new Regional Manager for Geraldton

To provide a stronger local presence, Western Power has appointed new managers for the regional areas. Mr Adrian Stewart has very recently been appointed as the Mid West Regional Manager. Adrian will commence his new role on 28 September 2010. He will be based in Geraldton and he will be a senior point of contact between Western Power and the community. Adrian will be able to assist with resolving high level issues encountered in the region. Key stakeholders will be contacted by Adrian once he starts work in his new role.

In the interim, Dennis Smith, the Branch Manager for Country Distribution, is available to assist stakeholders with more general enquiries.

In addition, Western Power's Country Regional Planning and Development Manager, Dean Frost, regularly attends Mid West Infrastructure and Agency meetings to keep abreast of proposed developments and inform stakeholders of Western Power's plans for capacity expansion in the region.

Connection to Oakajee

Western Power is currently in discussion with Oakajee Port & Rail and the Department of State Development regarding future power provision for Oakajee. Load projections are being developed with Oakajee Port & Rail and will be made available in due course.

Smart Grid

Thank you for your interest and support for Western Power's Smart Grid program. We will take your inputs into account, and it is likely that they will help to form a part of the Smart Grid road map as it is developed. Smart Grid will be an important part of the power network of the future.

Western Power is currently undertaking a smart grid foundation project which involves:

- the installation of approximately 9,000 smart meters in Perth's eastern metropolitan region
- the installation of around 2,300 in Denmark
- the integration of smart meters and communications software into Western Power's existing meter data management system

This trial will enable us to gather information about energy usage patterns, which will help formulate future energy programs and initiatives to make better use of existing assets. The trial will also see the introduction of Homes Area Networks, In Home Displays and energy saving programs such as voluntary demand-management trials.

A major driver for Smart Grid solutions at this point in time is where the deferment of infrastructure expenditure is appropriate. Whereas this solution would be appropriate for 'edge-of-grid' communities in the Mid West, the Geraldton-Greenough area has sufficient power to meet current demand.

On behalf of Western Power I would like to thank you for your support. If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Network Planning and Development

Our ref: 7401524
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Tony Petersen
WA Director
ERM Power
GPO Box 2742
Cloisters Square
Perth WA 6850

Dear Mr Petersen,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support of the proposed augmentation and interest in the project is greatly appreciated by Western Power.

The proposed augmentation of the Mid West transmission network will substantially increase the power available to consumers and facilitate the connection of generation in the Mid West region. Western Power proposes that the leased assets from Eneabba to Karara mine will be treated as part of Western Power's network – the South West Interconnected System, and as such will be available for access from other loads and generators.

Should you wish to enquire about a network connection, please do not hesitate to contact Patrick Ragan, Team Leader, Access Solutions Section, telephone number (08) 9326 4891, email patrick.ragan@westernpower.com.au

On behalf of Western Power I would like to thank you for your support. If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7401563
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Bill Bowyer
RPV Developments Pty Ltd
Level 22, 56 Pitt Street
Sydney
NSW 2000

Dear Mr Bowyer,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support and interest in this project is appreciated by Western Power.

Your recommendation for the inclusion of Stage 2 along with Stage 1 is noted. In reply I would make the following comments.

In 2007 a proposal to build a double-circuit line from Pinjar to Moonyoonooka (Geraldton) was made. However, in 2009 the State Government and Western Power reviewed the drivers and cost of this project, in light of revised demand projections following the Global Financial Crisis.

This review recommended that the project be split into two stages, as follows:

Stage 1 – Neerabup to Eneabba (required by March 2013)

Stage 2 – Eneabba to Moonyoonooka, connecting Stage 1 through to Geraldton.

The key drivers for Stage 2 (Northern Section) relate to the need to meet electricity demand for:

- Underlying natural load growth in the Geraldton region.
- Growth from major new loads including the proposed new port and industrial estate developments at Oakajee, north of Geraldton and expansion to the Geraldton port.
- New generation seeking connection to the grid.

