4 August 2008

LGP

Landfill Gas and Power

Economic Regulation Authority
PO Box 8469
Perth Business Centre
PERTH WA 6849
Email: SubmissionMinReport@era.wa.gov.au

Dear Sir / Madam

SUBMISSION IN SUPPORT OF ANNUAL WHOLESALE ELECTRICITY MARKET REPORT

Thank you for the opportunity to make a submission in respect of ERA's annual review of the Wholesale Electricity Market. LGP comments below are in the same format of the Discussion Paper.

Discussion Point 1: The Authority invites comment on the impact of fuel supply and fuel prices on the market. In particular:

- **to what extent, and in what way, do current issues in regard to fuel supply or fuel prices impact on long-term investment decisions in the market;**

LGP submits that the current issues in respect to fuel supply and fuel prices has a profound impact on long term investment decisions in the market and is likely to lead to investment decisions that are sub-optimal from the perspective of achieving the Market Objectives.

The principal fuel supply issue at the moment is the limited availability and relatively high prices of gas, which is expected to continue over at least the medium term. The availability is limited by both a shortage of the commodity and a shortage of pipeline capacity, both being essential for effective supply.

LGP supports the comments in the Discussion paper to the effect that investors are in the best position to know what type of plant makes sense given the outlook for fuel supplies and that a decision to use a fuel other than gas does not of itself imply a problem with the WEM as it is appropriate for decisions on investment in new plant to respond to fuel availability.

From the perspective of power station financiers, project return is maximised by minimising the capital costs, maximising the debt-equity ratio of the capital structure and minimising the interest rate on the debt. These ideals translate into minimising cashflow risk so as to achieve predictable net returns that exceed the financiers' hurdle rates of return. Cashflow risk is minimised by securing firm cost and revenue structures; in effect locking-in at the outset the project costs and revenues.

Fuel is a major cost element of a project and needs to be locked-in on a long term basis; not only from the perspective of minimising risk and assessing project return, but as an express condition for obtaining Capacity Certification by the IMO. The forward-price of firm fuel supply at the time of project commitment is therefore a principal determinant of project

Landfill Gas and Power Pty Ltd
78 - 80 Robinson Avenue,
Belmont WA 6104
PO Box 861 Cloverdale WA 6985

ABN: 89 053 919 430
Telephone: +61 8 9475 0144
Facsimile: +61 8 9475 0173
Website: www.landfillgas.com.au

viability. It follows directly that if gas-fuel is unavailable on a long term firm basis, a gas-fired project cannot proceed. More likely, if gas-fuel is available but is expensive, projects based on other fuels, and diesel and coal in particular, will gain a relative advantage over projects using gas fuel.

When a project revenue stream is further resolved into capacity and energy components, risk is minimised by relying only on a capacity payment to service the capital, which is relatively more predictable and potentially of higher credit rating. This approach promotes the development of diesel-fired standby units based on second-hand generating units, which in turn means that the peaking consumption of the SWIS will shift towards diesel firing at prices linked to the oil price.

In a scenario in which gas is highly priced and of short supply, it is likely that new gas-fired plant will not be constructed, the existing gas-fired plant will operate in a mid-merit role, the less-versatile coal plants will be dispatched as baseload, and peaking capacity will be diesel-fired. As the relative energy-contribution of gas decreases, the contribution of liquids will increase. This is potentially a sub-optimisation in the event that the current fuel availability issues prove to be only short term as the market could contain a more liquid plant than is warranted by gas availability. Otherwise, as the market grows, market customers will purchase increasing amounts of high priced energy from the STEM/Balancing markets and this will act as a price signal for further gas plant until the trigger price for a new development is exceeded.

- **to what extent, and in what way, do current issues in regard to fuel supply or fuel prices impact on the day-to-day operation of the market, and outcomes in the market.**

Gas availability impacts the day-to-day operation of the market mainly via pipeline constraint issues and spot pricing.

