

DSW Restoration/Blackstart Plan

SWAT/RDRC

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18 October 2006



Restoration/Blackstart

Executive Summary

1. Identify Regional Priorities
2. Modify/Combine individual Plans
3. Determine Methodology for Restoration

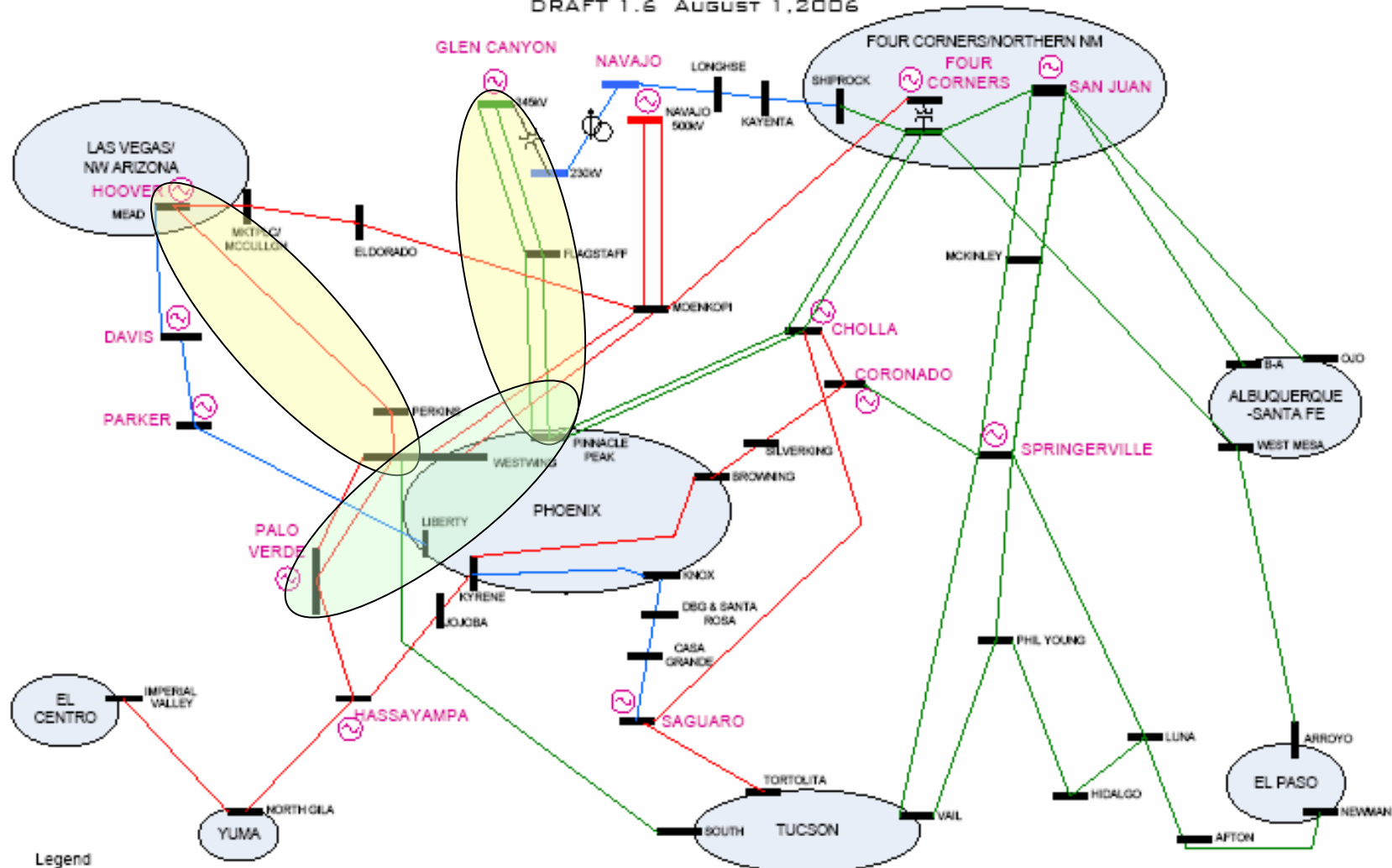


Initial Study Plan Overview

1. Power to Palo Verde
2. Arizona Triangle
3. NEVP Restoration
4. PSNM Restoration
5. EPE Restoration
6. Yuma Restoration
7. IID Restoration
8. TEP Restoration

