



**Gulf Coast Power Association (GCPA)
Spring 2016 Conference**

**Session III
Cost Allocation Issues in Transmission**

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A Battle Among Classic Titans

Resource Entities vs. Transmission Utilities vs. Gas Utilities



SSR Incident – Mohave Generator (1970)

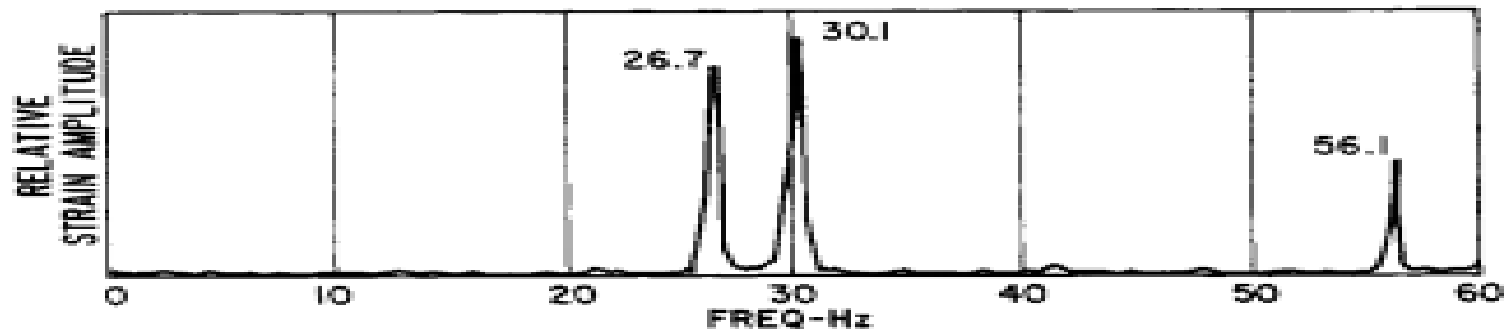


Fig. 7. Synchronization Frequency Analysis

SSR Criteria – The Current Proposal

Scope	Frequency Scan Criteria	Frequency Range
I GE/SSCI	Positive resistance at reactance crossover frequency (Generator + System)	5 ~ 55 Hz
TI	Positive Total Damping (Electrical De + Mechanical Dm) Dm at +/- 1 Hz of the modal frequency is utilized to compare to De.	5 ~ 55 Hz
TA	Less than 5% reactance dip within +/- 3Hz of the 60 Hz complement of a modal frequency. *	5 ~ 55 Hz

Option	Generation	Mitigation (# of outages)	Protection (# of outages)	Outage Coordination / Monitoring
NPRR562	All Resources	N<=3, TSP or GO	N=4, TSP or GO	N=5,6, ERCOT/TSP
Option1	New Generation	N<=4, GO	na	N=5,6, ERCOT/TSP
	Existing Generation	N<=4, TSP	na	N=5,6, ERCOT/TSP
Option2	New Generation	N<=4, GO	na	N=5,6, ERCOT/TSP
	Existing Generation (after NPRR562)	N<=3, GO	N=4, GO	N=5,6, ERCOT/TSP
	Existing Generation	N<=4, TSP	na	N=5,6, ERCOT/TSP

Induced Voltage – Possible Accelerated Corrosion



Induced Current – NACE International Standard

From NACE SP0117-2014 Foreword:

- *“Many are now concerned with AC corrosion on buried pipelines adjacent to or near overhead electric transmission towers. **This subject is not quite fully understood, nor is there an industry consensus on this subject.** There are reported incidents of AC corrosion on buried pipelines under specific conditions, and there are also many case histories of pipelines operating under the influence of induced AC for many years without any reports of AC corrosion. The members of NACE Task Group (TG) 025 agreed that any criteria for AC corrosion control should **not** be included in this standard.”*



**LET'S
GET
READY
TO
RUMBLE**