A generator earns a revenue stream from the sale of capacity and energy, with surpluses being sold via the WEM. For non-Verve plants, energy is sold primarily through the STEM, with non-liquid prices capped at a price based on the cost of operating a 40 MW open cycle gas turbine and non-liquid prices capped at a price related to the oil price. Section 6.6.3 of the Market Rules requires that:

> *A Market Generator must not, for any Trading Interval, offer prices within its Portfolio Supply Curve that do not reflect the Market Generator's reasonable expectation of the short run marginal cost of generating the relevant electricity when such behaviour relates to market power.*

In June 2008 STEM and MCAP prices were very high by historical standards, being driven mainly by outages of coal and gas fired stations which necessitated substitution by liquid plant. These high prices coincided with the major gas outage at Varanus Island, which of itself may not have made a significant contribution, depending on how Verve Energy deployed its gas stocks having regard to the state emergency. LGP notes that in recent days, prices have returned to more normal levels which are of themselves no cause for concern.

While it is no doubt true that *long term* coal prices are shadowing gas prices, so that new generator projects face significant increases in the cost of both fuels, LGP submits that this ought not to be impacting short term WEM prices and in any case would not of itself imply a problem with the WEM. While it is true that the WEM facilitates coal-fired prices to shadow gas-fired prices, such activity would require multiple independent coal–burners on the system

some of which purchased coal at a 'spot price'. LGP perceives no evidence of this having occurred.

Discussion Point 2: The Authority invites comment on the impact of fuel constraints on the market. In particular:

- **to what extent, and in what way, do fuel constraints impact on the day-to-day operation of the market, and outcomes in the market;**

The nature of LGP's business is such that it is not affected by gas availability and so it cannot comment on this issue from direct experience.

However, we accept in good faith that the STEM-day timing is not aligned with the Gas-day and that this will increase the risk-profile of some participants and potentially impede optimal participation in the STEM. We would support an initiative to review this issue, including the convening of a special committee to investigate and propose a Rule Change.

- **to what extent, and in what way, does the design of the market exacerbate problems caused by significant fuel constraints; and**

Again, we cannot comment from direct experience, but support the principle that market participants should act in good faith to promote the wholesale market objectives and having done so should be kept commercially whole.

- **do current issues in regard to gas supply interruptions deter participation in the STEM.**

Generators that hold certified capacity are obligated to participate in the STEM, regardless of fuel supply issues, or in the alternative suffer penalties (capacity payment refunds). Consequently, it is more an issue of STEM pricing potentially being higher than it otherwise need be as participants protect themselves against third party actions that they cannot control.

Discussion Point 3: The Authority invites comment on the application process for network access offers. In particular:

- **at what stage during the process of planning a new facility do applicants approach Western Power, and to what extent do applicants make applications for network access in advance of the timing of the reserve capacity cycle due to the perception that the application process may take some time;**

LGP understands that Western Power implements a Queuing Policy pursuant to the Electricity Networks Access Code and that the Queuing Policy was thoroughly discussed by the Access Code Development Committee. We accept in good faith the claims of delay, uncertainty and confusion in respect of access applications, but perceive that this is a result of Western Power having to ration a scarce resource (network capacity) in a complex technical and regulatory environment while subject to skills shortages due to the economic conditions.

We perceive that the Queuing Policy provides a reasonable balance between the rewards accruing to an early applicant for access versus the possibility of being dislodged to the

back of the queue in the event of obtaining the access offer before the project is sufficiently committed for it to be accepted. On this basis, an applicant would only have cause for complaint if the queue was blocked and the Queuing Policy not complied with by Western Power in respect of unblocking it; in particular, allowing the applicant to delay accepting the offer.

- **to what extent has the timing of the application process affected participation in the reserve capacity mechanism for particular facilities;**

LGP supports the proposition that delays in receiving a network access offer can delay participation in the reserve capacity mechanism and that this might impact on the competitiveness of, and outcomes in, the capacity market. However, it is LGP's perception that this state of affairs has arisen as a result of a well-discussed and necessary consequence of the obligation placed on the IMO to guarantee system security; specifically, to ensure that Certified Capacity will actually be delivered on time.

It must be recognised that slackening the requirement for obtaining a network access offer as a prerequisite for certification of capacity will increase the risk of a capacity shortfall if plant is not delivered on time. That said, we further perceive that there is scope to slacken the requirement for "small" plants in comparison with any forecast over-capacity amount. As we understand the Market Rules, a 1MW diesel-fired engine connected to the distribution system is subject to the same broad set of certification rules as a 300MW coal-burner requiring a reinforcement of the transmission system. We suggest that this is not appropriate and would benefit from a review. Indeed, we perceive this as an important discussion to have as part of the movement to increase the participation of renewable plant.