RESTORATION DIAGRAM

DRAFT 1.6 AUGUST 1, 2006

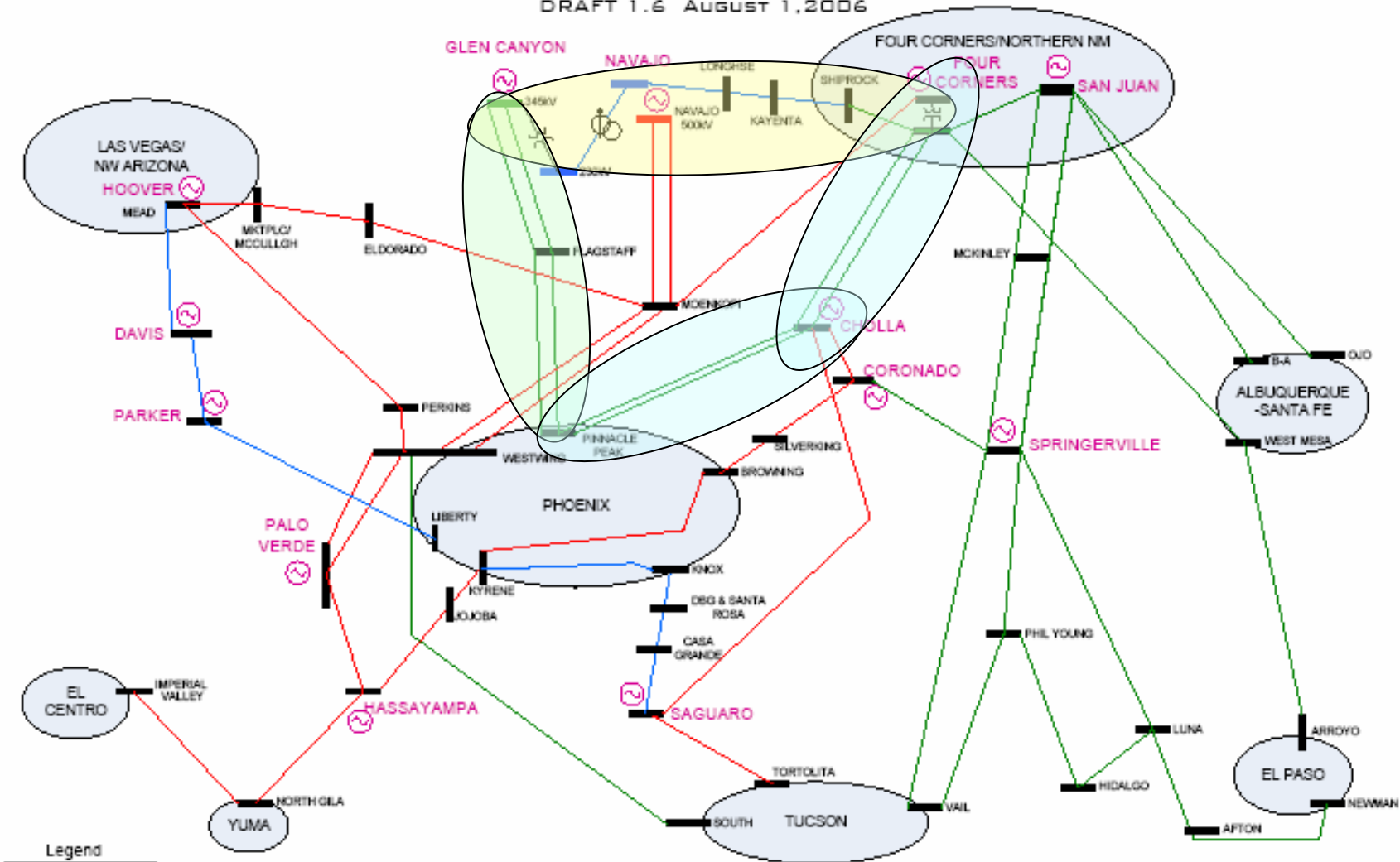


- Legend**
- 230kV lines
 - 345kV lines
 - 500kV lines
 - generation
 - Black Start Islands

