Maui Development Limited
PO Box 1873
Wellington

4 May 2010

Attention: Ian Wilson

Gas Industry Company Ltd
Level 8, The Todd Building
95 Customhouse Quay
WELLINGTON

Dear Ian

Vector Submission on Supplement to Statement of Proposal

We refer to Vector Limited's submission to you concerning the Supplement to the October 2009 Statement of Proposal and the draft Gas Governance (Balancing) Rules. We don't usually comment on submissions made to you by other parties but in this case we are so puzzled by some of the content of Vector's submission that we feel it needs to be discussed further.

First of all we have noticed Vector's dismissal of the industry based ICD process because it failed to reach a satisfactory conclusion. The reason that this process failed to go further is that Vector companies alone refused to sign up to it, thus effectively stalling further progress. In these circumstances, Vector's stated support for a package of remedial measures appears pointless, as it has shown that it is unprepared to work with either the industry or MDL to achieve them, but prefers changes to be imposed from the outside by regulation.

Second we refer to Vector's assertion that there has been a decline in energy system security as a result of the evolution of MDL's Standard Operating Procedures, (SOPs). It is worth recalling the context under which the SOPs arrived at their current form:

- The GIC expressed concern that balancing thresholds were being set too tightly by pipeline companies. This concern extended at one point to a recommendation that the setting of the balancing thresholds be the subject of an independent review.
- MDL noted that it was conducting its own review given the need for change that would follow from the entry into force of the Critical Contingency Regulations.
- One of the objectives of the review was to reduce the balancing costs that would be passed onto the industry when the supply of zero cost balancing gas ended and balancing gas would be supplied through an open balancing gas market.
- The new SOPs were circulated to the industry, including Vector, a month in advance of their implementation and comments were sought. None were received.

We are concerned that procedures set to reduce balancing costs to the industry as a whole are presented as an attempt by MDL to reduce its exposure to non-payment, (the non-payment, of course being originated by Vector). An examination of the MPOC would make it clear that MDL's owners have no long-term exposure to non-payment as any profit or loss from balancing expenses

is incorporated in MDL's tariffs when they are next adjusted. The expense of non-payment is ultimately borne by Maui Pipeline users and for this reason MDL considers it quite legitimate to put measures in place to make sure balancing charges are collected as much as possible from the parties causing them, and not merely passed onto pipeline users through the tariff.[1].

Unfortunately Vector has taken its argument a step further by claiming that there is some incentive for MDL to jettison its current SOPs and introduce a new set that introduces a very stable linepack at the expense of substantially raising balancing charges. There is no financial incentive for MDL to do this, nor is it MDL's intention. An action of this type would certainly attract the attention of regulators.

We are concerned however, that this is what Vector is apparently calling upon MDL to do. Vector asserts that the current SOPs have thresholds that are too broad and therefore "threaten system security". More on this below. In the meantime we note that the "significant risk of increasing costs" cited by Vector is based on an assumption of actions by MDL that MDL has no intention of proceeding with. Furthermore later on in its submission Vector drags out the same extremely unlikely scenario and attaches a possible cost of $38 million to it.

MDL has been criticised for disagreeing with attempts to "codify" its Standard Operating Procedures. MDL believes that it must be free to alter them at short notice in response changed operational and safety requirements, without having to go through a drawn out approval procedure. However MDL has undertaken to consult with the industry when they are altered.

OFOs and Curtailments

In its submission Vector has complained about the number of Operational Flow Orders, (OFOs), and curtailments and has inferred that the number will reduce if pipeline balancing is regulated. OFOs are a notice requiring the Welded Party to whom it is issued to flow gas in accordance with its Scheduled Quantity, that is the amount of gas that has been ordered and which will be paid for. Excessive departure from the Scheduled Quantity can push the pressure in the pipeline to a point where curtailment is needed, or even the Critical Contingency Regulations have to be invoked. The intent of the OFO is to send a signal to Shippers ordering gas for that Welded Point to increase their nominations, (gas orders), on the next cycle or reduce their off take to the level they have purchased. In Figure 1 below, we illustrate this using the same period as Vector has covered in its submission[2]. Note that the quantity that directly affects pipeline balance is not Operational Imbalance, (OI), which is measured at a point, but Running Operational Imbalance, (ROI), which measures the cumulative effect of Operational Imbalance.

