

Subj: Bilateral decomposition of Inadvertent Interchange energy violates the Fundamental Principle of Transmission Usage built into NERC's Interchange Distribution Calculator software..
Date: 8/8/03 10:46:10 AM Central Daylight Time
From: Robert Blohm
To: WEQ Inadvertent Interchange Payback Task Force

In my mathematical example of an Interconnection consisting of 3 Balancing Authorities A, B & C, C was providing 100 MWh of Inadvertent energy to B. Of this 100 MWh of Inadvertent energy provided by Balancing Authority C to B, 50 MWh was provided by C directly to B and 50 MWh was provided by C to B "through" A. If this were a scheduled flow, NERC's Interchange Distribution Calculator (IDC) would identify the source of that 100 MWh Interchange as C, identify the sink as B, and identify the paths: 50 MWh directly to B and, most importantly, the 50 MWh "through A" to C. Similarly the IDC would identify the 50 MWh flow from C directly to A, identify C as the source, and identify A as the sink.

The Fundamental Principle of Transmission Usage. This principle underlies all bilateral exchange of energy. It deems the source-and-sink transacting parties to be the users of all the transmission along the path required for their transaction. Accordingly, C would be contracting bilaterally for 100 MWh of Interchange energy to B, and together they would contract for 50 MW of transmission along all three paths of the Interconnection, C to B, C to A, and A to B. Also, C would be contracting bilaterally for 50 MWh of energy to A, and together they would contract for 50 MW of transmission along the path from C to A.

According to the Lively/Cox bilateral decomposition of Inadvertent Interchange energy, no such transactions would be made by source and sink. Instead the two ends of any transmission path would be deemed the source and sink of all energy flowing over that path and be required to reserve and pay for use of that path for the full amount of that energy. When in reality A is a pass-through of the transaction for 50 MWh from C to B, A would be deemed a buyer of the 50 MWh from C and a reseller of that 50 MWh to B; in other words, A would be converted from an agent to a principal! This is a fundamental violation of the principals of bilateral-contracting for energy or transmission. Most radically, it collapses generators into transmission owners and "redefines" all energy transactions into uses of transmission. If an intertie is loaded to 100 MW between nodes C and A as in our example, that is deemed to be a single bilateral transaction for 100 MWh of energy from C to A when, in reality, it is two transactions for energy between two different sets of parties: one transaction of 50 MWh from C to A, and another transaction for 50 MWh from C to B. This would truly be socialism writ large and a socialization of the transmission system without any regard to the causality of the transactions.

NERC's Interchange Distribution Calculator has enabled on a DC estimation basis the identification of sources and sinks of bilateral SCHEDULED Interchange transactions. The IDC cannot do real-time identification of sources, sinks, and transmission paths of REAL-TIME Inadvertent Interchange transactions. Mark Lively and AEP are welcome to invest the funds and time and contract with NERC to develop IDC software that tracks "real-time" flows. In the absence of such software, the Fundamental Principle of Transmission Usage, a keystone of capitalism in our system, needs to be respected by not deeming as "bilateral" energy Interchange between two parties, energy Interchange that does not exist between those two parties! In particular, in my example A is not a bilateral provider of 50 MWh to B, as bilateral decomposition of Inadvertent would have it. C is the bilateral provider of that 50 MWh to B, consistent with the Fundamental Principle of Transmission Usage.

Accordingly, although it does not identify the sources and sinks of specific Inadvertent Interchange flows because there is no software to identify the paths of real-time flows, Inadvertent Interchange with the Interconnection is the only way we have of preserving the

integrity of bilateral exchanges and transmission usage by at least grouping all Inadvertent Interchange separately by source and separately by sink.