

Arizona Corporation Commission

Palo Verde Hub Transmission Interconnection Meeting

Jerry D. Smith, ACC Staff

May 31, 2005



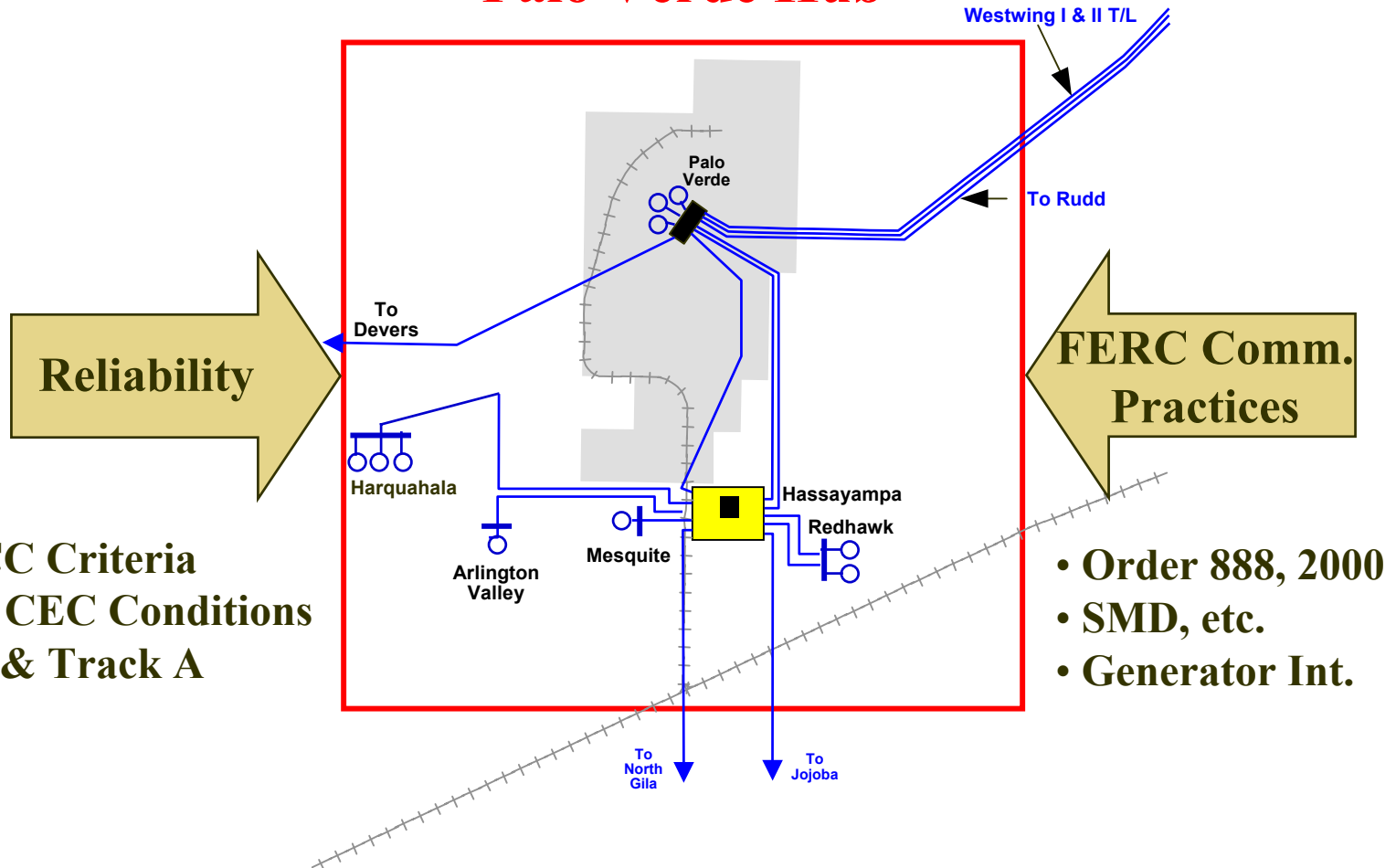
Proposed Agenda

- 1. Specific Staff Concerns**
- 2. Conceptual Solutions Discussed w/ FERC Staff**
- 3. 3rd Biennial Transmission Assessment**
- 4. PV-TS5 Termination Alternatives**
- 5. PV-DV 2 Terminations Alternatives**
- 6. Conceptual Action Plan**



A Seams Issue Extraordinaire

Palo Verde Hub





PV Hub Risk Assessment Recommendations

- **Future generation or transmission projects should give consideration to risk mitigation for extreme events.**
- **For overall diversity, performance and risk mitigation: should consider terminating future lines at generating stations interconnected at the hub rather than at the Palo Verde or Hassayampa Switchyards.**
- **Future generators desiring to interconnect at the Palo Verde hub should also be interconnected to at least one other location in the transmission network.**



