Stakeholder Proposal Evaluation – May 20, 2020

Participant-Related Costs for DFOs (Substation Fraction) and DFO Cost Flow-Through Technical Session 2A

Period of Comment:	May 4, 2020	through May 20, 2020	**Contact:** [redacted]
Comments From:	ATCO Electric Ltd.		[redacted]
Date:	2020-05-20		**Phone:** [redacted]
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Document purpose

The purpose of this document is to provide a structured and consistent guide to workshop participants to evaluate each of the proposals.

Instructions

1. Please fill out the section above as indicated.
2. Please complete an evaluation on each of the proposals using the tables below (Tables 2-7). Please provide your reason(s) as to why you think the proposal does/does not meet each of the evaluation criteria.
3. Once you have completed an evaluation on each of the proposals, please choose your preferred proposal with an explanation as to why in Table 1: Overall evaluation.
4. **Please submit one completed evaluation per organization.**
5. Email your completed evaluation to tariffdesign@aeso.ca by **May 20, 2020**.

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Table 1: Overall evaluation

Questions	Stakeholder Evaluation
1. Which proposal did you prefer? Please explain why.	ATCO prefers the proposals represented by Group 1 (DCG Consortium, URICA and Fortis), and specifically the Fortis proposal as it most comprehensively addressed the matters requiring resolution via this consultation. While ATCO generally agrees with Group 2 (Lionstooth, Solar Krafte and Canadian Solar) regarding the intent of the Transmission Development Policy (TDP) and the Transmission Regulation, ATCO views that these documents did not anticipate the DER future that is currently developing, and that relying on these 20 year old policies as reasons not to progress is short sighted. Without a mechanism to correct the current price signals, we will continue to see GFOs incented to avoid transmission connection alternatives, even when they may be technically superior to a distribution system connection. In many instances, a DCG alternative can avoid transmission costs completely. The Group 1 proposals, with some modifications, have the potential to fully achieve the first four of the guiding principles that have been established for this consultation, and to reasonably achieve Principle 5. While principles 3-5 can be achieved to some degree within the Group 2 proposals, they cannot achieve Principles 1 and 2 to the same degree as those presented within Group 1.
2. What are the challenges or unresolved questions with your preferred proposal?	Calculation of the DCG contribution by DFOs should be simple. DCG proponents should be able to estimate their contribution based on the DFO providing information on POD peak loading and applicable feeder minimum loading. The Fortis proposed methodology for determining an average cost per MW for each transmission asset requires additional discussion. DFOs do not utilize load breakers or PODs to their maximum ratings due to contingency planning requirements. Conversely, DFOs may permit reverse flow that is much closer to, if

Questions	Stakeholder Evaluation
	not matching, the full equipment rating because there are no alternate feed provisions for DCGs. They are required to be off-line during contingency events. Existing protection and control system costs are not extraneous and are necessary components of a substation to accommodate both load and DCG. In all instances (perhaps only for simplicity), these costs have not been considered in the development of cost functions. The full impact of transmission upgrade costs incurred should be considered as part of the cost function. Contributions should apply to DCG larger than 1 MW, or alternatively, larger than 5 MW, to align with the MG and SSG Regulations and the AESO threshold for dispatchable generation.
3. What aspects from the other proposals would you like to see applied to your preferred proposal?	N/A – as discussed above.
4. Additional comments	Provision of hourly feeder and substation load data as requested by some proponents is not required to implement the Fortis proposal or Group 1 proposals. The per MW share of a substation and related components can be determined fairly from peak substation and minimum feeder values. The primary value of hourly data is to facilitate siting and operation of DCGs to maximize D32 and Option M demand credits, which is not in the public interest. This information also encourages "feeder shopping" which results in excessive administrative, technical and study burden and churn for DFOs, and creates customer confidentiality concerns in many situations. Consideration should be given to developing policy that limits DCG to the capacity of a single 25 kV feeder and breaker, typically about 25 MW.

Table 2: Evaluation of Proposal: Canadian Solar Solutions Inc.

