

**ISO-IT ISN'T WHAT YOU THINK IT IS
-OR IS IT?**

**OUTLINE OF PRESENTATION TO
THE HARVARD ELECTRICITY POLICY PROJECT
MARCH 21, 1996**

**PAUL DRAGOMIS ASSOCIATES, INC.
TEL: (301) 469 4956
FAX: (301) 469 7508**

1 *ISO-IT ISN'T WHAT YOU THINK-OR IS IT?*

HARVARD ELECTRICITY POLICY PROJECT

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2 *THE RESPONSE SPECTRUM*

- ◆ Open access & non-discriminatory tariffs
 - Consolidated tariffs
- ◆ "ISO lite"
- ◆ ISO, ISO Operator- "Account temps"
- ◆ Full service ISO
- ◆ Independent Transco

3 *EIGHT CRITERIA FOR AN ISO-AN ARGUMENT*

- Under contract will "operate" owners' transmission facilities in the interest of all users in accordance with FERC approved tariffs, procedures and rates.
- Reliability will be governed by good practice, NERC and Regional guidelines and standards.
- Will operate the capacity, energy and ancillary services markets for all players.

4 *EIGHT CRITERIA FOR AN ISO-AN ARGUMENT*

- Meets substantiality Test:
 - ◆ Makes initial Capital Investment in and owns relevant facilities.
 - ◆ Multi-contract Commitment to the ISO business.
 - ◆ Committed to invest in needed capital improvements over time.
 - ◆ Provides fruitful training and career employment for superior personnel.

5 *EIGHT CRITERIA FOR AN ISO-AN ARGUMENT*

- Independent from any potential bias, including G, T and D ownership.
- Will have no financial interest in market transactions or operation.

6 *EIGHT CRITERIA FOR AN ISO-AN ARGUMENT*

- Earns a profit with some fraction of return at risk. Not a cost plus entity.
- Coordinates regional planning with input of all stakeholders.

7 *ISO GOVERNANCE*

8

- ◆
- ◆
- ◆
- ◆ *PROMINENT ISO THEMES*
- ◆
- ◆

- ◆
- 9 *"ISO LITE"*
 - ◆ Independent tariff administrator
 - Has a rational basis
 - Assumes separate security center
 - Auditor-Referee against the tariff/procedure/rate standard.
 - Dispute mediator or arbiter
 - Few people, little capital
- 10 *CALIFORNIA ISO*
 - ◆ Organization of stakeholders
 - ◆ Lessee of transmission; Own or lease Center
 - ◆ Negotiates rules, tariffs
- 11 *CALIFORNIA ISO (CONT'D)*
 - ◆ May be investor in incremental facilities
 - ◆ Hires system operator (Account Temps)
 - ◆ Separate Market Manager
- 12 *EASTERN MODELS*
 - ◆ NEW YORK
 - Single "Hogan" market, consolidated tariff
 - Lessee of transmission
 - NYPP office becomes the Security Center/Market Manager
 - ◆ Governance/Ownership Change needed
- 13 *EASTERN MODELS (CONT'D)*
 - ◆ MID ATLANTIC
 - Capacity market Intact
 - Energy market-changes weekly (locational priced residual)
 - Security Center
 - PJM office is the "ISO", converted to not-for-profit.
 - Evolving Board (responsibilities uncertain)
- 14 *THE MIDWEST GROUP*
 - ◆ Full service ISO
 - ◆ New market to be defined
 - ◆ The center above the centers
- 15 *TEXAS STYLE*
 - ◆ ERCOT becomes the ISO, add market functions.
 - ◆ Stakeholders represented
 - ◆ Dispute resolution

ISO FUNCTIONS

NOTE: THESE FUNCTIONS WOULD BE PERFORMED BY A FULL SERVICE
ISO

• RELIABILITY (PLANNED)

- Coordinate regional planning
- Determine regional reserve obligation
- Determine inter-area tie credit
- Allocate generation responsibility among load serving entities.
- Contingency planning for operations
- Participate in interregional Planning

RELIABILITY (OPERATING)

- Regional load forecast (self scheduled portion and available to market)
- Generator scheduling from committed units
- Ancillary services supply adequacy and scheduling (spinning reserve, ramp up/down, ACE, AGC).
- Emergency procedures including:
 - voltage reduction
 - load dump
 - Min gen
- Inter area scheduling
- Operating to contingencies
- Planned outage coordination (G&T)

ECONOMY

- Regional load forecast
- Generation dispatch to economic merit after "must run" transactions.
- Bilateral dispatch
- Parallel flow surveillance and remediation
- Transaction accounting and billing
- Interregional coordination transactions (very short term)
- Balancing
- Ancillary services market
- Regional tariff administration

ISO Governance: Who Decides Who Decides? When? How?



