

Continental Divide West Planning Group (CDWPG)

Presentation to CCPG
April 27, 2011



General Footprint

Electrically bounded by:

Bonanza West Path and Flaming Gorge
Transformers (Northwest Boundary)

TOT 2A (Southwest Boundary)

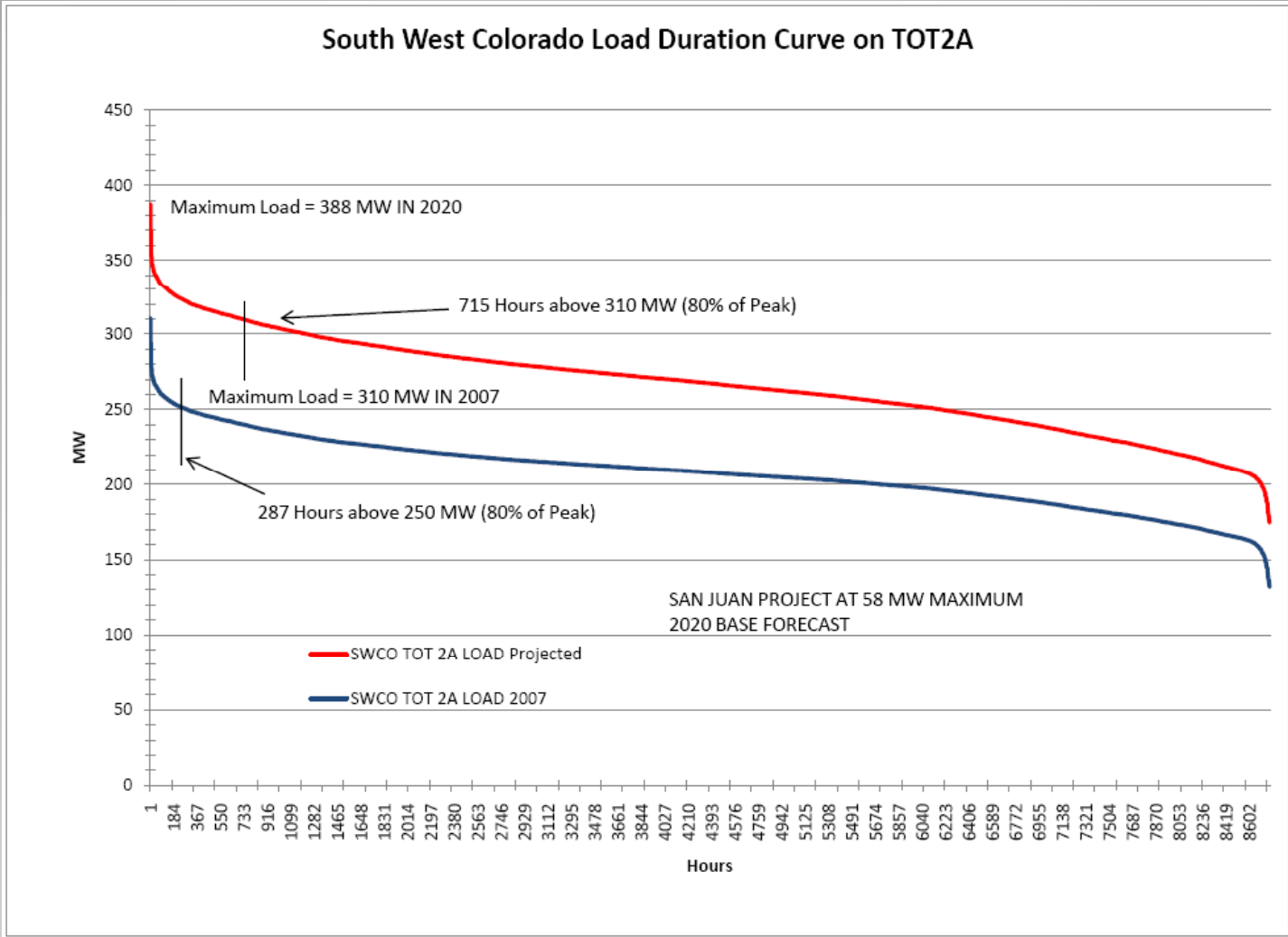
TOT 5 / Continental Divide (East Boundary)

Geographic Footprint

- CDWPG 2010 Study Focus – San Juan Major
 - Significant Load Growth Projected in La Plata County
 - Detrimental Impact to TOT 2A
 - Additional Transmission Required to Ensure Reliability and Maintain Transfer Capability
- Other Transmission Limitations Identified
 - Craig-Rifle and Grand Junction-Montrose