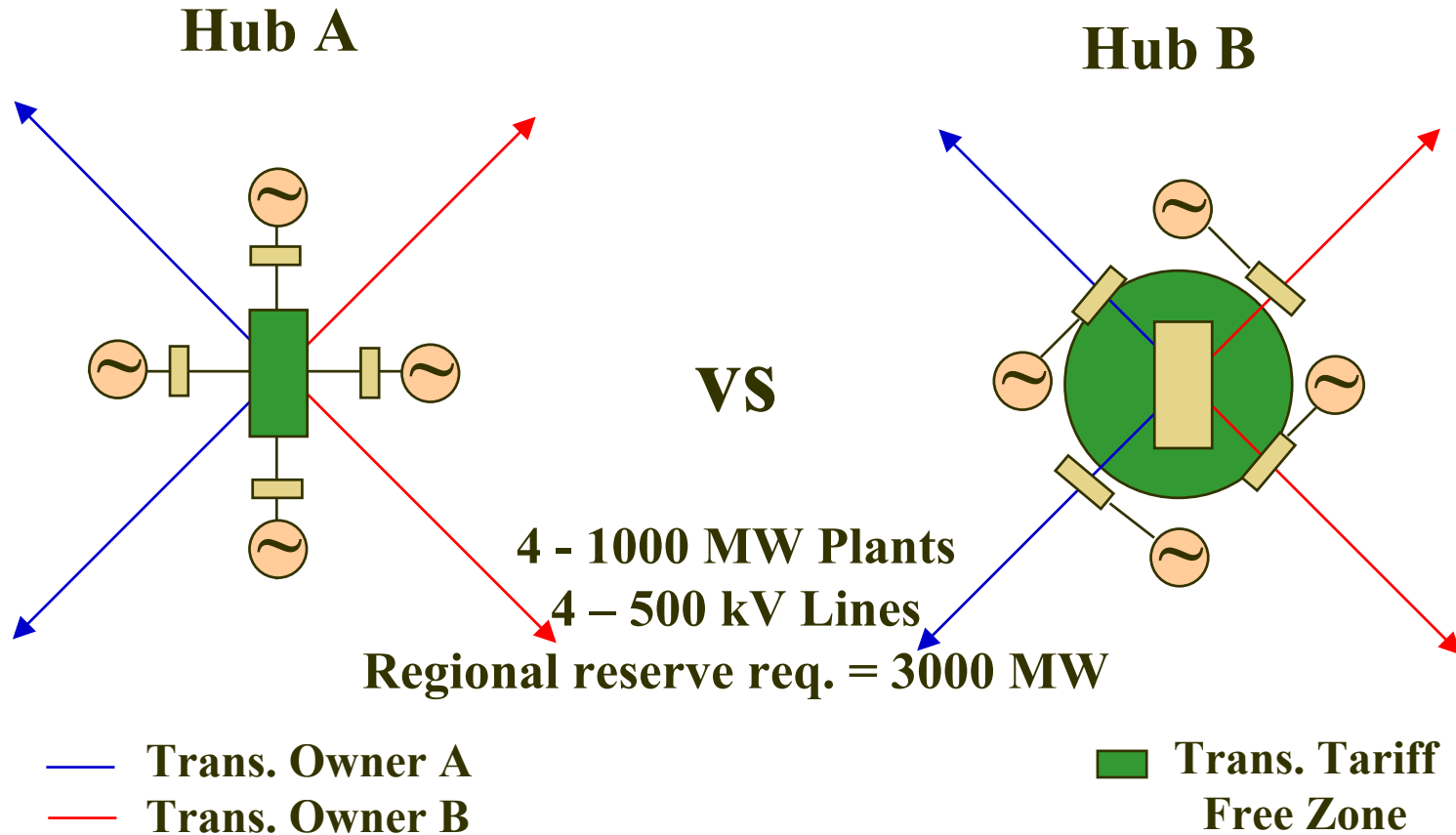
FERC/ACC

Collaborative Effort Needs

- **Policy and Regulations That Balance Reliability Needs vs Market Interest**
- **Generator Only Control Areas Acceptable Only if Reliability Obligations and Purposes Maintained**
- **EWG Substations and Embedded Lines:**
 - Same Obligation to Requested Interconnections as Transmission Provider
 - Under Transmission CAO Operational Control
 - Tariffs Void of “Pancaking” for New Interconnects
 - Demonstrated Deliverability



Hub Concepts



The seal of the Arizona Corporation Commission is circular, featuring a landscape with a mountain, a cactus, and a deer. The text around the seal reads "SEAL OF THE ARIZONA CORPORATION COMMISSION" and "1912".

3rd Biennial Trans. Assessment - Key Conclusions -

- **Existing & Planned Transmission Facilities Meet Load Serving Requirements of Arizona in a Reliable Manner. (W/O Planned Facilities -Conclusion May Have Been Different)**
- **Staff concerns remain regarding adequacy of Arizona transmission to reliably support the competitive wholesale market.**
 - Existing Transmission from Palo Verde to California is **Inadequate** to Allow All New Palo Verde Hub Generation Full Access to the California Market Under Weak Arizona Market Conditions. (**Three 500 kV projects being studied to remedy limitations between AZ, CA and NV**)
 - The Palo Verde to TS5 to Raceway and Palo Verde to Browning Projects **Will Significantly Increase** the Outlet Capability of the Palo Verde Hub to Arizona.



3rd BTA

Commission Decision

- **RMR Studies required in even number years:**
 - Need more transparent input data & economic dispatch assumptions and
 - Utilities/Staff to develop and implement more stringent planning criteria for RMR areas.
- **Extreme contingency analysis required of major generation hubs & transmission stations.**
 - Palo Verde Hub risk assessment required of future interconnections and
 - Report risks and consequences if mitigating system improvements not planned.
- **Report N-1-1 Analysis for Year 1 of Ten-Year plan.**



Questions ?

