Date: September 9, 2008
To: Board of Directors
From: Mark Dreyfus, Technical Advisory Committee (TAC) Chair
Subject: 2009 Commercially Significant Constraints (CSCs) and Congestion Zones

Issue for the ERCOT Board of Directors

ERCOT Board of Director Meeting Date: September 16, 2008
Agenda Item No.: 10d

Issue:
Designation of 2009 CSCs in the ERCOT transmission system and Transmission Congestion Zones.

Background/History:
Protocol Section 7.2.1, Process for Determining CSCs, states "CSCs and resulting Congestion Zones will be reassessed annually by November 1 of each year." Board approval is required for the annual CSC and Congestion Zone designations.

The Congestion Management Working Group (CMWG), under the auspices of the Wholesale Market Subcommittee (WMS) and TAC, has been working on this issue. ERCOT Staff provided the underlying analysis using the transmission topology for 2009 and the resulting load flow data to determine expected operating limits, candidate CSCs and associated constraints to be used in the designation of CSCs for 2009. The CMWG did not reach a unanimous recommendation for the 2009 CSCs and Congestion Zones and brought the following three proposals to the August 20, 2008 WMS for consideration.

Scenario 3b (ERCOT Staff Proposal):

- Four Congestion Zones: West, North, South and Houston
- Commercially Significant Constraints:
  - CSC#1 – North to Houston* – Singleton to Obrien; Singleton to TH Wharton 345-kV double circuit
  - CSC#2 – North to South – Lake Creek to Temple; Tradinghouse to Temple Pecan Creek 345-kV double circuit
  - CSC#3 South to North – Temple to Lake Creek; Temple Pecan Creek to Tradinghouse 345-kV double circuit
  - CSC#4 – West to North – Graham to Benbrook; Graham to Parker 345-kV double circuit
  - CSC#5 – North to West –Benbrook to Graham; Parker to Graham 345-kV double circuit

  **For CSC#1 - North o Houston – Singleton is not scheduled to be in-service until May 2009.*

Scenario 3g:

- Same as ERCOT's proposal except for CSC#4 and CSC#5:
  - CSC#4 – West to North –Graham to Long Creek; Graham to Cook Field Road 345-kV double circuit
  - CSC#5 – North to West –Long Creek to Graham; Cook Field Road to Graham 345-kV double circuit

Scenario 3h:

- Same as ERCOT's proposal except for CSC#4 and CSC#5:
  - CSC#4 – West to North – Sweetwater to Long Creek; Abilene Mulberry Creek to Long Creek 345-kV double circuit
  - CSC#5 – North to West –Long Creek to Sweetwater; Long Creek to Abilene Mulberry Creek 345-kV double circuit

At the August 20, 2008 WMS meeting, a motion to endorse the ERCOT Staff proposal, Scenario 3b, failed by roll call vote with 43.2% in favor, 56.8% opposed and two abstentions. There were twelve opposing votes from the Cooperative (1), Municipal (1), Investor Owned Utility (IOU) (3), Consumer (1), Independent Retail Electric Provider (IREP) (4), and Independent Power Marketer (IPM) (2) Market Segments and two abstentions from the IOU (1) and Consumer (1) Market Segments. A subsequent motion to endorse Scenario 3g failed to receive a second. A third motion to recommend the Scenario 3h proposal to TAC passed by WMS roll call vote with 61.1% in favor, 38.9% opposed and two abstentions. There were ten opposing votes from the Cooperative (1), Municipal (2), IOU (1), Independent Generator (4) and IPM (2) Market Segments and two abstentions from the Cooperative and Municipal Market Segments.

At the September 4, 2008 TAC meeting, the TAC heard the proposals presented to WMS as well as a fourth proposal, Scenario 3i, which is described below.

Scenario 3i:

- Same as Scenario 3h except for the cluster analysis performed. In Scenario 3i, Olkaunion remains in the West Congestion management zone instead of moving to the North Congestion management zone as is the case in Scenario 3h.

Comparison of Scenarios:

CSC Analysis – MWs of Load Moving Zones by Scenario

	Scenario 3b	**Scenario 3g**	**Scenario 3h**	**Scenario 3i**
North to South	1137.39	1156.40	1150.38	1150.38
South to Houston	107.54	53.41	53.41	53.41
West to North	4.97	762.08	762.08	761.63
West to South	3.80	3.80	3.80	3.80
North to West	7.63	0	0	0
Total	1261.33	1975.69	1988.57	1969.22

CSC Analysis – MWs of Generation Moving Zones by Scenario

	Scenario 3b	Scenario 3g	Scenario 3h	Scenario 3i
North to South	0	0	0	0
South to Houston	0	0	0	0
West to North	0	832	2117.67	1468
West to South	0	0	0	0
North to West	0	0	0	0
Total	0	832	2117.67	1468

Attachment A also includes a diagram of selected 345-kV lines that are different among the proposed scenarios.

After discussing the four proposals for the 2009 CSCs as described above, a motion to recommend the Scenario 3i proposal passed by TAC roll call vote with five opposing votes from the IOU (1), Independent Generator (2) and Consumer (2) Market Segments and four abstentions from the Municipal (1), Independent Generator (1), Consumer (1) and IPM (1) Market Segments**.**

Key Factors Influencing Issue:
The TAC met and discussed four proposals for the 2009 CSCs and recommends Board approval of the Scenario 3i proposal for the 2009 Congestion Zones and CSCs.

2009 CSCs:

- CSC#1 – North to Houston* – Singleton to Obrien; Singleton to TH Wharton 345-kV double circuit
- CSC#2 – North to South – Lake Creek to Temple; Tradinghouse to Temple Pecan Creek 345-kV double circuit
- CSC#3 South to North – Temple to Lake Creek; Temple Pecan Creek to Tradinghouse 345-kV double circuit
- CSC#4– West to North** – Sweetwater to Long Creek; Abilene Mulberry Creek to Long Creek 345-kV double circuit
- CSC#5 – North to West** – Long Creek to Sweetwater; Long Creek to Abilene Mulberry Creek 345-kV double circuit

**For CSC#1 - North o Houston – Singleton is not scheduled to be in-service until May 2009.*

***Clustered using post-contingency (Oklaunion to Fisher Road; Fisher Road to Bowman 345-kV shift factors)*

2009 Congestion Zones:
1 – West 2009
2 – North 2009
3 – Houston 2009
4 – South 2009

Attachment B includes a diagram of the 2009 CSCs as recommended by TAC.

Alternatives:
1. Approve the TAC recommendation regarding CSCs and Congestion Zones for 2009;
2. reject the TAC recommendation; or
3. remand to TAC with instructions.

Conclusion/Recommendation:
TAC recommends that the Board approve the Scenario 3i proposal for 2009 CSCs and Congestion Zones.