

Provision of Services for Demand Control WS2737625436 - Registration of Interest

The Organisation

Western Power is a Western Australian State Government owned corporation which is responsible for building, maintaining and operating an electricity network which connects over 1.1 million customers to traditional and renewable energy sources.

Problem Statement

Western Power is facing challenges in the distribution network where the medium voltage (MV) feeders is experiencing thermal overload driven primarily by evening peak load (generally occurring between 5.30pm-8.30pm).

About the opportunity

Western Power would like to closely work with interested parties who can provide a distributed response of a complete '50 Mega Watts (MW)' solution or a part solution of 'less than 50 Mega Watts (MW)' for demand control services across Perth's metro area to manage the network risks. The metro areas are: Henley Brook, Byford, Southern River, and Waikiki.

The solutions could comprise of:

- one or a combination of embedded generation;
- residential or commercial/ industrial grid-connected aggregated behind the meter battery storage;
- demand-side load management solutions.

The successful proponent(s) will propose an innovative integrated network solution which is deliverable by October 2021. The service provided must be dispatchable (increase and decrease in load) and provides verifiable monitored data to Western Power.

The service does not need to meet the entire network shortfall, and a 'part' solution may be pursued, however a minimum of 2MW solution (in one of the four metro areas) are required to qualify as a dispatchable service.

Proposed Location:

The services are required where there is an identified MV feeder overutilisation issue at the following zone substation feeders:



Substation Load Area	Suburbs	Required MW
Byford	Armadale, Brookdale, Byford, Darling Downs, Hilbert, Hopeland, Mundijong, Oakford, Oldbury, Serpentine	10
Henley Brook	Aveley, Brabham, Ellenbrook, Henley Brook, The Vines	20
Southern River	Armadale, Banjup, Champion Lakes, Huntingdale, Harrisdale, Mount Nasura, Piara Waters, Seville Grove, Treeby	5
Waikiki	Baldivis, Karnup, Port Kennedy, Secret Harbour, Waikiki, Warnbro	15
Total		50

The Scope

Western Power is seeking registrations of interest from suitably qualified and experienced organisations, for the provision of distributed demand control services on Western Power's MV Distribution Network, to primarily resolve MV feeder overutilisation from evening peak load (generally occurring between 5.30pm-8.30pm).

The service(s) must meet the following criteria:

- Integrated to Western Power distribution network
- Dispatchable monitored and verifiable distributed demand control during peak load periods
- Minimum of 2MW in the area specified
- The Provider will own, operate and maintain the proposed system
- Dispatchable by 1 October 2021

Western Power is seeking competitive services that will be able to meet the above criteria.

Please note that these opportunities are also included in the 'Distribution Storage Opportunities' published as part of the Distributed Energy Resources (DER) Roadmap action 5b.

Registration Requirements

Suppliers are required to respond to the following for its Registration of Interest submission:

- Demonstrate track record and capability in delivering **Services for distributed demand control** in relation to the high-level Scope requirements stated above (capability statement).
- If available, references from at least three customers whom you have offered similar services.
- Safety, Health & Environment information to be requested as part of this exercise.

To be considered for the inclusion in the Request for Proposal, please **[CLICK TO REGISTER](#)** your interest by no later than **4PM AWST, Wednesday 23rd December 2020**.

***** IMPORTANT *****

Please ensure the following details are **included in your registration**:

- I. Please specify the advertised tender event number you are responding to:
WS2737625436_Demand Control Services - Network Support Services
- II. Commodity Code Number and Title: ***81 – Engineering and Research and Technology Based Services***

Please note that registering for the opportunity does not guarantee that you will be invited to participate in a market event or become a supplier of Western Power.

Please find answers to several questions on FAQs page below.

Should you have any further questions or concerns, please do not hesitate to contact:

Pilvaraj Rajendran – Western Power Sourcing Specialist, Commercial.

Pilvaraj.Rajendran@westernpower.com.au

Next Steps:

Western Power will review and evaluate the registrations received against the scope requirements. Shortlisted registrants would then be progressed and invited to submit an Expression of Interest and/or a Request for Proposal.