In December 2009 Western Power applied for Infrastructure Australia funding from the Australian Government to build Stage 2, based on a new 160 km double circuit 330 kV line from Eneabba to Moonyoonooka. Western Power continues to engage with Infrastructure Australia to progress this application. However, a number of options to meet future requirements have opened up and,

over the next 12 months, Western Power will conduct a more detailed planning assessment in consultation with key regional and industry stakeholders and the community to determine the best method and timing for meeting future requirements.

The Northern Section (Stage 2) will be subject to a separate business case to Government and submission to economic regulation authority.

The milestones for Stage 2 are:

1. Scope of Stage 2 works will be reviewed by engagement with key stakeholders and ongoing planning studies leading to the selection of a preferred option.
2. Outcome of Western Power's Infrastructure Australia funding application.
3. Development of a preferred supply option for the Geraldton area.

On behalf of Western Power I would like to thank you for your support. If you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7401634
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

David Griffin
General Manager Development
Infigen Energy Ltd

Dear Mr Griffin,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support and interest in this project is appreciated by Western Power.

Western Power recognises that the region north of Perth is highly prospective for wind generation. There are also solar and other generation projects in the area. The proposed augmentation project will enable these new generation sources to be connected to the network. I understand that you see the potential for expansion of your wind farm in the future.

Regarding the Northern Section (Stage 2), this will be subject to a separate business case to Government and submission to the Economic Regulation Authority (ERA).

The milestones, based on current forecasts, for Stage 2 are:

1. Scope of Stage 2 works will be reviewed by engagement with key stakeholders and ongoing planning studies leading to the selection of a preferred option.
2. Outcome of Western Power's Infrastructure Australia funding application.
3. Development of a preferred supply option for connection to the Geraldton area.

Western Power will continue to work closely with industry, State Government, other stakeholders and the community to determine the most appropriate solution for the northern section of the Mid West Energy Project.

In December 2009 Western Power applied for Infrastructure Australia funding from the Australian Government to build Stage 2. Western Power continues to engage with Infrastructure Australia to progress this application. The project has been identified as having real potential and has been shortlisted by Infrastructure Australia.

Western Power will continue to engage with stakeholders and Infrastructure Australia to consider the options for the northern section of the Mid West Energy Project. The scope of Stage 2 works will be reviewed by ongoing planning studies and engagement leading to the selection of a preferred option. We expect this planning work to occur over the next 12 months.

On behalf of Western Power I would like to thank you for your support of the project. If you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7402563
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Dajlan Li
VP
Xian Continental Power Engineering Corp.

Dear Mr Li,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba.

Western Power has responsibility for constructing and maintaining a network to transmit and distribute electricity and to facilitate the connection of power generation sources to its network. Western Power does not have responsibility for generating power. The Mid West Energy Project proposal is therefore confined to augmenting the transmission network.

The proposed augmentation of the Mid West transmission network will substantially increase the power available to consumers and facilitate the connection of generation in the Mid West region. Western Power proposes that the leased assets from Eneabba to Karara mine will be treated as part of Western Power's network – the South West Interconnected System, and as such will be available for access from other loads and generators.

Should you wish to enquire about a connection to the transmission network, please contact Patrick Ragan, Team Leader, Access Solutions Section, telephone number (08) 9326 4891, email patrick.ragan@westernpower.com.au

I would like to thank you on behalf of Western Power for your interest in the project. If you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7402662
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Troy Forward
General Manager Development
Independent Market Operator
PO Box 7096, Cloisters Square
Perth WA 6850

Dear Mr Forward,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support and interest in the project is very much appreciated by Western Power.

A key driver for Stage 1 (Southern Section) includes supplying the new mining projects that are being actively pursued in the area (notably Karara), which will have a significant impact on total electricity demand. Western Power has conducted a detailed process to determine the most appropriate solution, in negotiation with Karara Mining Limited as the foundation customer. As well as providing the capacity to deliver the projected power requirements for the region into the future, the reinforced network will enable local generation sources to be connected. The region north of Perth is highly prospective for wind generation. There are also major solar and other generation projects in the area.