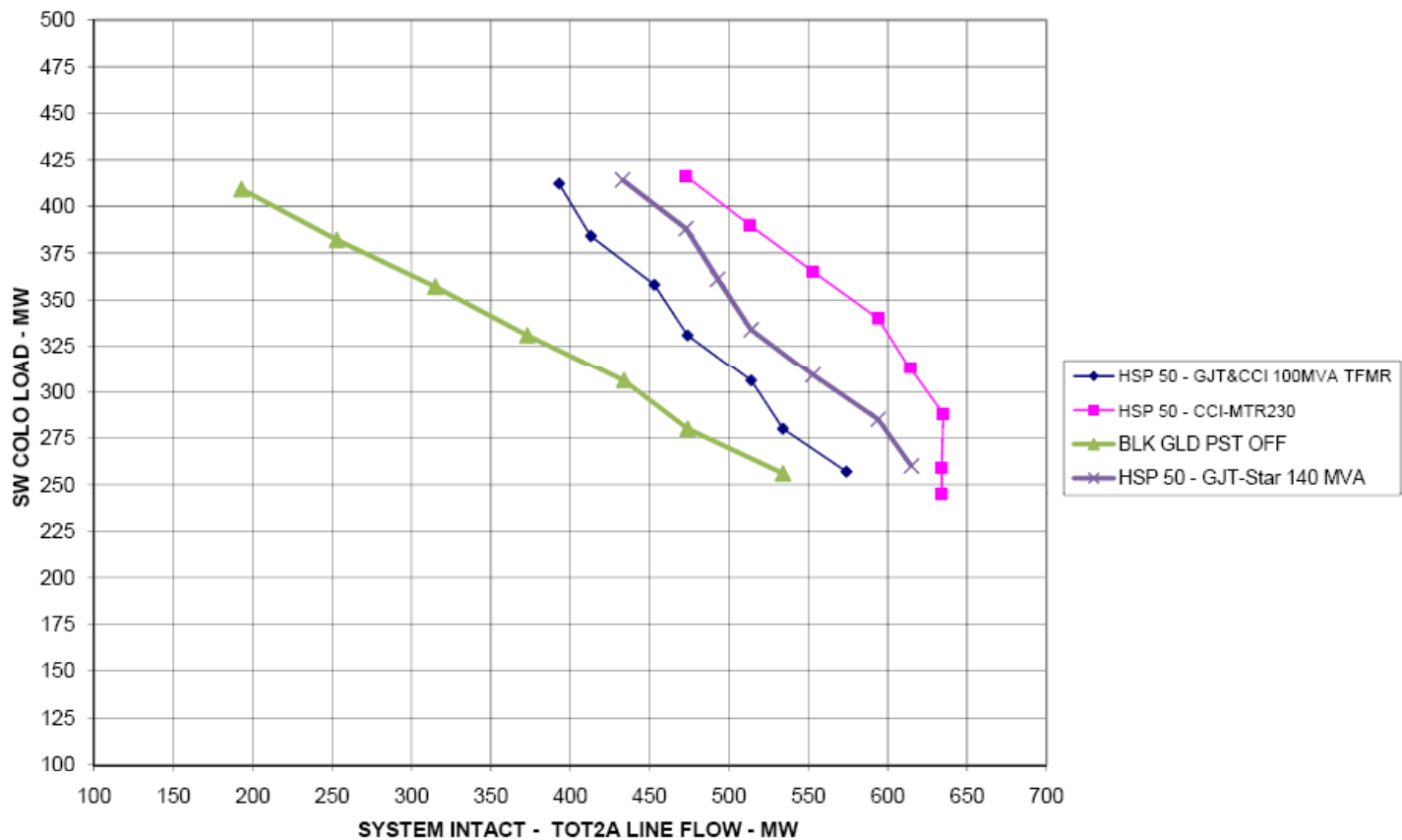
San Juan Basin Load Study

South West Colorado Load Duration Curve on TOT2A



Projected Load (One Customer)