The square on Figure 1 marks the point at which the OFO complained about by Vector was issued. At that point the combined ROI at Vector's Rotowaro and Frankley Road Welded Points was nearly 60TJ, or about $300,000 to $400,000 worth of gas. At about the same time as the OFO was issued, shippers on the Vector pipeline increased their Scheduled Quantity at Rotowaro, but as the graph shows, the total imbalance from both points increased further before recovering. We note that an increase in gas orders of the type that actually happened is precisely what the issue of an OFO is designed to achieve.

We are perplexed by the criticisms made by Vector about our issue of an OFO in these circumstances:

[1] Reduction of socialised balancing costs is also a GIC objective.

[2] We think the graphs presented by Vector in their submission are seriously misleading in that they show point values of operational imbalance instead of its cumulative effect and use two different scales on the same diagram.

- The ROI that caused the problem was created on Vector's pipelines.
- If it had continued, the operation of the Maui pipeline and other users' transmission of gas on it would have been affected.
- The issue of an OFO notice was clearly a prudent action for MDL's Operator to take in the circumstances.

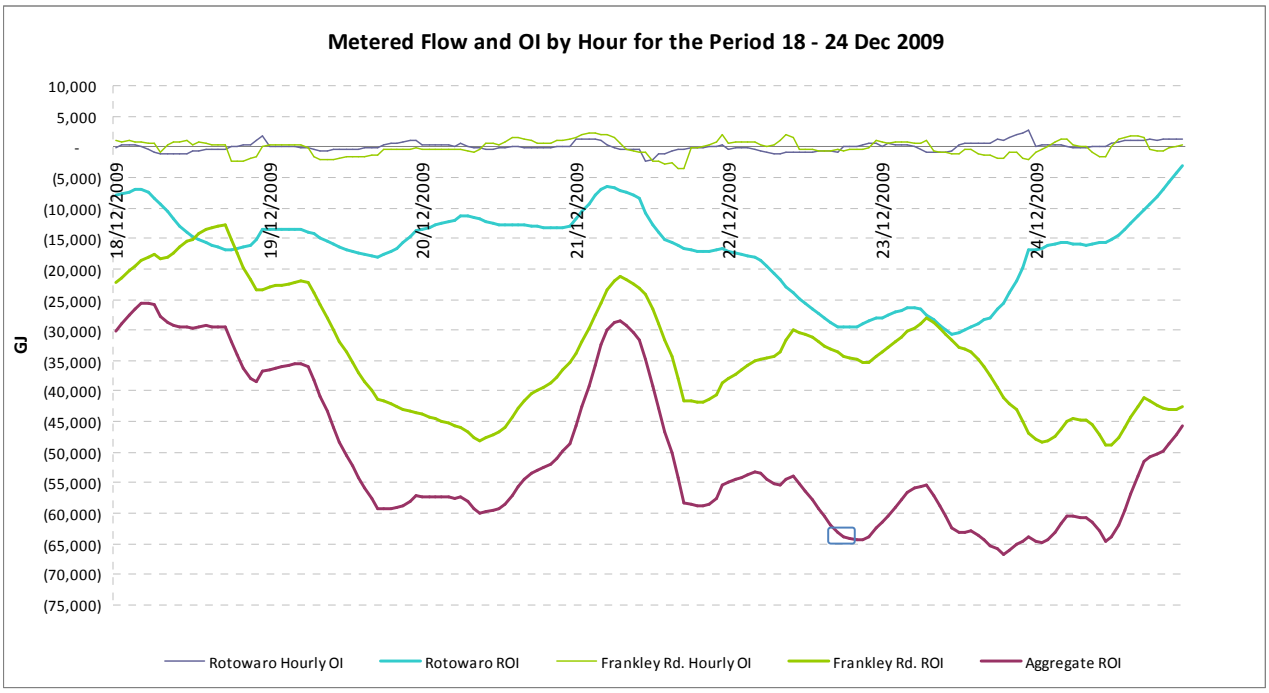

Figure 1

We are also concerned too about "hands off" attitude shown by Vector to events on their own pipeline:

- A very large ROI was created on Vector's pipelines over the period cited.
- Vector took no action of its own.
- Yet Vector claim that action taken by MDL to remedy the situation was somehow inappropriate.

