



Jamaica Public Service Company Limited

CHANGING LIVES WITH OUR ENERGY

COMMENTS ON THE WHEELING CONSULTATION DOCUMENT AND WHEELING FRAMEWORK

January 25, 2013

In response to the OUR's request for comments on the proposed introduction of wheeling services JPS has reviewed the Wheeling Consultation Document published by the OUR as well as evaluated wheeling arrangements and mechanisms globally. We have also broadened our evaluation from just the wheeling arrangement to assess its intersection with the current tariff framework and to capture issues of concern which might not have been raised or addressed in the document. Our comments that follow are by no means exhaustive and we look forward to feedback and the opportunity for further consultations as the wheeling framework is developed.

A. Proposed Mechanism (General Comments)

The main concerns regarding the proposed MW-km (Load Flow-based) mechanism are:

1. **Revenue neutrality:** The document claims that the wheeling arrangements should be revenue neutral for JPS, however, it is not clear how this would be achieved since only wheelers that save money will choose this option. It does not discuss or propose recalculating tariff adjustments of existing customers to compensate for the revenue deficit.
2. **Inequity for customers:** Is it intended that customers that buy generation from JPS pay different rates for using the same wires that wheelers do?
3. **System losses:** The proposed methodology does not explicitly address this very critical issue. The proposed MW-Km flow based approach attempts to isolate only the costs associated with the assets that are actually involved in serving wheeling customers, hence it may become difficult to add to this tariff, the total commercial system losses that

all customers pay today. JPS believes the treatment of losses is fundamental to its ability to recover cost associated with the operation of the network and so it is imperative that the issue be explicitly and comprehensively addressed in the development of the framework.

4. **Ancillary Services:** Use of the MW-Km flow based methodology, will require design of additional back up services in a coherent manner so that, for example, when the generation of the wheeling party trips, simulations can be done for the flows and distances involved in providing services to these customers. The OUR will introduce inconsistency if it designs wheeling tariffs that measure precisely the distance that the flows transit and then socializing the costs of ensuring system stability, frequency, voltage and supply.
5. **Transmission Tariff methodology:** If you apply this methodology to both transmission and distribution services as proposed, there will be a need to simulate the flows of the entire transmission and distribution system to measure the impact of a wheeling customer. Also note that flows will change from year to year as demand grows and new generation is installed, requiring many simulations to measure the impact. Also, there is the issue of how dynamic this calculation will be and who will bear the risk of the actual outturn differing from forecasts.

B. Commercial & Administration

6. The Consultation Document does not address the processes for implementation and administration of power wheeling. There are significant implications to the internal business processes of JPS and the requirements (systems/mechanisms/data models/PSS/E software) need to be clearly outlined and finalized through consultation with JPS. JPS is strongly recommending a meeting with the OUR/Consultant to clarify these questions in order to inform the implementation schedule for power wheeling.
7. **Stand-by Power Purchase Agreements:** What will be the basis for pricing the power for these arrangements and will there be limits on the capacity added to the grid

pool via the wheeling arrangements? In the event of excess generation by the wheeling generator to the grid, will the power sale be automatic (for example, in the event of a wheeling load trip or the wheeling production being greater than the wheeling load in any interval) or will the grid operator be allowed to exercise acceptance/refusal discretion on that power on the basis of cost or system conditions? Will the agreements be take-as-available or dispatchable?

8. Can all rate classes be eligible to participate in a single wheeling transaction from a customer perspective?
 - How will wheeling costs be treated where for the same Owner, there are multiple customer points in different Rate Classes for the transaction if purchase and sale are to be matched in all respects (MW, MVAR) in real time?
 - If the transaction is not required to be matched in real-time, how will the real time cost and quality effects of wheeling be accounted for?
9. Will the wheeling transaction be a required guarantee on the part of the Utility?
 - E.g. What if an outage occurs on the transmission network attributable to system events which interrupts the wheeling transaction even though the wheeling demand exists and the wheeling generator is available - who stands the liability?
10. How will incremental operating costs related to change in dispatch imposed by wheeling be accounted for?
 - Will the utility be mandated to have backup supply available for wheeling customers? If so, will this customer be required to pay a backup facility charge monthly regardless of usage?
 - Should JPS' obligation to serve still exist as it relates to wheeling customers and who pays for infrastructure capacity used by the wheeling customer? That is, if a self-generator triggers a system upgrade (separate from interconnection infrastructure).

- How will the issue of incremental generation cost be accounted for? If a wheeling generator trips offline resulting in the utility having to bring online a peaker unit to serve the wheeling load; who pays that incremental cost?
11. JPS believes the wheeling framework should include a specific mechanism to reconcile revenue shortfall due to wheeling in the period between rate reviews. This revenue shortfall could be occasioned by significant load switching to wheeling over the tariff period that would require tariff re-balancing to account for unrecovered costs.
 12. Wheeling can potentially impact/trigger the replacement or upgrade of infrastructure; the tariff design for wheeling should properly recognize and allocate such costs.
 13. The increase in costs due to real time operating profile (e.g. Losses) of the system needs to be provisioned for.
 14. The framework should be specific and clear on the treatment of congestion if it should occur.

C. Technical Considerations

15. The wheeling framework needs to clearly define the grid operation requirements for the self-generator (wheeling generator), for example SCADA visibility of generator and load required.
16. Demand and spinning reserve management – the wheeling customer should provide sufficient information to the utility to enable projection of demand and potential reserve requirements
17. VARs affect system losses therefore the wheeling generator's VAR production should be properly matched with the wheeling customer's demand or as otherwise specifically allowed by the utility.
18. Impact on frequency management – operation of the wheeling generator can have an impact on the grid and therefore requires close communication between the grid

operator and the wheeling generator even though the wheeling generator is expected to be generally (barring system conditions) non-dispatchable when producing at levels below the wheeling load.

19. Digital mass memory real time remote accessible metering of both sale and purchase points required

- Generator and Customer meters to be GPS synchronized, recording and storing 15 minutes data so that real-time MW and MVARs can be offset.

There may be special requirements in relation to PPA's and standby agreements (inclusive of all grid interconnection criteria etc.) and may require consultation prior to drafting. This would have to be a consideration that informs the implementation schedule.