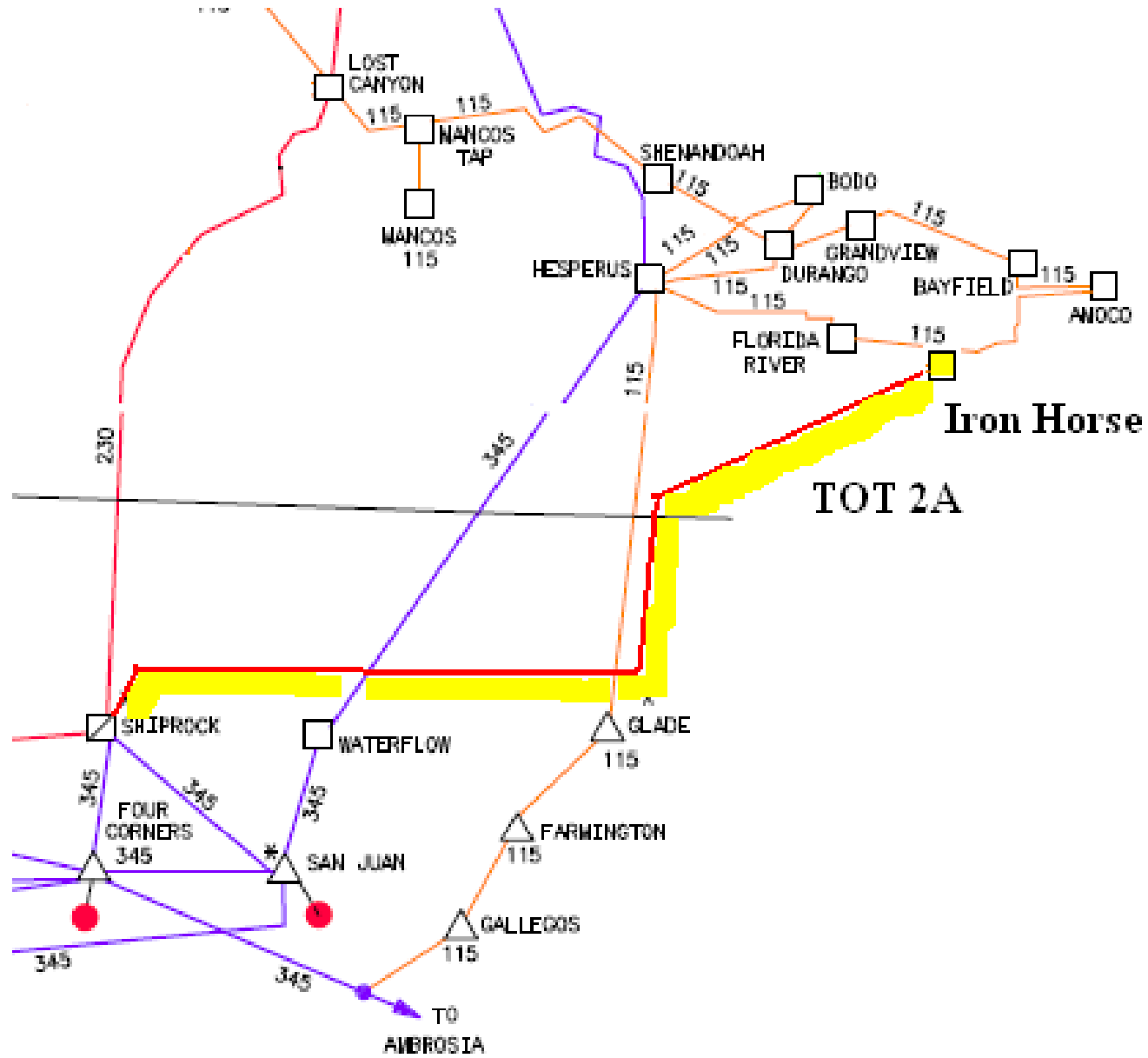
2014 WINTER - TOT2A LINE FLOW VS SW COLO LOAD - NUCLA= 80 MW



Impact of Additional Load to TOT 2A

- System met WECC VAR Margin Criteria (Voltage stability demonstrated)
- Transient analysis showed phase angles to be damped and transient voltage and frequency criteria to be met.
- Studies support the TOT to continue to be limited by thermal and voltage constraints.

Dynamic and Voltage Stability



- Alternatives limited due to terrain, transmission line mileage, and time considerations.
- Southern source shorter distance and more favorable terrain.
- Line addition could become integral part of TOT 2A for transmission expansions to the north.
- <http://www.sjbenergyconnect.com/>

Transmission Alternatives

- **Additional Transmission Limitations Identified**

- **Craig-Rifle Options**

- Increase rating of Craig-Rifle 230-kV
 - Operate Craig-Rifle at 345-kV

- **Grand Junction-Montrose Options**

- Replace transformers at Grand Junction and Curecanti in addition to increasing thermal rating of Grand Junction-Montrose 115-kV
 - Replace Curecanti-Montrose 115-kV with 230-kV

San Juan Basin Load Study

- Near term sensitivity
 - Studies to date have modeled the full build out envisioned.
 - Next phase of studies will look at a single 230-kV circuit expected in the initial build out.
 - No significant change in results expected.
- Meeting to discuss results

Next Steps

Questions?

CDWPG Presentation