



March 16, 2011

Black Hills Colorado Transmission Q1 TCPC / SB-100 Stakeholder Meeting

Improving life with energy



Meeting Overview

- Welcome and Introductions
- Trans. Planning Department Update
- 2010/2011 LTP Study Process
- Stakeholder Comments

TCPC Overview

- FERC Order 890 – 9 Principles
 - Coordination
 - Openness
 - Transparency
 - Information Exchange
 - Comparability
 - Dispute Resolution
 - Regional Participation
 - Economic Planning Studies
 - Cost Allocation for New Projects

TCPC Meeting Policies

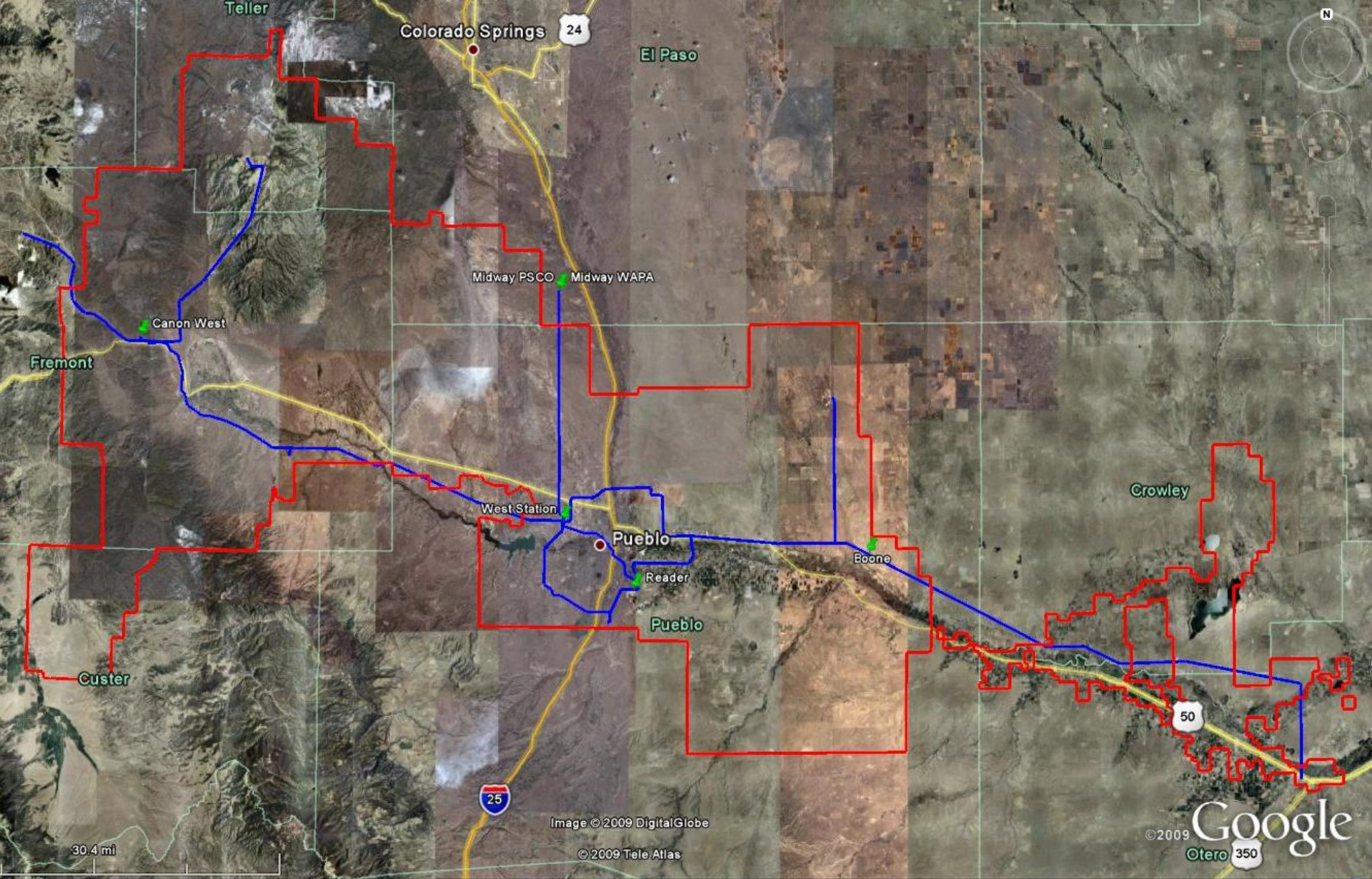
- FERC Standards of Conduct
- Anti-Trust Policy
- Confidentiality

BHCE Transmission System

- The transmission system follows the Arkansas River Valley from the Royal Gorge west of Cañon City to La Junta
- Major load centers are Pueblo, Cañon City, and Rocky Ford
- The transmission system consists of 311 miles of 115-kV transmission lines

BHCE Transmission System Interconnection Points

| Interconnection Name | Interconnecting Utility |
|----------------------|-------------------------|
| Midway (PSCo) | PSCo |
| Midway (WAPA) | Western, CSU, Tri-State |
| Boone | PSCo, Tri-State |
| Reader | PSCo |
| Cañon West | Western, PSCo |
| West Station | Tri-State |



