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| PGRR Number | [077](http://www.ercot.com/mktrules/issues/PGRR077) | PGRR Title | DC Tie Planning Assumptions |

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| Comments |

Rainbow Energy Marketing Corporation (REMC) submits these comments to Planning Guide Revision Request (PGRR) 077, DC Tie Planning Assumptions, to urge Technical Advisory Committee (TAC) to approve 7/29/20 REMC Comments instead of the ROS recommendation in the 8/6/20 ROS Report.

The 9/9/20 Joint Commenters’ comments are misguided in stating that “ERCOT Transmission Grid enables Direct Current Ties (DC Ties) to export electricity to adjacent regions outside of ERCOT, and transmission system upgrades and maintenance further facilitate such transactions. However, transmission system upgrades and maintenance that are solely intended to help facilitate DC Tie exports would not materially benefit the ERCOT Transmission Grid and ratepayers, as a whole, especially when operational conditions can be resolved in a more cost effective way by curtailing DC Tie exports to other regions to maintain reliability in ERCOT.” First of all, most transmission system upgrades are not solely for the benefit of any particular Load, including DC Tie Load, nor for any particular generator. The Joint Commenters contradict themselves by reasoning that no upgrade should facilitate exports and yet upgrades that do not maintain, let alone increase, historical export capability somehow “facilitate” such transactions. If exports are always curtailed in reliability planning studies, then transmission upgrades recommended by those upgrades would not support even historical exports that paid more than their share of transmission cost of service (TCOS) and, over time, the grid would not support any export. Using Joint Commenters logic, some generator may inadvertently benefit from a reliability upgrade and thus should pay for TCOS – this we know is not the case and generators do not pay TCOS in ERCOT. Joint Commenters’ argue that no upgrade will be planned to facilitate exports and yet exports have to pay more than their share of upgrade costs – totally violating cost causation principles and basic principles of fairness. Transmission upgrades to maintain historical exports also facilitate DC Tie imports during times of scarcity and emergencies – the benefits of which are enjoyed by these consumers.

It's highly ironic that members of the Joint Commenters fully avoid paying any TCOS by chasing the four Summer coincident peaks (4CP) and by netting their Load behind a Private Use Network. In addition to suppressing peak and near‐peak energy scarcity prices as pointed out by Dr. William Hogan and Dr. Susan Pope[[1]](#footnote-1), these customers’ response for avoiding the 4CP transmission cost allocation does nothing to avoid or defer future transmission upgrades since customer load reduction for a few hours of the year has no impact on load distribution factors and load forecasts used in transmission planning. These Loads avoid paying their share of TCOS with no corresponding benefit of reduced transmission costs thereby shifting the TCOS burden on other consumers. These large consumers pay little to no TCOS and do not object to (rather expect) transmission upgrades to be built to support their Load, yet they argue that DC Tie Load paying more than their fair share of TCOS should not get the benefit of being considered in ERCOT’s transmission planning process – truly ironic!

It’s basic textbook Economics that trade increases the efficiency of both systems and is beneficial to the combined system or society at large. The curtailment or bottling up of renewable energy during off-peak hours instead of exporting to neighboring grids that are willing to pay higher prices is an inefficient waste of societal resources. These exports help with resource adequacy by alleviating the impacts of price distorting production tax credits and thus address some of the main challenges facing the ERCOT market, as identified by Drs. Hogan and Pope[[2]](#footnote-2) as "those arising from increasing energy supply from subsidized renewables, as well as continuing challenges, such as transmission investment and cost recovery, and the persistent lower cost of the wholesale market’s marginal fuel (i.e. natural gas), which results in lower energy and ancillary service revenues." On the other hand, Joint Commenters want the benefits of DC Tie imports.

Only the Public Utility Commission of Texas (PUCT) can modify the DC Tie export tariff. Until and unless the PUCT eliminates or significantly reduces the DC Tie export tariff, the only equitable treatment of DC Tie Load is to treat DC Tie Load as other Load in the ERCOT reliability transmission planning process. If the PUCT were to eliminate DC Tie export tariff, which would remove an inefficient barrier to trade, then REMC would have no objection to the PGRR as filed. For example, current transmission charges for DC Tie exports of about $23/MWh during summer off-peak hours create a significant barrier to exporting off-peak energy that suppresses the opportunity for the market to address the most important price formation issue identified by Drs. Hogan and Pope[[3]](#footnote-3) - i.e. the allocation of sunk costs adversely impacting decisions to consume/export.