Appendix: Locations of Required Services

a. Byford Load Area

Substation Load Area	Feeder	Suburbs	MVA Required
Byford	BYF 503	Armadale, Brookdale, Darling Downs	1
	BYF 523	Hopeland, Mundijong, Serpentine	1
	BYF 524	Byford	4
	BYF 527	Byford, Hilbert, Oakford, Oldbury	4
Total			10

Table 1 Required Services for Byford Load Area

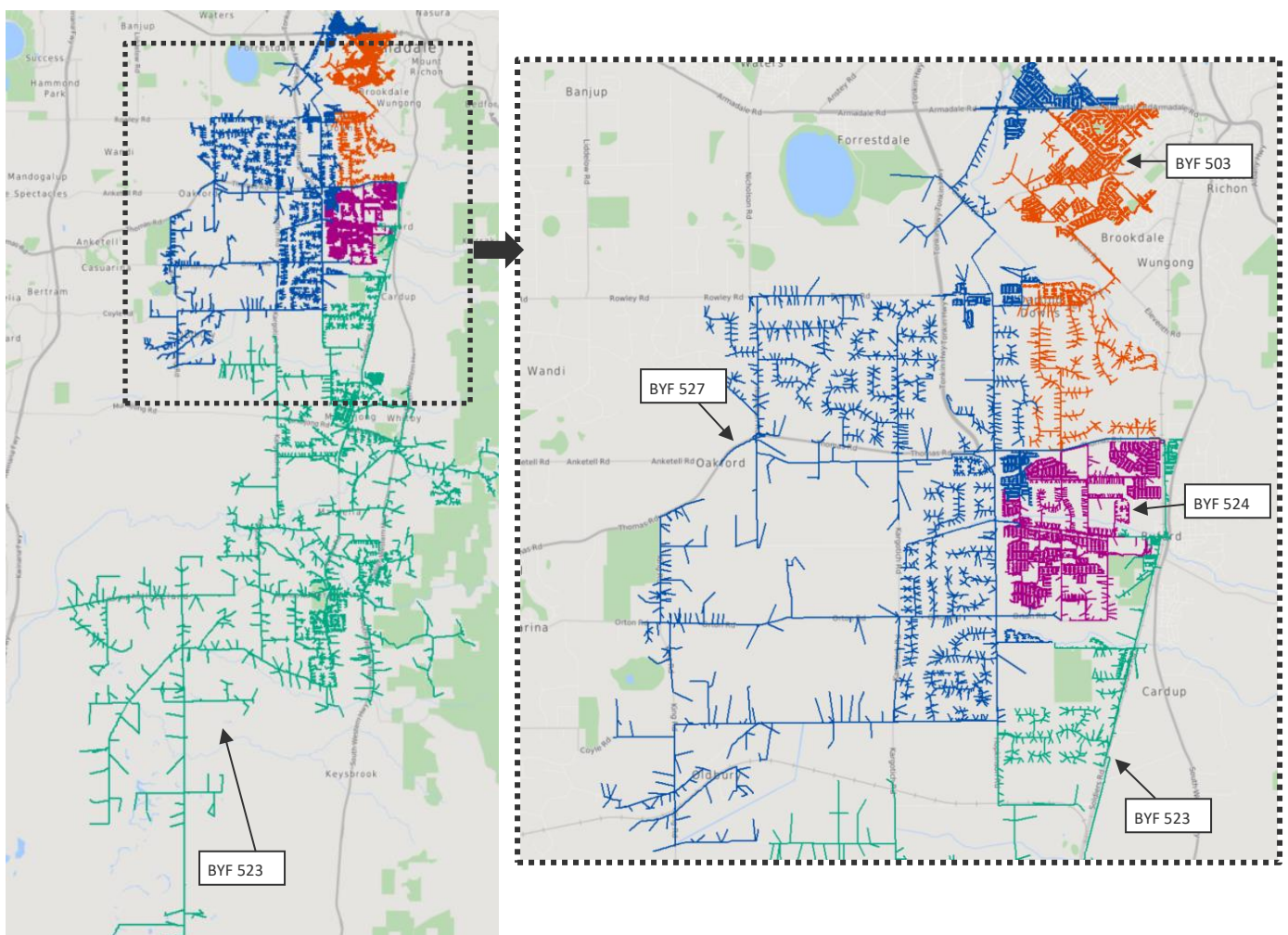


Figure 1 Required Services for Byford Load Area

b. Henley Brook Load Area

Substation Load Area	Feeder	Suburbs	MW Required
Henley Brook	HBK 504	Brabham, Henley Brook	2.5
	HBK 507	Ellenbrook	4.5
	HBK 508	Aveley, Ellenbrook	4.5
	HBK 536	Ellenbrook, The Vines	3
	HBK 537	Aveley, The Vines	5.5
Total			20

