Extension Hill Pty Ltd

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ABN 81 067 128 938

First Floor, 66 Kings Park Road
WEST PERTH WA 6005
Australia

PO Box 82
WEST PERTH WA 6872

Telephone: 61-8-9216 2600
Facsimile: 61-8-9322 9801

E-mail: austadmin@asiairon.com

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Ms Karen Tilsed
A/Assistant Director (Electricity)
Electricity Access
Economic Regulation Authority
GPO Box 8469
Perth Business Centre WA 6849

Dear Ms Tilsed

Western Power 330kV Mid-West Augmentation
New Facilities Investment Test

Extension Hill Pty Ltd submits that Western Power's proposed 330kV Mid-West Augmentation satisfies Section 6.52 of the Access Code and that it has provided sufficient information, when the material previously submitted to the ERA for assessment of the technical merits of this augmentation are taken into account.

Following is Extension Hill Pty Ltd's Extension Hill magnetite Project background information,

- Extension Hill Pty Ltd (EHPL) is the owner and developer of the Extension Hill Magnetite Project located at Mt Gibson approximately 350km from Perth on the Great Northern Highway. The project involves the establishment of a magnetite mine and process plant at Mt Gibson to produce magnetite concentrate, slurry and water return pipelines between Mt Gibson and Geraldton and associated infrastructure including the establishment of a 330kV transmission line from Three Springs to the Mt Gibson mine site and 330/33kV substation at the mine site. The project has achieved both state and federal environmental approval and authority to proceed is anticipated from EHPL's Chinese principals in late 2008. Construction of the project's infrastructure is planned to be completed by late 2010 and first ore shipped by mid 2011.

- The development of the proposed 330kV double circuit transmission line from Neerabup to Eneabba (the subject of this NFIT submission) is an essential component of Western Power's proposed Mid-West Augmentations of the South West Interconnected System (SWIS) necessary for the EHPL project to proceed. It is fundamentally important that these proposed Western Power Mid-West Augmentations proceed within a time frame consistent with EHPL's own project programme.

- The electrical demand of EHPL's project of an initial 55MW in late 2010 and 110MW within another twelve months are not currently identified in Western Power's 2008 Transmission and Distribution Annual Planning Report released in May. EHPL submitted a Transmission Connection Load Application nominating these demands to Western Power in August 2007 and specifying Three Springs as the preferred point of connection with the SWIS. Ultimately it is planned that EHPL's electrical demand will double to 250MW within a further five years (i.e. by 2016).

We make the following supporting points pertaining to the NFIT considerations by ERA,

- EHPL's loads, together with other mining loads identified in the Mid-West region, are consistent with the level of demand of the High Peak Load Forecast included in Western Power's Submission to the ERA for this NFIT. In addition to these prospective mining and industrial loads, significant additional load will result from the multiplier effect of increased economic activity in the region. Multiplier effect loads would be the additional loads arising from housing, small businesses, services and infrastructure necessary to support these people and service industries. Direct employment numbers are > 350 during the operating phase. In addition the project will still have a direct load impact. For instance, even if EHPL was forced to self generate on site, because the mid west grid could not support the demand, there would still be project related loads out of Three Springs and at Geraldton Port of the order of 7 and 10MW respectively.

- The nature of extra high voltage transmission system development, results in very long development times. This is driven by the need to obtain statutory approvals and stakeholder consents, which in particular adds significantly to project lead times. There is a natural capacity increment determined by transmission distance, load to be transmitted, generation to be connected and the rate of connections of these loads and generation. Given the medium case, the 330kV dual circuit is the only sensible choice.

  Smaller scale incremental solutions whilst technically possible, are undesirable as they exacerbate community resentment as more easement corridors are needed, increasing environmental and community impacts. Further, given the nature of the growth and location of loads, smaller scale increments will need to be installed almost continuously. The overheads to this approach are significant in areas of engineering, planning, route selection, environmental approvals, community, ERA reviews, etc…Investment in 330kV infrastructure provides economies of scale not available with lower voltage systems.

  The 330kV augmentation provides predictability to regional communities and businesses that sufficient power transmission capacity is available to access the competitive generation market to support investment in the region.

- The existing 132kV transmission lines from Perth feeding the Mid-West and North Country region do not have the necessary capacity to supply increasing connected loads, much less new loads. Neither do they have the capacity to allow additional generation to be connected in the region onto the SWIS.

- The existing wood pole lines are generally at the limit of their economic life and increasing failure of poles and hardware pose regional fire and safety risks, as well as increasing the risk to reliability. This factor alone demands attention and a move to steel or concrete towers and new hardware is needed. Even if the load were not growing, something has to be done to address these issues, as the safety and reliability of the regional supply will be compromised.

- An important economic benefit to all consumers is that it is far more efficient use of capital to generate and supply load in the region than to "send" it all up from down south. The efficiency accrues in two ways,

    - The transmission capacity at Muja is freed up for further expansion in the southwest region as generation in the mid west is brought on line, and
    - The losses consumed on the transmission system to send energy from Muja to Geraldton is lowered as mid west generation is closer to all the loads north of Perth.

- Further the fuel and generation capacity located in the mid west region will provide many beneficial, diversity factors to the whole system making generic failure and total system shutdown more unlikely, than if generation in the mid west is not expanded. Any augmentation, other than 330kV, will likely not provide these benefits, but will exacerbate the current situation of being over exposed to the existing south west regional concentration of fuel and generation.

- Competition in the generation market is enhanced by extension of the 330kV system, as it gives access for new loads and expansion of existing loads to the competitive generation market. Competition in the generation market is further enhanced by the new capability for significant regional generators to connect to the grid. Competition is also enhanced by access to a variety of generating sources, coal, gas, gas combined cycle, wind, solar etc… and with options expected to grow due to this augmentation. Our project for instance, in the absence of a strong grid in the region, would have to run a gas line to the mine and generate on site, thereby being captive to the gas market and being unable to gain access to the grid connected renewable sources.

- We applaud WPC's decision to adopt Alliancing as its contracting approach to the augmentation. This approach to the creation of faculties is well proven and with appropriate governance and cooperative behaviour will deliver a lower cost, better delivery time and better quality outcome than traditional contracting methods. EHPL preferred contracting approach is Alliancing.

Yours sincerely,
EXTENSION HILL Pty Ltd

Matt Duxbury
Manager Infrastructure Services