Questions	Stakeholder Evaluation
1. Please rate your support of this proposal on a 1-10 basis, with 10 being completely supportive and 1 being not at all supportive. Please provide your rationale.	ATCO abstains from rating the presentations, and states merely that as a TFO/DFO, the ATCO utilities maintain that here is a functional need to recover some form of flow through costs for the impact of DCG interconnection. This mechanism is largely not included in the Canadian Solar Solutions presentation.
2. Is the proposal an unbiased solution and evenly weighted in its analysis?	The proposal focuses on the legalities and historical context of the TDP and the considerations made during the drafting and development of these policies. To that extent, the proposal provides a somewhat unbiased interpretation of these legislations.
3. Is the proposal feasible?	Yes, the proposal is feasible to the extent that it essentially removes the fraction, and primarily treats DCG as per the previous tariff. Transmission costs are only considered or allocated if the transmission upgrades are directly caused by the size of the DCG interconnection.
4. Which stakeholders are best served by this proposal? Why?	Distribution connected generation are best served by the proposal, as DCG receives the cost certainty that is generally unanimously considered as a need for generation development and eliminating the contribution towards transmission costs in some scenarios.
5. Which stakeholders are least served by this proposal? Why?	Load customers or facility owners are least served as future costs associated with upgrades that are either caused by or tied to the size of the interconnected DCG can only be collected through load customers, as such the DFO is required to collect these costs through the DTS tariff.
6. Do the objectives/principles outlined in the proposal seem fair and reasonable?	The argument that the TReg and TDP do not necessitate a concept of fairness does not contemplate that the development of DCG resources is no longer as infrequent as it was at the time of the TReg and TDP development.
7. Does the proposal align with the consolidated principles (see Appendix A) presented in Technical Session 1 as	Principle 1 – Price Signals / Rightsizing – Not achieved

Questions	Stakeholder Evaluation
well as the additional principle of "Ease of understanding and implementation (simplicity)"? This additional principle was added based on stakeholder feedback. If not, are you supportive of the principles that are used in the development of the proposal?	Principle 2 – Share of Tx Facility Costs – Partially achieved -– share of Tx costs is achieved only in the instance of there being upgrades required at the time of the construction. Principle 3 – Generator Cost Certainty - Achieved Principle 4 – DFO Cost Certainty – Achieved Principle 5 – Simplicity - Achieved
8. What are the unresolved questions or challenges you would want to see answered in this proposal?	Overstatement of reliability impacts/improvements to the grid relative to the installation of DCG. Per the EPRI report filed as part of the DI (Proceeding 24116), to realize the DCG benefits and enable mitigation of the problems caused by DCGs, all DFOs in Alberta would need to enjoy the following capabilities, which are not in place today: 1. Count on DCGs to be fully dispatchable, visible and controllable by the local system operator, including active power curtailment 2. Deploy fully mature Advanced Distribution Management Systems (ADMS) and DER Management Systems (DERMS) 3. Contractual infrastructure to ensure technical obligations of these DCGs, especially with respect to availability and a concerted load shedding hierarchy, is set in place 4. Protection and control philosophies that are not in place today and that are more complex and expensive Scenario 3 as presented is not well defined and does not appear to treat future DCG development consistently – the development that is depicted in this scenario more directly mirrors TCG development.
9. Additional comments	

Table 3: Evaluation of Proposal: DCG Consortium

Questions	Stakeholder Evaluation
1. Please rate your support of this proposal on a 1-10 basis, with 10 being completely supportive and 1 being not at all supportive. Please provide your rationale.	ATCO abstains from rating the presentations, and states merely that as a TFO/DFO, the ATCO utilities maintain that here is a functional need to recover some form of flow through costs for the impact of DCG interconnection. This mechanism is considered as a cost-sharing function within the DCG Consortium proposal.
2. Is the proposal an unbiased solution and evenly weighted in its analysis?	The proposal provides a well-balanced solution that balances present cost certainty for generation investment decisions, while providing the DFO and TFO with a mechanism to ensure costs for upgrades are collected.
3. Is the proposal feasible?	Yes, the proposal is feasible – though there are a number of checks and balances required to develop the correct cost values for upgrade costs.
4. Which stakeholders are best served by this proposal? Why?	DCGs are best served by the proposal with the provided cost certainty well defined to assist in investment decisions.
5. Which stakeholders are least served by this proposal? Why?	Load customers are likely the least served as the future costs for upgrades and incremental O&M are likely to still be collected through DTS and would passed on to load customers.
6. Do the objectives/principles outlined in the proposal seem fair and reasonable?	Yes.
7. Does the proposal align with the consolidated principles (see Appendix A) presented in Technical Session 1 as well as the additional principle of "Ease of understanding and implementation (simplicity)"? This additional principle was added based on stakeholder feedback. If not, are you supportive of the principles that are used in the development of the proposal?	Principle 1 – Price Signals - Achieved Principle 2 – Tx Facility Cost Share – Achieved (largely, though there is some question as to the full inclusion of costs associated with upgrade(s)) Principle 3 – Generator Cost Certainty - Achieved Principle 4 – DFO Cost Certainty – Achieved (although DTS charges are not