Palo Verde Backup Power Restoration

RESTORATION DIAGRAM

DRAFT 1.6 AUGUST 1, 2006

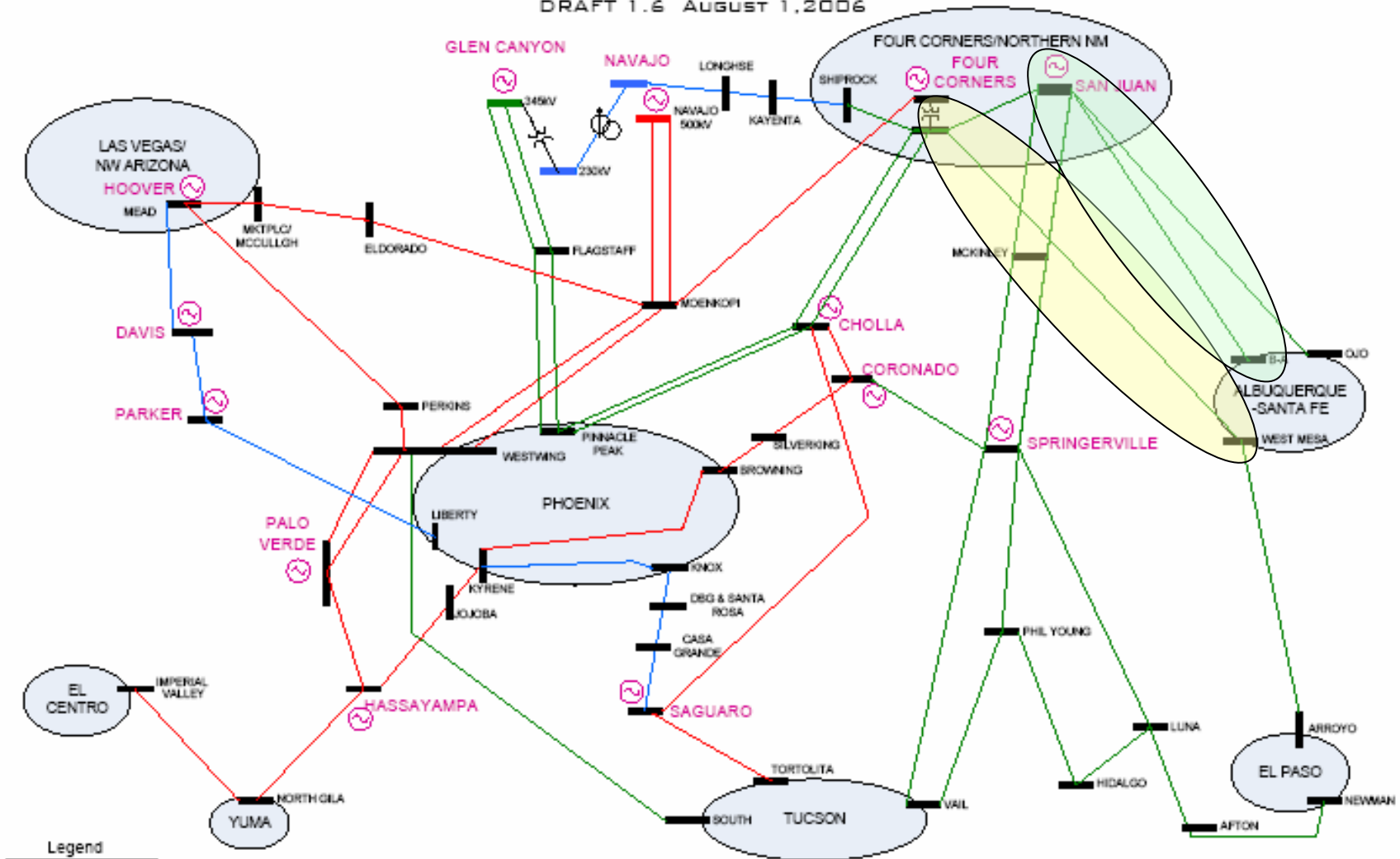


- Legend**
- 230kV lines
 - 345kV lines
 - 500kV lines
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 - Black Start Islands