BHC Transmission Planning Department Updates

- CO Rule 3206: System Additions for the Next 3 Calendar Years (Added in 2010)
 - New Portland-West Station 115 kV line (2013)
 - Greenhorn-Reader 115 kV line rebuild (2014)
 - Reconductor Pueblo-Hyde Park-West Station 115 kV line (2012)

Refer to Docket No. 10M-206E for more information

BHC Transmission Planning Department Updates

CO Clean Air Clean Jobs Act (HB1365)

- Lower NOx emissions by 70% on half of coal-fired generation facilities by 12/31/2017
 - Filed proposal on Oct. 29 to retire W.N. Clark generation facility in Canon City, CO (42 MW)
 - Replace with utility-owned gas-fired generation at Baculite Mesa
 - LGI request and CPCN filed

BHC Transmission Planning Department Updates

Colorado SB07-100

- Report filed in 2009
- Biennial study process to begin again in 2011 as part of this TCPC study cycle

For more information:

https://www.oatioasis.com/BHCT/BHCTdocs/2009_SB07-100_Report_Filed.pdf

BHC Transmission Planning Department Updates

Black Hills/Colorado Electric - Large Generator Interconnection Queue

| Interconnection Request Information | | | | | Facility Output (MW) | | Facility Location | | Point of Interconnection | Projected In-Service | Generator Information | | Study Report Status | | | Notes |
|-------------------------------------|------------|--|------------------|-------------------|----------------------|--------|-------------------|-------|--------------------------|----------------------|-----------------------|-----------|---------------------|---------------|------------|-----------------------|
| Queue Number | Queue Date | Status | Company Name | Requested Service | Summer | Winter | County | State | | | Generation Type | Fuel Type | Feasibility | System Impact | Facilities | |
| BHCT-G1 | 2/12/2009 | Withdrawn | Black Hills Corp | NR/ER | 240 | 240 | Pueblo | CO | Reader 115 kV | 10/1/2011 | Combustion Turbine | Nat. Gas | | | | Withdrawn by Customer |
| BHCT-G2 | 4/1/2009 | Withdrawn | Black Hills Corp | NR/ER | 120 | 120 | Pueblo | CO | Reader 115 kV | 10/1/2011 | Combustion Turbine | Nat. Gas | | | | Withdrawn by Customer |
| BHCT-G3 | 4/3/2009 | Active | Black Hills Corp | NR/ER | 200 | 200 | Pueblo | CO | Airport Tap 115 kV | 10/1/2011 | Combustion Turbine | Nat. Gas | Complete | Complete | Complete | LGIA executed |
| BHCT-G4 | 4/3/2009 | Active | Black Hills Corp | NR/ER | 100 | 100 | Pueblo | CO | Airport Tap 115 kV | 10/1/2011 | Combustion Turbine | Nat. Gas | Complete | Complete | Complete | LGIA executed |
| BHCT-G5 | 4/3/2009 | Active | Black Hills Corp | NR/ER | 100 | 100 | Pueblo | CO | Airport Tap 115 kV | 10/1/2011 | Combustion Turbine | Nat. Gas | Complete | Complete | Complete | LGIA executed |
| BHCT-G6 | 12/3/2010 | Active | Black Hills Corp | NR | 100 | 100 | Pueblo | CO | Baculite Mesa | 1/1/2013 | Combustion Turbine | Nat. Gas | NA | In progress | | SISA executed |
| BHCT-G7 | 12/27/2010 | Queue Number assigned to an SGIP project | | | | | | | | | | | | | | Withdrawn by Customer |
| BHCT-G8 | 1/4/2011 | Active | Black Hills Corp | ER | 29 | 29 | Huerfano | CO | Huerfano County | 12/1/2012 | Wind | | NA | In progress | | SISA executed |
| BHCT-G9 | 2/21/2011 | Queue Number assigned to an SGIP project | | | | | | | | | | | | | | |

BHCE Ten Year Plan

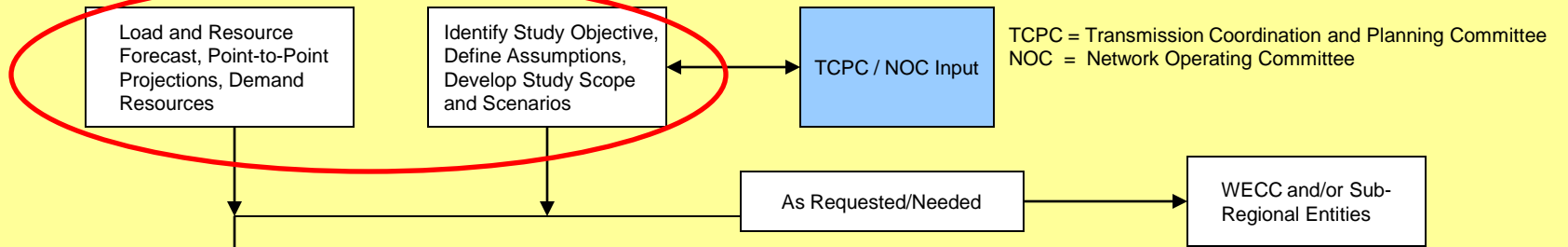
- Baculite Mesa 115 kV substation (2011)
- Nyberg 115 kV substation (2011)
- West Station 115 kV substation expansion (2011)
- West Station-Baculite Mesa 115 kV double circuit (2011)
- Baculite Mesa-Nyberg 115 kV line (2011)
- Baculite Mesa-Airport Memorial 115 kV rebuild (2011)
- Pueblo-Hyde Park-West Station 115 kV rebuild (2012)
- Overton 115 kV substation (2013)
- Portland-West Station #2 115 kV line (2013)
- La Junta Tri-State 115 kV Interconnection (2013)
- Reader 115:69 kV transformer #1&2 replacement (2013)
- Greenhorn-Reader 115 kV line rebuild (2014)
- Baculite Mesa-Overton 115 kV line rebuild (2015)