- **to what extent is the application process, including the timing of the application process, transparent; and**

LGP suggests that transparency conflicts with confidentiality and that the Access Code, in respect of access application process, places on Western Power the obligation of confidentiality but not of transparency. Consequently, the process is not transparent and participants should not be surprised by that. That said, if the ERA wishes to instigate a review, LGP would support it.

- **if there is an issue with the application process, does the issue relate to the timing of the process, the transparency of the process, or both.**

We suggest that if the ERA considers that market participants are experiencing unreasonable difficulty in obtaining access, the most fruitful approach would be to review the Queuing Policy. That said, the policy was discussed at length by the Access Code Development Committee and we are not optimistic about achieving significant improvements.

Discussion Point 4: The Authority invites comment on whether the risk that a network connection will not be delivered on time impacts on investment incentives, including incentives to invest in new facilities on particular parts of the network.

LGP supports the proposition that, as things stand, a project may be prevented from complying with its capacity obligations because of a network connection not being delivered

on time, that this would result in the project having to make capacity refund payments, that this risk is borne by the project, and that this could materially adversely affect the project's financial viability. Further to the above comments on financing a power station, it is more likely that the project would have to base its analysis on the 'worst-case' delay, thereby impairing viability. Whether the facility in question is new or is located on particular parts of the network is not material; it applies to all facilities with capacity obligations.

Discussion Point 5: The Authority invites comment on the determination of connection charges by Western Power, and the impact that these connection charges have on the effectiveness of the WEM. In particular:

- **to what extent do connection charges influence long-term investment decisions;**

Further to the comments under Discussion Point 1, connection charges are initial capital charges that increase the capital employed and decrease the return on capital, thereby diminishing the project's viability.

- **do connection charges provide appropriate locational investment signals; and**

For an investment signal to be effective it must be transparent and stable and the investor must be capable of responding to it. In practice, development sites are driven by many factors, including the availability of fuel, land and environmental approvals. Further, the determination of connection charges requires relatively expensive and complex studies that have to make assumptions about which other access applicants are also going to be successful. While in principle a connection charge is capable of providing locational investment signals, in practice it will generally be ineffective due to the long lead times and complex interaction of other drivers. More likely, the connection cost is an important part of a complex "stop/go" mix but not a location signal.

- **is there sufficient transparency and predictability in the calculation of connection charges for participants to respond to the signals in making investment decisions.**

Please see the comments above regarding predictability. In respect of transparency, it should be noted that access applications are rarely directly comparable to each other due to differences in, among other things, equipment, location and network capacity. The issue of Deep Connection Costs was discussed in detail by the Access Code Development Committee, with equity as a primary consideration. While LGP accepts in good faith the grievances expressed by participants, it is unclear as to whether like is properly being compared with like, particularly in face of the confidentiality of applications. Moreover, while gaming should be discouraged, it would in any case appear to be a complex and unworkable undertaking due to differences in equipment, the need to lock in fuel supply and participation in the capacity certification process. That said, LGP perceives that there is considerable scope for improvement and supports the development of "Modelling Guidelines" to assist Western Power in obtaining relevant and timely network studies and minimizing the cost and delay to applicants.

Discussion Point 6: The Authority invites comment on whether network planning processes are sufficiently responsive to developments in the WEM and whether network planning decisions are sufficiently transparent to participants.

LGP has found the existing process to be satisfactory within the regulatory limits placed on Western power. However, we are concerned that this issue will need to be reviewed in order to facilitate a significant increase in the contribution of renewable energy.

Discussion Point 7: The Authority invites comment on the extent to which the reserve capacity mechanism, along with other elements of the WEM, provides appropriate incentives for investment in a mix of new generation plant. The Authority is interested in specific factors that might have deterred potential new investment in the market.