Arizona Triangle Restoration

RESTORATION DIAGRAM

DRAFT 1.6 AUGUST 1, 2006

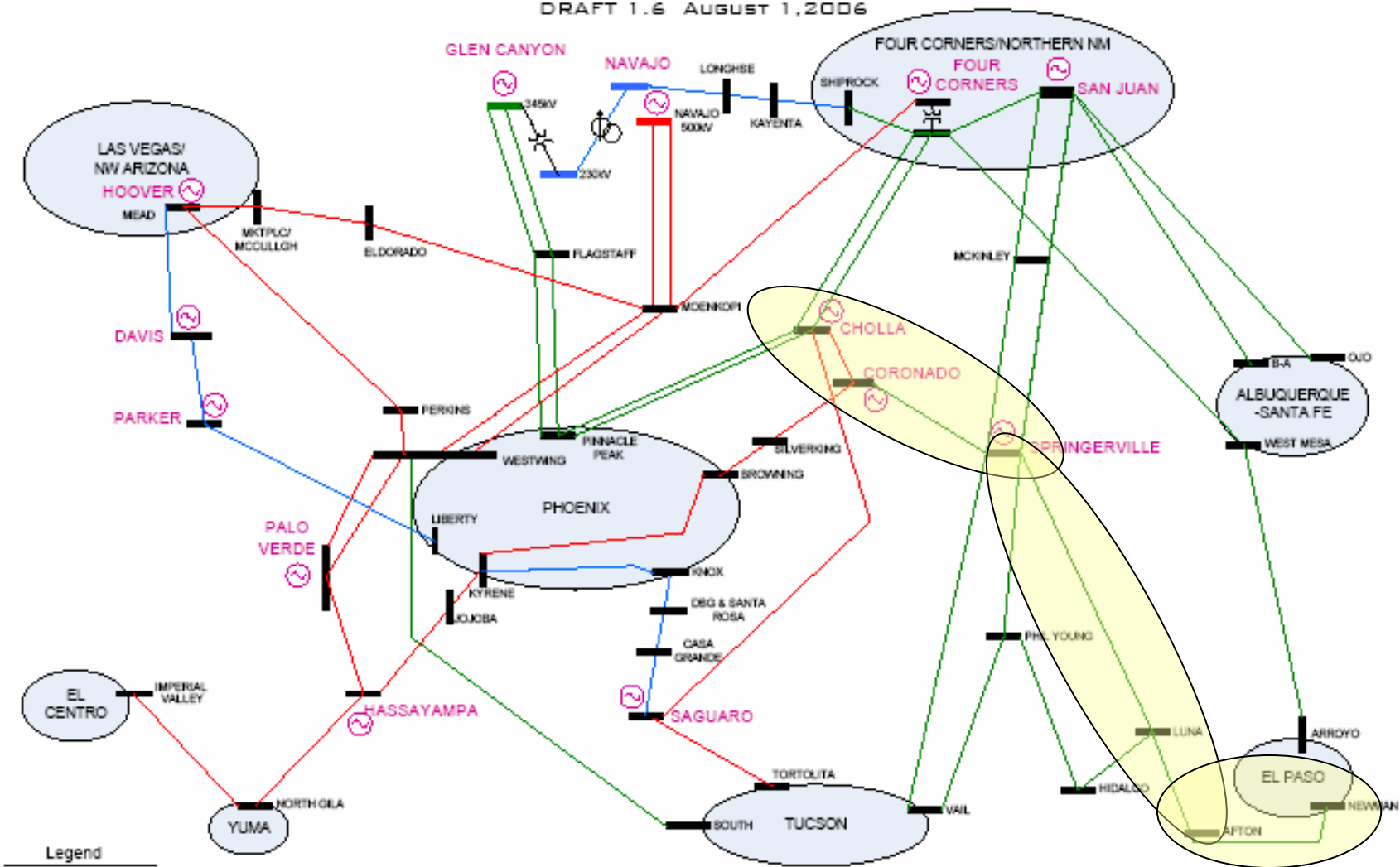


- Legend**
- 230kV lines
 - 345kV lines
 - 500kV lines
 - generation
 - Black Start Islands