The proposed option reduces the risk to network users of the need for further major reinforcement in the region within a few years, and the potential curtailment of development projects in the area.

On behalf of Western Power I would like to thank you for your support. If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7412086
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Piers Verstegen
Director
Conservation Council of Western Australia Inc.
City West Lotteries House
2 Delhi Street
West Perth
WA 6005

Dear Mr Verstegen,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your interest in the project and support for reinforcing the transmission system in the Mid West is appreciated by Western Power.

The Mid West Energy Project is one of the most important infrastructure projects in Western Australia. It will provide the capacity to meet increasing demand for electricity and facilitate the connection of power generation sources to the network within the region. This means that the capacity, reliability and security of the South West Interconnected System will be greatly enhanced.

The region north of Perth is highly prospective for wind generation. There are also major solar generation sources in the area. These renewable energy sources cannot be connected to the present 132 kV network because of its capacity limitation. Without the major proposed augmentation it will be difficult for Western Australia to meet its Renewable Energy Target (RET) obligations. The 330 kV upgrade will enable these and other new generation sources to be connected to the network.

Your letter raises some issues, which I have addressed below.

Construct stages 1 and 2 concurrently:

Your recommendation for Stage 1 & 2 to be carried out concurrently is noted.

In 2007 a proposal to build a double-circuit line from Pinjar to Moonyoonooka (Geraldton) was made. However, in 2009 the State Government and Western Power reviewed the drivers and cost of this project, in light of revised demand projections following the Global Financial Crisis.

This review recommended that the project be split into two stages, as follows:

Stage 1 – Neerabup to Eneabba (required by March 2013)

Stage 2 – Connection from Eneabba or Three Springs through to Moonyoonooka, connecting Stage 1 through to Geraldton

The key drivers for Stage 2 (Northern Section) relate to the need to meet electricity demand for:

- Underlying natural load growth in the Geraldton region
- Growth from major new loads including the proposed new port and industrial estate developments at Oakajee, north of Geraldton and expansion to the Geraldton port
- New generation seeking connection to the grid

In December 2009 Western Power applied for Infrastructure Australia funding from the Australian Government to build Stage 2, based on a new 160 km double circuit 330 kV line from Eneabba to Moonyoonooka. Western Power continues to engage with Infrastructure Australia to progress this application. However, a number of options to meet future requirements have opened up and, over the next 12 months, Western Power will conduct a more detailed planning assessment in consultation with key regional and industry stakeholders and the community to determine the best method and timing for meeting future power requirements.

The Northern Section (Stage 2) will be subject to a separate business case to Government and submission to the Economic Regulation Authority.

The milestones for Stage 2 are:

1. Scope of Stage 2 works will be reviewed by engagement with key stakeholders and ongoing planning studies leading to the selection of a preferred option.
2. Outcome of Western Power's Infrastructure Australia funding application.
3. Development of a preferred supply option for the Geraldton area.

Western Power will continue to work closely with industry, State Government, other stakeholders and community to optimise the development

Please note that Infrastructure Australia published a report 'Getting the Fundamentals Right for Australia's Infrastructure Priorities' at the end of June 2010, where the Mid West Energy Project Stage 2 was identified as a project of priority under the National Electricity Grid theme. The project has been identified as having real potential and shortlisted by Infrastructure Australia. Further engagement with Infrastructure Australia is proposed and funding is being sought for the Northern Section double-circuit 330 kV line from Eneabba to Moonyoonooka.

Environmental impact consideration

It is proposed that the new transmission line will be constructed along the majority of the existing route. By rebuilding along an existing alignment our impacts are confined to an already disturbed area, reducing the environmental significance compared to constructing an entirely new alignment. Western Power have minimised the environmental impact by locating tower positions (where possible) outside of significant environmental areas. Management actions will be implemented where construction works are required in environmentally sensitive areas. Where vegetation clearing is required, Western Power will implement offsets in accordance with state and federal legislation.

Western Power is required to seek environmental approvals for the new line and the associated clearing and works. We have already sought most of these approvals, and will continue to liaise with environmental stakeholders such as Department of Environment, Water Heritage and the Arts (Federal) and the Department of Environment and Conservation (State) throughout the duration of the project.