Questions	Stakeholder Evaluation
	reduced based on the shared capacity with the DCG) Principle 5 – Simplicity – Achieved
8. What are the unresolved questions or challenges you would want to see answered in this proposal?	The lack of a fraction results in the DFO paying full DTS charges for the life of the asset, despite sharing facility capacity with the DCG. The cost calculation includes just materials & installation for transmission assets (breaker & transformer) with no considerations for protection/control. The true costs associated should be considered further.
9. Additional comments	N/A

Table 4: Evaluation of Proposal: FortisAlberta Inc.

Questions	Stakeholder Evaluation
1. Please rate your support of this proposal on a 1-10 basis, with 10 being completely supportive and 1 being not at all supportive. Please provide your rationale.	ATCO abstains from rating the presentations, and states merely that as a TFO/DFO, the ATCO utilities maintain that here is a functional need to recover some form of flow through costs for the impact of DCG interconnection. This mechanism is considered as a cost-sharing function within the Fortis proposal in the form of the ASIC function.
2. Is the proposal an unbiased solution and evenly weighted in its analysis?	The proposal provides a well-balanced solution that balances present cost certainty for generation investment decisions, while providing the wires and facility owners with a mechanism to ensure costs for upgrades are collected.
3. Is the proposal feasible?	Yes, the proposal is feasible, though it would require a large amount of up-front burden in the development of the ASIC and it is unclear as to what the future requirements for an annual recalculation would be.
4. Which stakeholders are best served by this proposal? Why?	Wires and facility owners are best served by this proposal as it provides for the most direct cost certainty for DFO developments.
5. Which stakeholders are least served by this proposal? Why?	There is not a clear least-served stakeholder given the cost certainties provided across all players and the appropriate price signals delivered by the proposal.
6. Do the objectives/principles outlined in the proposal seem fair and reasonable?	Yes.
7. Does the proposal align with the consolidated principles (see Appendix A) presented in Technical Session 1 as well as the additional principle of "Ease of understanding and implementation (simplicity)"? This additional principle was added based on stakeholder feedback. If not, are you supportive of the principles that are used in the development of the proposal?	Principle 1 – Price Signals - Achieved Principle 2 – Tx Facility Cost Share – Achieved (largely, though there is some question as to the full inclusion of costs associated with upgrade(s) Principle 3 – Generator Cost Certainty – Achieved Principle 4 – DFO Cost Certainty – Achieved

Questions	Stakeholder Evaluation
	Principle 5 – Simplicity – Achieved – though there are additional burdens required in the development of the ASIC, and the continual upkeep of this function. Efforts should be made to simplify the process within the proposal – especially for annual updates for the function.
8. What are the unresolved questions or challenges you would want to see answered in this proposal?	The challenge with the ASIC calculation is the mechanism in which it is implemented – there is a necessity to ensure that this is done in a consistent manner which will be difficult with multiple DFOs completing this evaluation.
9. Additional comments	N/A