REMC worked diligently with ERCOT and other interested parties to develop the 7/29/20 REMC Comments to this PGRR – ERCOT is indifferent if those comments are approved or the PGRR as filed. ERCOT’s stated reason for the submission of this PGRR is to describe the current treatment of DC Ties in the planning process with the objective of letting Market Participants decide on the appropriate policy for treating DC Ties in the planning process.

To provide some background on how we got here: ERCOT’s treatment of DC Tie schedules in the planning process changed with the approval of Nodal Protocol Revision Request (NPRR) 818, Allow Curtailment of Certain DC Tie Load Prior to Declaring Emergency Conditions. That NPRR was an urgent fix to minimize the inefficient and unnecessary curtailment of exports by ERCOT Operations and consequent harm to Market Participants. Power Operations Bulletin #755 issued on 9/28/16 drastically changed ERCOT's operation of the DC Ties. ERCOT at that point would not commit Resources using the Reliability Unit Commitment (RUC) process to facilitate exports and wanted a new NPRR to clarify what was already in the Nodal Protocols – that is to treat DC Tie Load like Load which includes RUC, Constraint Management Plan (CMP), and Remedial Action Scheme (RAS), to protect DC Tie Load. Since such a new NPRR would take time to work through the NPRR approval process, NPRR818 was pursued on an urgent basis to stop inefficient and unnecessary export curtailments.

NPRR818 was quickly followed up by NPRR825, Require ERCOT to Issue a DC Tie Curtailment Notice Prior to Curtailing any DC Tie Load. NPRR825 eliminated the temporary provisions of NPRR818 and reinforced treatment of DC Tie Load like Load which includes RUC, CMP and RAS to protect DC Tie Load and was initially drafted to revert back to ERCOT having to declare an Emergency Condition to curtail DC Tie Load. REMC accommodated ERCOT’s request of issuing a DC Tie Curtailment Notice instead of having to declare an Emergency Condition with the understanding (as clearly stated in the Business Case of the Board-approved NPRR825) that “Apart from when a DC Tie experiences an Outage or a system operator in a non-ERCOT Control Area requests curtailment, ERCOT would use the same processes prior to curtailing DC Tie Load by issuing a DC Tie Curtailment Notice as they would if required to declare an Emergency Condition”. ERCOT Planning and Operations plan and operate the system to avoid having to enter into an Emergency Condition. According to current planning treatment of DC Tie schedules as reflected in this PGRR as filed, by not planning for any transmission to accommodate DC Tie schedules even under base case or N-1 conditions, ERCOT is essentially ensuring that ERCOT Operations would have to issue a DC Tie Curtailment Notice (equivalent to an Emergency) to maintain reliability – an unacceptable practice inconsistent with treatment of DC Tie schedules in planning prior to NPRR818.

Even more egregious is that a flat (8760-hour) DC Tie Load pays 1.67 times the transmission cost paid by similar other flat Load and, unlike other Load avoiding 4CP charges, DC Tie Load cannot avoid paying this transmission charge since it’s charged in all hours as $/MWh. Thus, DC Tie Load pays more than other Load in transmission cost and yet, according to this PGRR as filed, **no** transmission upgrade or even slight modifications of planned transmission upgrades would be considered to accommodate DC Tie Load.

The Nodal Protocols have consistently made clear, starting in 2012 with NPRR405, Clarification of DC Tie Load into Operational Systems and Processes, that DC Tie Load should be treated like other Load except that, in Real-Time Emergency Conditions, DC Tie Load can be curtailed prior to curtailing other Load. Thus, for ERCOT Planning purposes, DC Tie Load should be treated exactly the same as other Load and DC Tie imports should be treated as other Generation Resources. REMC’s 7/29/20 Comments clarify this treatment of DC Tie schedules – REMC urges TAC to approve those Comments.

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| Revised Cover Page Language |

None.

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| Revised Proposed Guide Language |

None.

1. *Priorities for the Evolution of an Energy-Only Electricity Market Design in ERCOT*, Dr. William Hogan and Dr. Susan Pope of FTI Consulting, Inc., filed in PUCT Project No. 47199, Project to Assess Price-Formation Rules in ERCOT’s Energy-Only Market, 2017. [↑](#footnote-ref-1)
2. *Ibid*. [↑](#footnote-ref-2)
3. *Ibid*. [↑](#footnote-ref-3)