Table 3 Required Services for Henley Brook Load Area

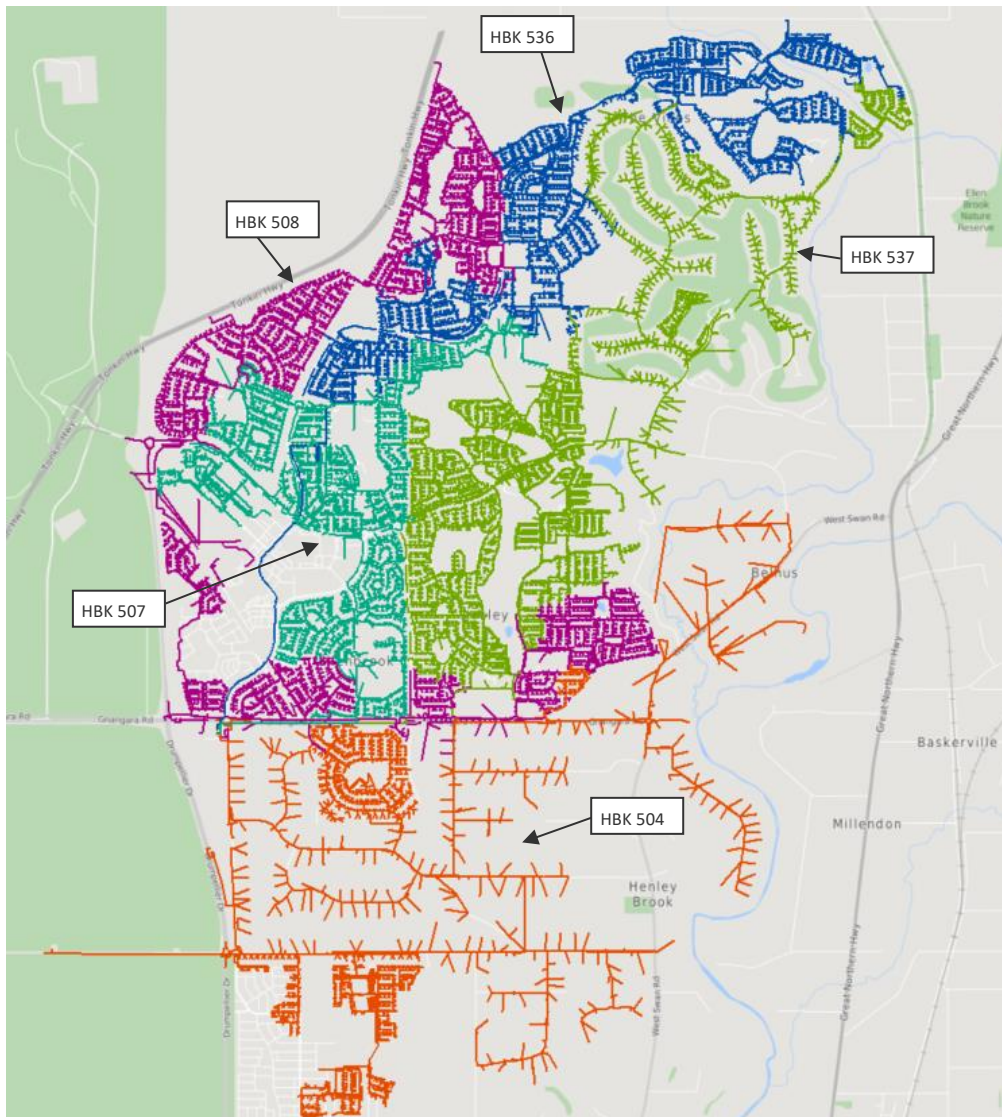


Figure 3 Required Services for Henley Brook Load Area

c. Southern River Load Area

Substation Load Area	Feeder	Suburbs	MW Required
Southern River	SNR 505	Banjup, Piara Waters, Treeby	2
	SNR 516	Armadale, Champion Lakes, Huntingdale, Mount Nasura, Seville Grove	1
	SNR 540	Harrisdale, Piara Waters	2
Total			5