On behalf of Western Power I would like to thank you for your support. If you have any queries regarding the project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7413964
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Lisa Edwards
PO Box 44
Gingin
WA 6503

Dear Ms Edwards,

Mid West Energy Project – Southern Section

Thank you for your submission regarding the Mid West Energy Project, which proposes replacing the existing 132,000-volt (132 kV) transmission line passing through your property on Lot 101 Brand Highway, Boonanaring, Gingin, with a new 330 kV line.

On behalf of Western Power I want to assure you that we take very seriously your concerns regarding how this proposed project may impact your property.

Your submission requests answers to a number of issues, which I will address below.

Considering options:

Western Power investigated a number of options for the provision of additional power to the Mid West region, as well as several different transmission line routes. Of the transmission line route options considered, three were evaluated in detail, taking into account social, environmental, social, technical and cost impacts. This was done in 2007 and reviewed in 2009.

By rebuilding along an existing alignment, our impacts are confined to an already disturbed area, reducing the environmental impact, compared to constructing an entirely new alignment. Preliminary cost estimates indicate that the project cost of the line replacement is lower than alternative routes. As such, Western Power identified the rebuild option as the most acceptable and viable option overall.

Easements:

Western Power is required to register an easement for infrastructure operating at 200 kV and above. The line which currently crosses your property operates at 132 kV. Before the line is rebuilt to operate at 330 kV, Western Power will negotiate easements with all affected landowners and pay compensation, in accordance with the relevant legislation.

Following the gas pipeline:

Building a transmission line in close proximity to a gas pipeline presents technical problems (earth potential risk and low frequency induction) which are both difficult and expensive to mitigate and would potentially make this option unviable. Furthermore, if we built the 330 kV line parallel to the gas pipeline, my understanding is that it would still take the infrastructure to a point where it crosses your property.

I trust this information is helpful and thank you for your input.

Our Project Officer Neil Reedy will continue to work closely with landowners along the proposed line route, to ensure that individual landowner needs are taken into consideration.

I hope the above information is useful to you. Should you have any queries about the Mid West Energy Project please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au. Should your queries relate to construction issues and/or land access please continue to contact Neil Reedy on 9326 4108 or via email to neil.reedy@westernpower.com.au

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7402900
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Richard Sellers
Director General
Department of Mines and Petroleum
Mineral House
100 Plain Street
East Perth WA 6004

Dear Mr Sellers,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Your support for reinforcing the Mid West transmission system to 330 kV and interest in the project is appreciated.

A key driver for Stage 1 of the project (Southern Section) includes supplying a number of new mining projects that are being actively pursued in the area (notably Karara), which will have significant impacts on total electricity demand. The proposed reinforcement is one of the most important infrastructure projects in Western Australia. It will provide the capacity to meet increasing demand and facilitate the connection of generation sources within the region. This will greatly enhance the reliability and security of the South West Interconnected System.

On behalf of Western Power I would like to thank you for your support. If you have any queries please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development

Our ref: 7434034
Contact: Douglas Thomson
(08) 9326 6174

10th September 2010

Mike Joyce
Giralia Resources NL
PO Box 1665
West Perth
WA 6872

Dear Mr Joyce,

Mid West Energy Project – Southern Section

Thank you for your response to Western Power's request for submissions regarding the proposed Mid West Energy Project Stage 1 (Southern Section) between Neerabup and Eneabba. Western Power appreciates your interest in the project and for providing an indication of your anticipated power requirements, which are noted.

Should you wish to enquire about a connection to the transmission network, please contact Patrick Ragan, Team Leader, Access Solutions Section, telephone number (08) 9326 4891, email patrick.ragan@westernpower.com.au

On behalf of Western Power I would like to thank you for your submission. If you have any queries regarding the current project, please do not hesitate to contact Douglas Thomson on (08) 9326 6174 or via email to douglas.thomson@westernpower.com.au.

Yours sincerely,



David Bones
Manager Networks Planning and Development