There is no prospect that imbalances of this size can be accommodated given the normal availability of balancing gas. Furthermore comments about security of the energy system are misplaced when matched against this level of imbalance. If electricity companies, or any other type of user for that matter, continue to take gas out of the pipeline that they have not scheduled or nominated then problems of the type experienced during 18-24 December can be expected no matter which balancing system is used. Such a situation cannot somehow be resolved by taking a "unified" system view, nor will regulation perform some kind of instant fix.

Many gas users do not seem to realise that much of the large swing capacity formerly provided by the Maui gas field is no longer available, that the balancing capacity that is available is limited in size, and that when required it may not be available at all for operational reasons. Irrespective of the balancing system used, the days when just about any level of imbalance could be accommodated in

pipeline operations are over. This is one of the factors that led to the establishment of the current balancing gas market.

Balancing behaviour has improved

Contrary to Vector's assertions, the introduction of an enforceable balancing regime in December 2008 and the associated changes in SOPs and balancing thresholds have had a positive effect on behaviour downstream of Vector Welded Points. As before, the correct measure to look at is ROI, which measures the effect on the pipeline balance and not OI which is a measurement at a point. Figure 2 illustrates that pipeline behaviour downstream of Vector's Rotowaro and Frankley Road Welded Points has improved substantially, although it could improve still further. Pipeline users are self-balancing more accurately and correcting their positions more quickly.