As commented in response to Discussion Point 1, generation projects receive revenue from sales of capacity and energy. The WEM design envisages that such sales will occur primarily via bilateral contracts, but provides market mechanisms for the sale of capacity, via the annual capacity market, and energy, via the day-ahead STEM and real-time balancing mechanism. Whereas bilateral contracting would normally offer the benefit of price certainty, the WEM mechanisms are variable and more difficult to forecast.

LGP perceives that the 'wholesale procurement process run by Synergy' and the 'tenders run by discrete mining or mineral processing facilities' (both referenced in the Discussion paper) belong to the bilateral aspect and are not within the scope of the market. The market does, however, provide a mechanism for the sale (spill) of surplus capacity and energy from such a project and of the purchase (top-up) of a deficit, be they systematic or occasional, which are material to project financability.

Insofar as a project chooses to sell its output via the WEM, the capacity credit price has historically been set annually by an administrative mechanism that depends on the cost of constructing a standard plant reduced by the degree of over-supply of capacity. The capacity price is credit-supported via the IMO's "no-risk" financial guarantees required of Market Customers. Similarly, the day-ahead STEM price is credit-supported via the IMO. However, there is an ambiguity in the Market Rules covering the extent to which a participant can recover costs and earn a return on investment via sales to the STEM. Specifically, section 6.6.3 of the Market Rules requires that:

> *A Market Generator must not, for any Trading Interval, offer prices within its Portfolio Supply Curve that do not reflect the Market Generator's reasonable expectation of the short run marginal cost of generating the relevant electricity when such behaviour relates to market power.*

LGP suggests that the market would benefit from clarification of this rule, as financiers will generally take it to mean that STEM prices must be at short run marginal cost. This, in turn, means that the capacity payment must service the capital employed and earn a return, which promotes the development of low capitally intensive plants - diesel-fired single-cycle peakers. This discourages baseload and mid merit plants.

Discussion Point 8: The Authority invites comment on the appropriateness of the mechanism for determining the reserve capacity price. In particular:

- **does the reserve capacity price provide appropriate investment signals;**

LGP notes that in each of the three capacity cycles to date, the capacity price has been administered and the number of capacity credits assigned to participants has exceeded the reserve capacity requirement. Further, during the current cycle, the IMO received 18 Expressions of Interest totaling 1,036 MW of additional capacity relative to a forecast requirement of 183MW for 2010/11. While the current cycle is still a few weeks from completion, LGP perceives this outcome to be achieving the Market Objectives.

- **would investment signals be improved by a shift to a reserve capacity price that is determined using a mechanism more closely reflecting market outcomes;**

LGP acknowledges that determining the reserve capacity price on an administered basis makes it difficult for investors to forecast the reserve capacity payment that they will receive, particularly via the over-capacity adjustment. However, it is important to note that the cost of capacity is zero-sum, with customers funding the payments received by generators. Insofar as capacity prices are "high", this feeds directly into higher retail prices. Further, from the retail perspective, there is a case that over-capacity should apply greater downward pressure on capacity prices than provided for by the administered process. That said, and referring again to the above financing comments in response to Discussion Point 1, there is merit in providing a mechanism for generators to lock-in capacity payments over the long term as it reduces financial risk.

- **what, if any, barriers currently exist that would impede a shift to a reserve capacity price that is determined by the market.**

LGP submits that the principal issue is that of Regulatory Risk and the need to ensure that plants that secured funding under current arrangements are not disadvantaged by subsequent changes.

Discussion Point 9: The Authority invites comment on the extent to which the methodology for calculating reserve capacity refund payments promotes the market objectives, particularly in regard to reliability of supply. In particular:

- **to what extent do participants respond to signals provided by the structure of reserve capacity refund payments; and**

LGP has no direct knowledge of the response of participants to the capacity refund price signals.

- **if reserve capacity refunds reflected their impact on the market, how would this be expected to affect compliance or incentives to participate in the reserve capacity mechanism.**

In practice participation in the reserve capacity mechanism is not discretionary for financiers; if they choose to build, they need the capacity payment and must comply with the mechanism's requirements.

LGP submits that the "impact on the market" approach described in the Discussion Paper has merit in that generators would be incentivised to fine tune their operations to avoid impacting the market. However, it is noted that the rationale presented in the Discussion Paper is potentially circular in that it could be argued that plant is available during the peak periods because of the incentives. It should also be remembered that maintenance has to be scheduled with System Management and the use of high merit-order plant should ideally maximised in order to minimise energy cost.