PSNM Restoration

RESTORATION DIAGRAM

DRAFT 1.6 AUGUST 1, 2006

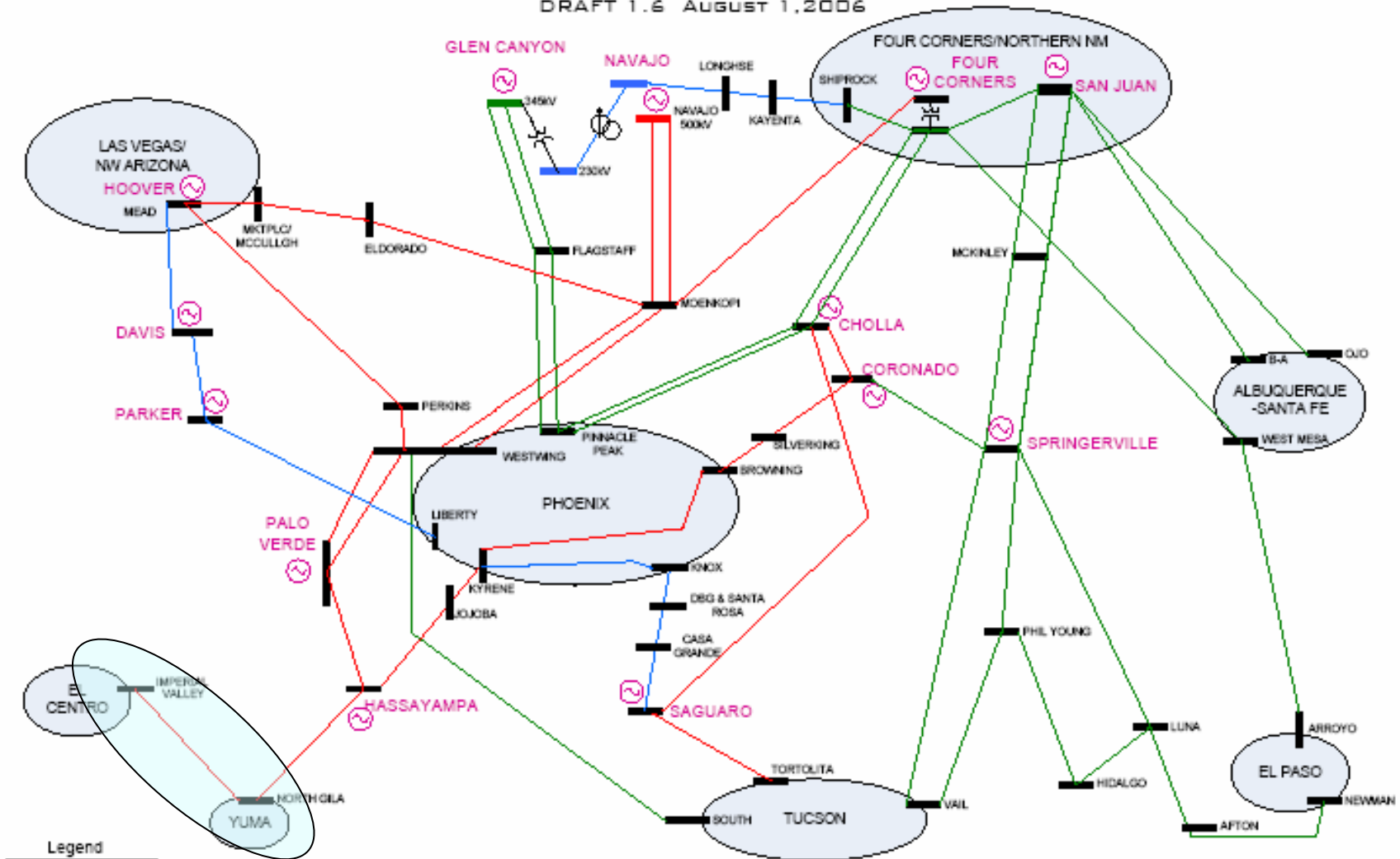


- Legend**
- 230kV lines
 - 345kV lines
 - 500kV lines
 - ⚡ generation
 - Black Start Islands