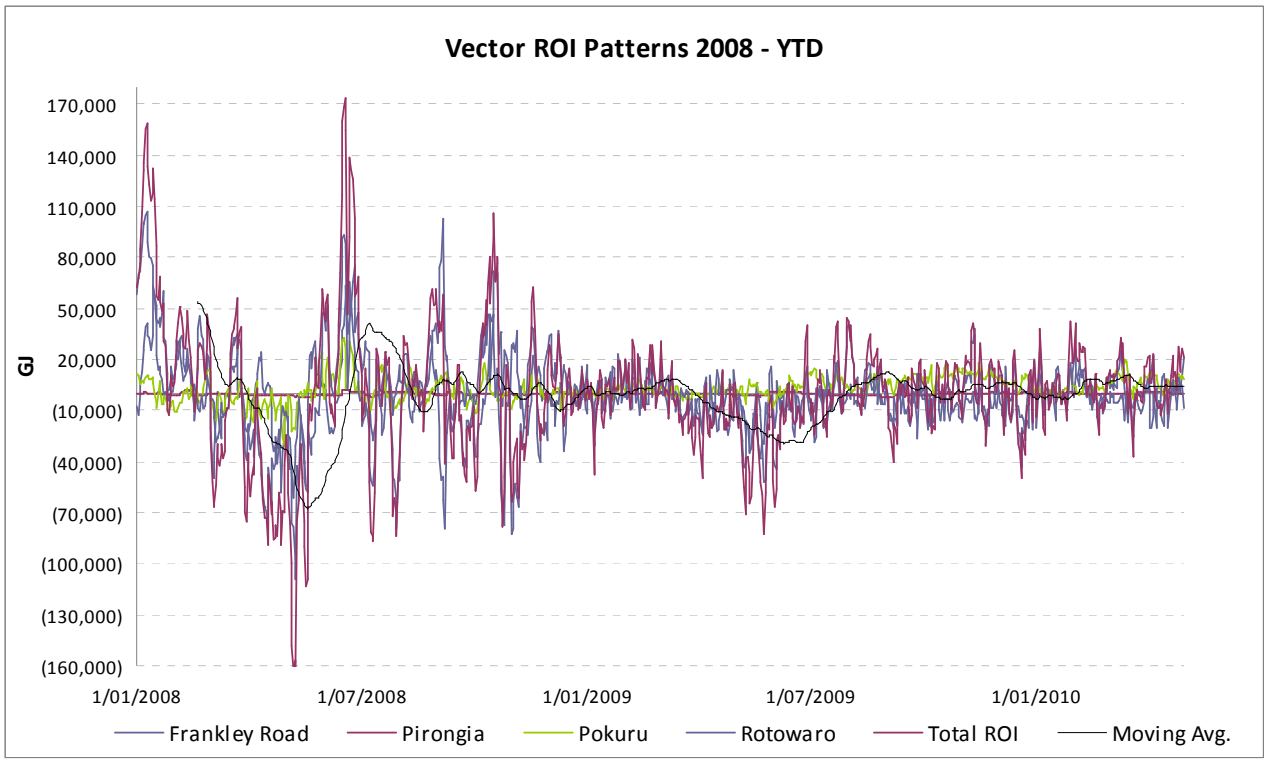

Figure 2

Curtailments

Vector has also expressed concern about the increasing number of curtailments. Recent curtailments have generally occurred when a major supplier of gas to the pipeline, (e.g. Maui or Pohokura), has production difficulties. More than 40% of the supply of gas to the pipeline can be lost in these circumstances. Pipeline balancing may not be an effective solution in the case of a major outage as the availability of balancing gas is often compromised as much of it may come from the supplier who is experiencing difficulties and the rate at which it can be ordered and delivered may be insufficient to maintain pipeline linepack. In these cases curtailment of gas demand may be needed. The MPOC specifies how curtailment should be administered and the procedures to be followed. As is the case for balancing, the operational procedures used are published as a set of Standard Operating Procedures.

There is a further safety mechanism put in place by the Critical Contingency Regulations, which are now fully in place. These provide for the compulsory allocation of the remaining gas supplies if pipeline linepack falls below a specified level.

MDL believes the general level of energy security for New Zealand gas supplies has been improved by the increasing diversity of gas supplies available. There are now two major suppliers instead of one and a number of smaller suppliers. It may be the case that gas supply problems will increase in number because there are more suppliers, but they will be less serious because their effect on total production will be lower. This contrasts with the situation earlier when there was only one major supplier and problems with that supplier, although infrequent, became serious very quickly.

A list of OFO's and curtailments affecting Vector Welded Points since the beginning of 2009, with their dates and causes is attached at Annex 1. As noted above, an OFO notice requires remedial action for undertaking, (leading to too much gas and excessive pressure in the pipeline), or overtaking, (using more gas than ordered). Only once in the period covered was curtailment necessary for an operational imbalance situation. The remainder of the curtailments were due to outages at the Maui and Pohokura receipt points. A number of other outages of various lengths were handled without the need for curtailment action.

Effect of MDL Change Request

Vector has claimed that the Change Request lodged by MDL on 17 December 2009 requires Welded Parties to curtail receipts or deliveries almost every hour[3]. We are at a loss to understand where this proposition comes from[4]. Under MDL's proposal, balancing charges will only be incurred on days when balancing gas is actually used and allocated at the end of the day. Thus Welded Parties will face the prospect of paying balancing charges only if pipeline as a whole is out of balance to the point where balancing gas is required. Otherwise there is no consequence for imbalances. Any statement to the effect that regular curtailments will be necessary to meet day to day circumstances is irreconcilable with the actual provisions of the proposed MPOC change, (and the GIC's Draft Rules for that matter). It also implies that Vector will take some action to mange imbalance on its own pipelines, which on the evidence so far is unlikely.

Overall Energy System Security

We find it difficult to work out the energy security objectives Vector wishes to achieve. However there are some factors that are difficult to dispute. They will not change whether the Draft Rules come into force or not. For instance:

- OFOs or their equivalent will still need to be issued when users take more gas than they have ordered or contracted for. (See Figure 1 above).
- Curtailment of gas supplies will still be necessary when the supply is lost from major producers for substantial periods of time.
- Residual balancing for operational imbalance is still likely to be infrequent. At the time of writing, Call balancing for OI purposes has been needed only once a month over the last 3 months.

Whatever the residual balancing service used, it is not going to be able to supply large quantities of gas for supply to users who have not ordered their own, nor is it going to be able replace large

[3] Paragraph 17 of Vector's submission.
[4] There is a "reasonable endeavours" obligation to maintain balance in MDL's proposed MPOC Change which is similar to the obligation in the GIC Draft Rules.

quantities of gas that cannot be supplied. In cases of extreme gas shortage the Critical Contingency Regulations are already in place to allocate the gas supplies available. A requirement to meet any level of demand whether or not gas has been ordered, or is available, makes no sense at all. Any such requirement cannot be related to a sensible energy system security policy.