Discussion Point 10: The Authority invites comment on the effect of moving the STEM closer to real-time or of introducing multiple gate closures. In particular:

- **would this encourage greater participation in the STEM or improve outcomes in the STEM, including through improved price signals;**

LGP understands that all certified capacity is obligated to participate in the STEM, and therefore presumes that STEM participation would not be impacted by conducting the auction closer to real time. It would, however, reduce the risk to participants and thereby potentially reduce prices.

- **would the benefits to participants outweigh the costs to participants; and**
- **what, if any, barriers are there to such a change and what do these barriers suggest for the timing of such a change.**

LGP has no direct experience of these issues.

Discussion Point 11A: The Authority invites comment on the extent to which Verve Energy's exposure to forecasting errors in the balancing market impacts on the effectiveness of the market.

LGP supports the principle that Verve Energy should be kept whole in respect of the risks it incurs because of the misalignment of gas scheduling with respect to the STEM. As a commercial principle, the largest generator on the system should not be placed in a position whereby it provides important services that are neither funded nor recognised. The notion of dual pricing would seem to be a natural extension of the recent ex-post balancing adjustment and is much simpler than moving the STEM closer to real-time.

Discussion Point 11B: The Authority invites comment on barriers to the introduction of competitive balancing, and what these barriers suggest for the shift to more competitive balancing arrangements.

LGP perceives that Verve Energy is best suited to carry out balancing services because of its larger generator fleet. We welcome the prospect of competitive procurement but perceive it as a marginal issue rather than a priority.

Discussion Point 12: The Authority invites comment on the delivery of ancillary services, particularly in regard to the competitive delivery of ancillary services.

LGP notes that the delivery of ancillary services is a specialist activity that comprises an insignificant part of the retail cost structure. While we welcome the prospect of competitive procurement, we are satisfied with the current arrangements.

Discussion Point 13: The Authority invites comment on the impact that wind energy will have on the effectiveness of the WEM. In particular:

- **to what extent, if any, will additional wind energy impose costs on the market, and will these costs be borne by the wind energy facilities or by other participants; and**

LGP is a member of the Market Advisory Committee's Renewable Energy Generation Working Group (REGWG) and perceived that these issues are best addressed by that body, which is at an early stage of its deliberations. That said, it seems to be widely recognised that system frequency-keeping and load following requirements significantly increase with wind penetration and the Reserve Capacity Requirement is less likely to be reliably met, even net of diversity benefits of multiple wind farms. The issue of how best to allocate these costs is an important issue for the REGWG.

- **do the existing arrangements for network connection charges provide signals to wind energy facilities that reflect the impact of these facilities on the market.**

Further to the comments above under Discussion Point 5, LGP understands that connection charges will reflect a conservative perception of the impact of wind facilities on the market. The issue is to what extent a conservative approach is warranted. LGP perceives that this is an important issue for the REGWG to address.

Discussion Point 14: The Authority invites comment on the incentives for DSM to participate in the market. In particular:

- **what, if any, barriers exist that would prevent the participation of DSM that could otherwise provide capacity at a price competitive with new generation; and**

LGP supports the participation of DSM in the capacity market as being an environmentally friendly source of capacity credits, displacing the need for new generation. However, we perceive ambiguity over its intended contribution to the Reserve Capacity Requirement. More generally, there are three styles of capacity credit: Scheduled Generator, Intermittent Generator and DSM. While LGP is itself a beneficiary of the lesser Reserve Capacity obligations of Intermittent Generators and is amenable to beneficial treatment of DSM, we perceive that there are currently unreasonably few controls on certified DSM, even to the extent, in some case, of there being little proof even of its existence. This is especially incongruent given the reported large quantities of DSM that could connect to the network but hasn't done so because of onerous connection requirements.

LGP perceives that DSM would be encouraged into the market by i) Western Power relaxing what are widely considered to be unreasonably onerous connection requirements for the paralleling of small generators, and ii) the Market Rules relaxing the 2-year ahead requirement in respect of certifying capacity.