EPE Restoration

RESTORATION DIAGRAM

DRAFT 1.6 AUGUST 1, 2006

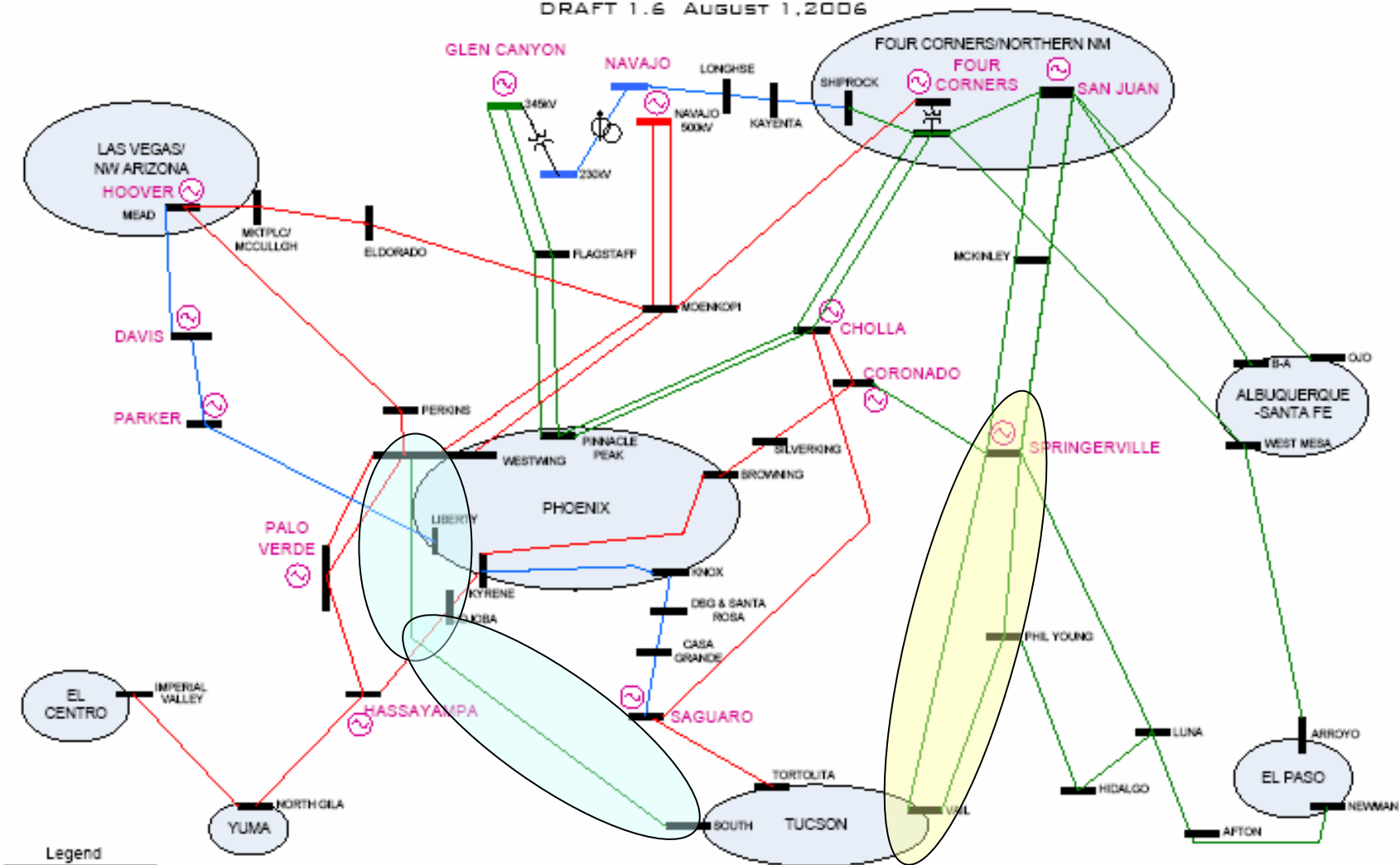


- Legend**
- 230kV lines
 - 345kV lines
 - 500kV lines
 - generation
 - Black Start Islands

IID Restoration

RESTORATION DIAGRAM

DRAFT 1.6 AUGUST 1, 2006



TEP Restoration

- Legend**
- 230kV lines
 - 345kV lines
 - 500kV lines
 - generation
 - Black Start Islands



- Restoration/Blackstart Plan Structure
 - Restoration Plan Template
 - Synchronization Checklist
 - Voltage, Freq and Phases matched
 - Sync-Scopes
 - Interconnection capacity
 - One system maintain 0 droop
 - RDRRC Approval
 - Maintain reserves in each area until multiple ties
 - Priorities
 - Blackstart Plan Template