Table 4 Required Services for Southern River Load Area

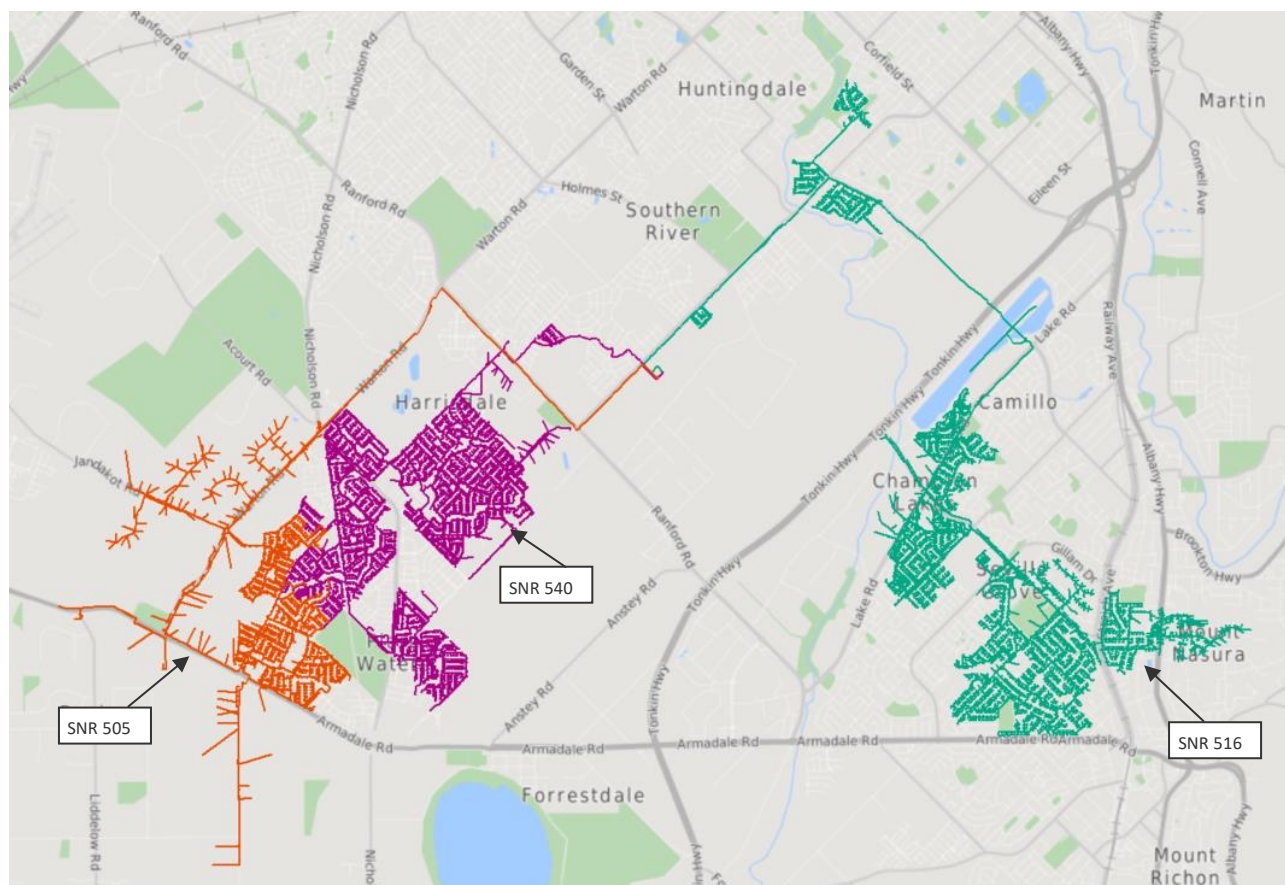


Figure 4 Required Services for Southern River Load Area

d. Waikiki Load Area

Substation Load Area	Feeder	Suburbs	MW Required
Waikiki	WAI 505	Port Kennedy, Secret Harbour	4.5
	WAI 527	Baldivis, Karnup	4.8
	WAI 536	Waikiki, Warnbro	1.2
	WAI 539	Baldivis	3.5
	WAI 540	Baldivis	1
Total			15