Table 5: Evaluation of Proposal: Lionstooth Energy

Questions	Stakeholder Evaluation
1. Please rate your support of this proposal on a 1-10 basis, with 10 being completely supportive and 1 being not at all supportive. Please provide your rationale.	ATCO abstains from rating the presentations, and states merely that as a TFO/DFO, the ATCO utilities maintain that here is a functional need to recover some form of flow through costs for the impact of DCG interconnection. The proposal considers incremental costs caused directly by the DCG only.
2. Is the proposal an unbiased solution and evenly weighted in its analysis?	Yes, the proposal is generally unbiased in its approach and proposes that the fraction is the problem.
3. Is the proposal feasible?	Yes, the proposal would be feasible.
4. Which stakeholders are best served by this proposal? Why?	DCGs achieve cost certainty, and an ability to develop facilities where financially incented (low cost / no cost PODs)
5. Which stakeholders are least served by this proposal? Why?	While the proposal claims that all parties are better off, it does not take into considerations both a desire to hold rate-base flat for cost of service transmission utilities, nor the effects of increased rate base on PBR incented DFOs.
6. Do the objectives/principles outlined in the proposal seem fair and reasonable?	Yes, however the principles set out in this engagement are not completely met through the Lionstooth proposal.
7. Does the proposal align with the consolidated principles (see Appendix A) presented in Technical Session 1 as well as the additional principle of “Ease of understanding and implementation (simplicity)”? This additional principle was added based on stakeholder feedback. If not, are you supportive of the principles that are used in the development of the proposal?	Principle 1 – Price Signals – Partially achieved, however locational incentives may be outweighed by incentives to select low-cost substation where there is low or no upgrade costs required. This does not incent DCG to locate near load growth. Principle 2 – Tx Facility Cost Share – Partially Achieved at least for initial costs Principle 3 – Generator Cost Certainty – Achieved Principle 4 – DFO Cost Certainty – Achieved – though additional costs would be borne through load customers.

Questions	Stakeholder Evaluation
	Principle 5 – Simplicity – Achieved
8. What are the unresolved questions or challenges you would want to see answered in this proposal?	The proposal references that all parties are better off in this scenario – generation because it is provided with cost certainty; and utility owners through increases in rate base. The one concern in this instance is that it does not seem to address the PBR distribution utilities where ratebase addition is not necessarily an incentive.
9. Additional comments	NA

Table 6: Evaluation of Proposal: Solar Krafte

Questions	Stakeholder Evaluation
1. Please rate your support of this proposal on a 1-10 basis, with 10 being completely supportive and 1 being not at all supportive. Please provide your rationale.	ATCO abstains from rating the presentations, and states merely that as a TFO/DFO, the ATCO utilities maintain that here is a functional need to recover some form of flow through costs for the impact of DCG interconnection. This mechanism is outright not considered within the Solar Krafte proposal.
2. Is the proposal an unbiased solution and evenly weighted in its analysis?	No, the proposal proposes a reversion to pre-decision treatment of DCG and does not address the inequity of load and generation share of facility upgrades required to accommodate generation additions.
3. Is the proposal feasible?	No, the proposal relies upon the DFO or AESO to pass costs on to load customers for upgrades that may be directly caused or contributed to by DCG facility adds.
4. Which stakeholders are best served by this proposal? Why?	DCGs are best served by this proposal as they are provided cost certainty and no responsibilities for transmission upgrades.
5. Which stakeholders are least served by this proposal? Why?	Load customers are the least served by this proposal as they are not afforded the same level of cost certainty – whereby all costs associated with transmission system upgrades would be borne by load customers.
6. Do the objectives/principles outlined in the proposal seem fair and reasonable?	No, the entirety of the cost allocation for system upgrades are not attributed fairly between load and generators.
7. Does the proposal align with the consolidated principles (see Appendix A) presented in Technical Session 1 as well as the additional principle of "Ease of understanding and implementation (simplicity)"? This additional principle was added based on stakeholder feedback. If not, are you supportive of the principles that are used in the development of the proposal?	Principle 1 – Price Signals – Not Achieved Principle 2 – Tx Facility Cost Share – Not achieved Principle 3 – Generator Cost Certainty – Achieved – only through the no-cost implementation of upgrade costs. Principle 4 – DFO Cost Certainty – Not achieved – as costs for upgrades are the responsibility of the DFO and would have to be passed through to load customers.