Vector says that it is representing the views of its shippers on the energy security issue. However we are unaware of any concern by Vector's shippers, and some have informed us they do not agree with Vector's comments.

The Best Solution

We do agree with Vector on one point. This is about the need for an improved link between gas demand and supply of gas into the transmission system, although we do not agree with Vector's belief that there is currently no such link. Given that users must balance their own inputs and off takes within each system, any improved linkage can only happen by improving users' nominations to suppliers and not, as Vector's submission seems to suggest, requiring suppliers to somehow second guess what their customers' demands are.

Good gas industry practice requires the adoption of real time metering and a nomination system for all major points on both pipelines. This would give all users the immediate feedback they need to balance their system and allow balancing charges to be allocated to those who cause the imbalance.

Good gas industry practice also requires that each pipeline system retains the overall responsibility for the economic and efficient operation of its system and therefore should retain a residual role to maintain physical balance to ensure the safe, secure, efficient and reliable operation of its system. Vector's submission does not recognise this basic responsibility and it is this choice by Vector, and its reluctance to reimburse MDL's resultant elevated residual balancing costs, which has been the source of the industry perceiving that gas pipeline balancing is an issue.

An expression of good industry practice can be found in the Balancing Principles set out by CEER, where the roles and responsibilities of TSO's include the following:

- *Each TSO retains the overall responsibility for the economic and efficient operation of its system and therefore should retain a residual role to maintain physical balance to ensure the safe, secure, efficient and reliable operation of its system, subject to the incentives, information and flexibility and tools provided to shippers to balance their individual portfolio.*
- *It shall be the primary responsibility of network users to balance their own inputs and offtakes over the relevant period according to the rules and incentives of the respective balancing regime.*

Further support for this comes from the good practice guidelines set out in COPAS AG-8. We have attached some of the relevant ones at Annex 2.

Unfortunately while the Draft Rules meet Vector's requirement to be relieved from its obligations regarding the payment of balancing charges for imbalance on its pipelines, they do not meet either

the CEER[5] or COPAS[6] requirements and so do not address the elements of good practice required. By carving out the residual balancing function from other pipeline operational functions, the Draft Rules create unnecessary operational interfaces, do nothing to make balancing operations more efficient and add additional costs. Furthermore in MDL's case they create the necessity for MDL to review its MPOC obligations bearing in mind the fact that it will no longer control an important aspect of its pipeline operations. Addressing this impact is unlikely to be comfortable for Shippers and Welded Parties alike.

In New Zealand we appear to be inventing a new system for governing relationships between pipelines that is different from best practice elsewhere in the world. Balancing can be further improved, but to do so we need a full nominations system and real time metering, neither of which are provided for in the Draft Rules.

We continue to urge that the GIC rethink its Draft Rules and its efforts to impose an artificial "unification" that, because it is so unconventional, has high risks of being impractical and very costly. Instead, we recommend that that GIC looks to addressing the real cause of issues, - the elements of the transmission system that do not conform to good gas industry practice.

Conclusion

Many of the points made in Vector's submission do not accord with our analysis of the situation. As noted in its last submission on the topic, MDL is not convinced of the need for such extensive and complex regulation. Nor does it think that the Draft Rules advance the progress towards good industry practice that will be needed if pipeline users' self-balancing performance is to be improved further.

Following the ICD process, MDL has addressed the issues capable of being resolved through the MPC Code Change Process in the Change Request it submitted on 17 December. It regards this Change Request as part of an evolutionary process that can be extended to incorporate other elements outside the Maui Pipeline if other parts of the industry simultaneously evolve, (or are moved), to a more conventional basis.