Table 5 Waikiki Load Area Required Services

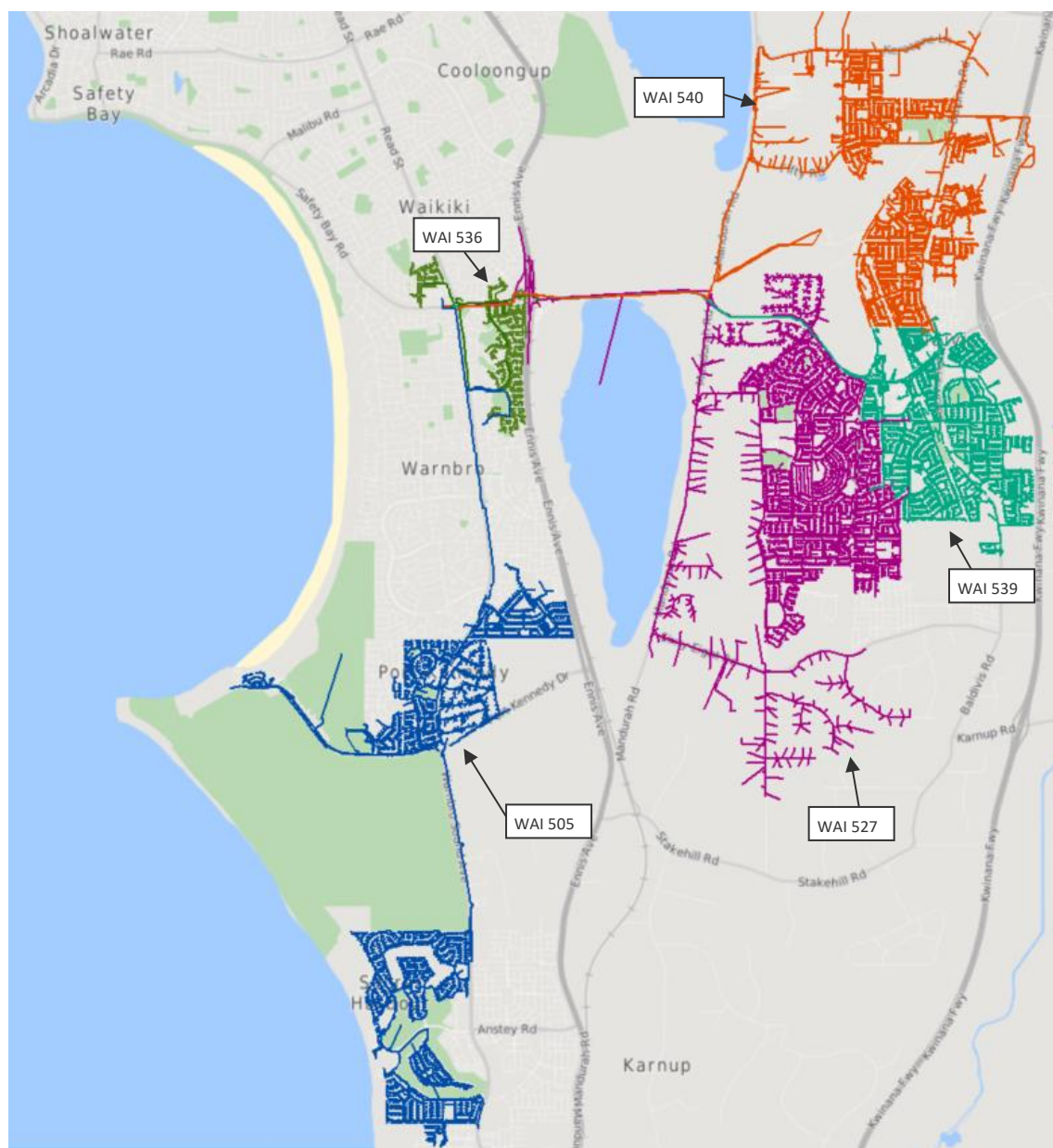


Figure 5 Waikiki Load Area Required Services

FAQs

1. What is the minimum supply capacity required?

- The minimum supply capacity required is 2MW for each metro load area.

2. Where are the locations?

- The network locations for the services are within the area specified in ROI for each metro load area. However, the final location will be determined through detailed engineering studies as part of the development of connection services.

3. What are the dispatch periods?

- Preference is for services that has dispatchable verifiable demand reduction of at least 3 hours during the evening peak hours, typically 17:30 to 20:30 on hot summer days, which triggers high customer demand.

4. Who will be responsible for site specific preparatory works?

- The Provider is responsible for all property-related arrangements and site establishment requirements including any necessary permits and Local Government Authority (LGA) consultation, community consultation and environmental approvals, network connection costs including any applicable connections contribution, and commissioning of non-network energy solutions.

5. Who will be responsible for operating and maintaining the facility?

- The Provider will own, operate and maintain the proposed system(s).

6. What are the connections voltages to the Western Power MV and LV network?

- Western Power MV network voltages are between 6.6kV-33kV inclusive. The LV network consist of 415V. The four areas specified in the ROI contain 22kV MV networks.