- **would an alternative structure for payments for DSM, or an alternative treatment of DSM within the market, encourage the participation of DSM in a way that promotes the market objectives.**

We perceive that once the barriers to entry are removed, there is significant scope to increase the participation of DSM under transparent and verifiable reserve capacity obligations and at the prospective capacity credit prices. In particular, the low participation of currently existing islanded backup generators verges is plainly suboptimal.

Discussion Point 15: The Authority invites comment on the rule change process and procedures, the consultation process for rule change proposals and the time taken to have a rule change proposal considered and finalised.

LGP supports the proposition that from an ideal probity perspective, different bodies would administer the Market Rules and operate the market so as to avoid conflict of interest. However, LGP is satisfied with the current arrangement whereby the ERA monitors the processing of rule change proposals in order to assess whether the potential for conflicts of interest to arise is likely to impact on the effectiveness of the market.

LGP is both a member of the Market Advisory Committee and a small market participant and is generally satisfied with the Market Rule Change process. In particular, this includes a public consultation phase and interested parties are free to engage with members to have their views represented. However, LGP supports a review of the Rule Change timescales in order to include an intermediate speed between "fast" and "normal".

Discussion Point 16: The Authority invites comment on whether System Management remaining within Western Power impacts on the effectiveness of the market and, if so, in what way.

LGP supports the proposition that from an ideal probity perspective, System Management should not be part of Western Power and that there is merit in combining it with the IMO. However, LGP is satisfied with the current arrangement.

Discussion Point 17: The Authority invites comments on measures to improve price transparency in the market.

LGP notes that bilateral contracts are private agreements and that the broader market has no right to knowledge of them. We suggest that project returns can be estimated from knowledge of the cost structure and tariff revenues.

Discussion Point 18: The Authority invites comments on what, if any, impact retail market arrangements have on the WEM, and what implications this has for the effectiveness of the WEM.

LGP is very concerned at the existing arrangements for the procurement of Supplementary Capacity. We understand the current rules to require that the costs of all Supplementary Capacity be allocated across the purchasers of Capacity Credits from the IMO. Given that Verve Energy currently operates some 90% of the capacity and all its capacity credits are allocated under the Vesting Contract, private retailers are forced to source the majority of their capacity credits from the IMO, thereby leaving them exposed to this risk. The Market Advisory Committee has established a committee to review this issue and recommend Rule Changes, but at present this issue remains a major concern.

Discussion Point 19: The Authority invites comment on the effect that the Ministerial Directions to Verve Energy and Synergy and the Vesting Contract have on outcomes in the market.

LGP perceives that the Vesting Contract results in the bulk of Verve Energy's capacity and lowest-cost energy being supplied to Synergy, leaving no capacity credits and only marginal-cost energy for bilaterally contracting to other retailers. We further note from Figures 6 and 7

of the Discussion Paper that STEM transactions have recently primarily involved the buying of energy from the Electricity Generation Corporation (Verve Energy) from the Electricity Retail Corporation (Synergy). We propose that this state of affairs is counter-intuitive and merits investigation by the ERA.

Discussion Point 20: The Authority invites comment on the processes for planning the development of the market over the longer term. In particular:

- **to what extent do existing arrangements provide scope for, and transparency in regard to, the development of the market; and**
- **what aspects, if any, of the development of the market should be addressed in a more systematic manner, and in what forum.**

LGP is generally satisfied with the existing process for WEM development, as witnessed by the present review.

The most urgent and important issue at the moment is the implementation of the outcome of the Office of Energy's Electricity Retail Market Review, with significant price rises being necessary to restore the sustainability of Verve Energy in particular and all retailers in general.

LGP perceives that the major challenge for the market in the short term is the facilitation of renewable energy generation in order to fully optimise the opportunities created by the climate management imperative. We perceive that this will have major impacts on network development, system management and the reserve capacity certification and should be coordinated by a single body, which would presumably be the Office of Energy. We also perceive that DSM can play an important role in this area and should be given impetus through this process.

If you wish to discuss any aspect of LGP's submission, please contact Dr Steve Gould on 041 250 8291.

Yours sincerely

GRAEME ALFORD
CHIEF EXECUTIVE OFFICER