Yours sincerely

Maui Development Limited

Copy to: David Buckrell, MED

[5] http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Gas/2006/E06-GFG-17-04_GGPGB_2006-12-06.pdf

[6] http://www.copas.org/catalog/2/accountingguidelinesags

Annex 1: OFO and Curtailment Dates and Reasons

06/01/2009	OFO	Rotowaro Frankley Road	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
29/01/2009	OFO	Rotowaro Frankley Road	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
16/03/2009	s.15.2 Curtailment	Frankley Road Pokuru Rotowaro	Pohokura Outage. SENZL and Todd Pohokura initiated s.15.2
24/03/2009	s.15.2 Curtailment	Frankley Road Pokuru Rotowaro	Pohokura Outage. SENZL initiated s.15.2
21/05/2009	OFO	Frankley Road Pokuru Rotowaro	Low Line pack caused by excessive overtaking at Pokuru, Rotowaro and Frankley Rd.
22/05/2009	OFO	Frankley Road Rotowaro	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
02/06/2009	OFO	Frankley Road Rotowaro	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
03/06/2009	OFO	Frankley Road Rotowaro	High Line pack caused by excessive undertaking at Rotowaro and Frankley Rd.
28/06/2009	s.15.1 Curtailment	Frankley Road Rotowaro	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
14/07/2009	OFO	Frankley Road Rotowaro Pokuru	High Line pack caused by excessive undertaking at Huntly PS, Rotowaro, Pokuru and Frankley Rd.
05/10/2009	OFO	Frankley Road Rotowaro	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
06/10/2009	OFO	Frankley Road Rotowaro	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
06/10/2009	s.15.2 Curtailment	Frankley Road Rotowaro Pokuru	Oaonui Outage. STOS initiated S.15.2 curtailment.
21/11/2009	s.15.2 Curtailment	Frankley Road Rotowaro Pokuru	Oaonui Outage. STOS initiated S.15.2 curtailment.
17/12/2009	OFO	Frankley Road Rotowaro	Low Line pack caused by excessive overtaking at Rotowaro and Frankley Rd.
22/12/2009	OFO	Rotowaro	Low Line pack caused by excessive overtaking at Rotowaro.
03/01/2010	s.15.2 Curtailment	Frankley Road	Pohokura Outage. SENZL initiated s.15.2 curtailment.
08/01/2010	OFO	Frankley Road	Low Line pack caused by excessive overtaking at Frankley Rd.
27/01/2010	s.15.1 Curtailment	Rotowaro Frankley Road Pirongia Pokuru	Pohokura Outage. Ngatimaru Rd (R) curtailed.
27/01/2010	s.15.2 Curtailment	Rotowaro Frankley Road Pokuru Pirongia	Pohokura Outage cont. SENZL initiated s.15.2 curtailment.
17/02/2010	s.15.1 Curtailment	Frankley Road Rotowaro Pirongia Pokuru	Pohokura Outage. Pohokura curtailment.
20/04/2010	s.15.2 Curtailment	Rotowaro Frankley Road Pokuru	Pohokura Outage cont. SENZL initiated s.15.2 curtailment.

Annex 2: COPAS AG-8 Good Practice Guidelines

- Meter allocations methodologies should be agreed to prior to gas flow.
- Confirmed nominations should generally serve as the basis for allocations.
- Operator(s) at custody transfer points should serve as facilitators in the nomination, confirmation, and allocation process to the extent operating agreements allow.
- Operator(s) at custody transfer points need to monitor and adjust physical flow rates to conform with confirmed nominations during the month of flow. To the extent flow rates cannot be adjusted, operator(s) should initiate communications with the appropriate parties in order to modify confirmed nominations.
- Gas accounting procedures should be consistent with nomination procedures.
- Prior period adjustments that affect ownership rights to gas previously nominated and produced should be corrected prospectively through the nomination process, to the extent possible.
- Standard data elements are necessary for timely and accurate communication of nominations, quantity measurement, allocation, quantity imbalances, and invoices.
- Roles of various participants relative to nominations, allocations, and the determination and resolution of quantity imbalances should be clearly stated and understood.
- Resolution of imbalances should be based on predetermined agreements between the parties at risk for financial consequences associated with such imbalance.
- Standard contract provisions should be incorporated into sales/purchase, transportation, and joint operating agreements that provide a clear understanding of contract intent and that can be revised by executing parties on mutual agreement.
- Electronic data interchange should be utilized to facilitate timely communication in areas of nominations, confirmations, quantity measurement, allocations, imbalances, and invoicing.