Questions	Stakeholder Evaluation
	Principle 5 – Simplicity – Achieved – only in the sense that this is a reversion to pre-decision treatment of DCG.
8. What are the unresolved questions or challenges you would want to see answered in this proposal?	N/A
9. Additional comments	N/A

Table 7: Evaluation of Proposal: URICA

Questions	Stakeholder Evaluation
1. Please rate your support of this proposal on a 1-10 basis, with 10 being completely supportive and 1 being not at all supportive. Please provide your rationale.	ATCO abstains from rating the presentations, and states merely that as a TFO/DFO, the ATCO utilities maintain that here is a functional need to recover some form of flow through costs for the impact of DCG interconnection. This mechanism is considered as a cost-sharing function within the URICA proposal.
2. Is the proposal an unbiased solution and evenly weighted in its analysis?	Mostly – as the proposal considers the costs incurred by all parties and attempts to achieve balance based on incremental cost causation.
3. Is the proposal feasible?	Yes, as it provides a simplistic framework of developing incremental costs attributable to DCGs and a one-time payment.
4. Which stakeholders are best served by this proposal? Why?	DCGs are able to achieve the cost certainty sought.
5. Which stakeholders are least served by this proposal? Why?	Load customers or wire owners are left with paying future incremental or upgrade costs associated with any longer-term upgrade costs.
6. Do the objectives/principles outlined in the proposal seem fair and reasonable?	Yes.
7. Does the proposal align with the consolidated principles (see Appendix A) presented in Technical Session 1 as well as the additional principle of "Ease of understanding and implementation (simplicity)"? This additional principle was added based on stakeholder feedback. If not, are you supportive of the principles that are used in the development of the proposal?	Principle 1 – Price Signals – Achieved Principle 2 – Tx Facility Cost Share – Partially achieved through a one-time allocation of incremental costs. Principle 3 – Generator Cost Certainty – Achieved through a one-time allocation of incremental costs Principle 4 – DFO Cost Certainty – Partially achieved through a one-time allocation of incremental costs – potential for future costs would need to be passed on to load customers.

Questions	Stakeholder Evaluation
	Principle 5 – Simplicity – Achieved
8. What are the unresolved questions or challenges you would want to see answered in this proposal?	The proposal seeks transparency and access to feeder level data to ensure that STS levels are accurate and based on DCG capacity and actual feeder load so that DCG are only assigned costs that are properly attributed to their generator capacity. In ATCO's view, based on the current feeder level metering practice, this can be achieved using peak and minimum feeder values which are currently provided to DCG customers. The issue with providing the 8760 level of detail on the feeder or POD level is this information is not currently publicly available and there have been concerns regarding the sharing of confidential customer information where there are large, potentially identifiable load customers on a feeder. Another consideration is that the hourly data is being used by generators to site their projects in order to maximum D32/Option M credits. ATCO would like to avoid the practice where system growth encourages feeder shopping to maximize economics of these credits, rather than siting projects to best use available fuel sources in a given area and match area load requirements. The price signal incentive should be coming from the power pool pricing and lower capital costs by siting close to load, and not from trying to optimize economics from credits that are ultimately at the expense of load customers. It is not clear what the proposed cost allocation methodology is based on for incremental costs – it appears to be a 50/50 split of the costs with load, but it is not clear whether this is an example or a universal allocator.
9. Additional comments	N/A

Appendix A

Principle	Description
Overarching	Tariff design and implementation facilities a fair, efficient and openly competitive market (FEOC) • Fosters competition and encourages new market entry • Efficiency • Avoidance of undue discrimination • Fairness
Principle 1	Parity between transmission interconnection costs calculation for transmission connected customers and distribution connected customers while enabling effective price signals to ensure to optimal use of existing distribution and transmission facilities • Fairness • Effective price signals
Principle 2	Market participants should be responsible for an appropriate share of the costs of transmission facilities that are required to provide them with access to the transmission system (may include paying a contribution towards facilities paid for by other customers and refund to the customer that paid) • Fairness • Cost Causation
Principle 3	DCG participants should have cost certainty when making their final investment decision (FID) • Certainty of future costs • Stability
Principle 4	DFOs should be provided with reasonable certainty re: cost treatment/recovery • Certainty of future costs • Stability
Principle 5 (added)	Ease of understanding and implementation • Simplicity • Stability