Local Transmission Plan (LTP) Study Cycle

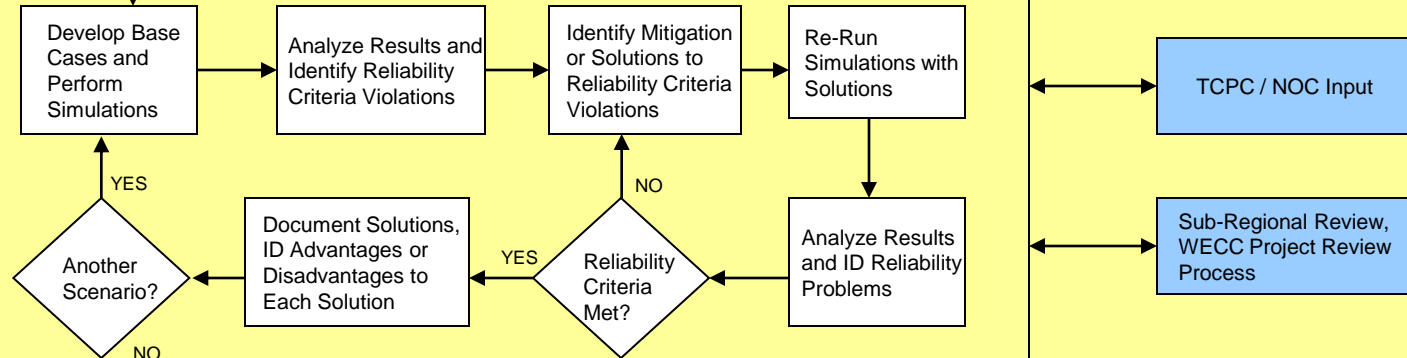
| Quarter | Planning Steps | Data Collection | TCPC Meetings |
|---------|---|-----------------|---------------|
| Q4 | Study Scope, Data Collection & Scenario Development | Open | X |
| Q1 | Technical Study | Optional | X |
| Q2 | | Closed | X |
| Q3 | Decision & Reporting | | |

LTP Study Process

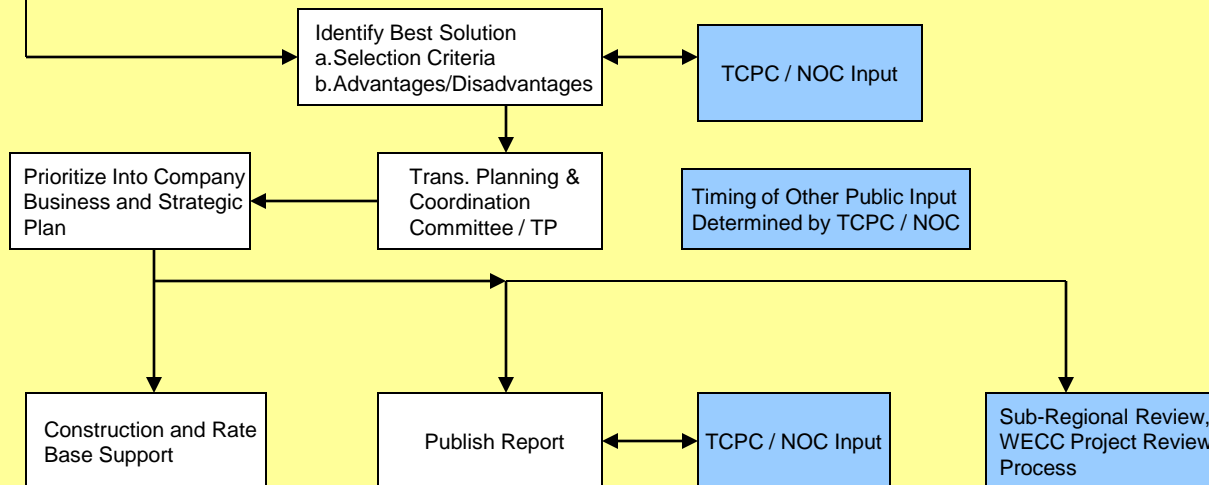
Data Collection, Study Scope and Scenario Development



Technical Study



Decision And Reporting

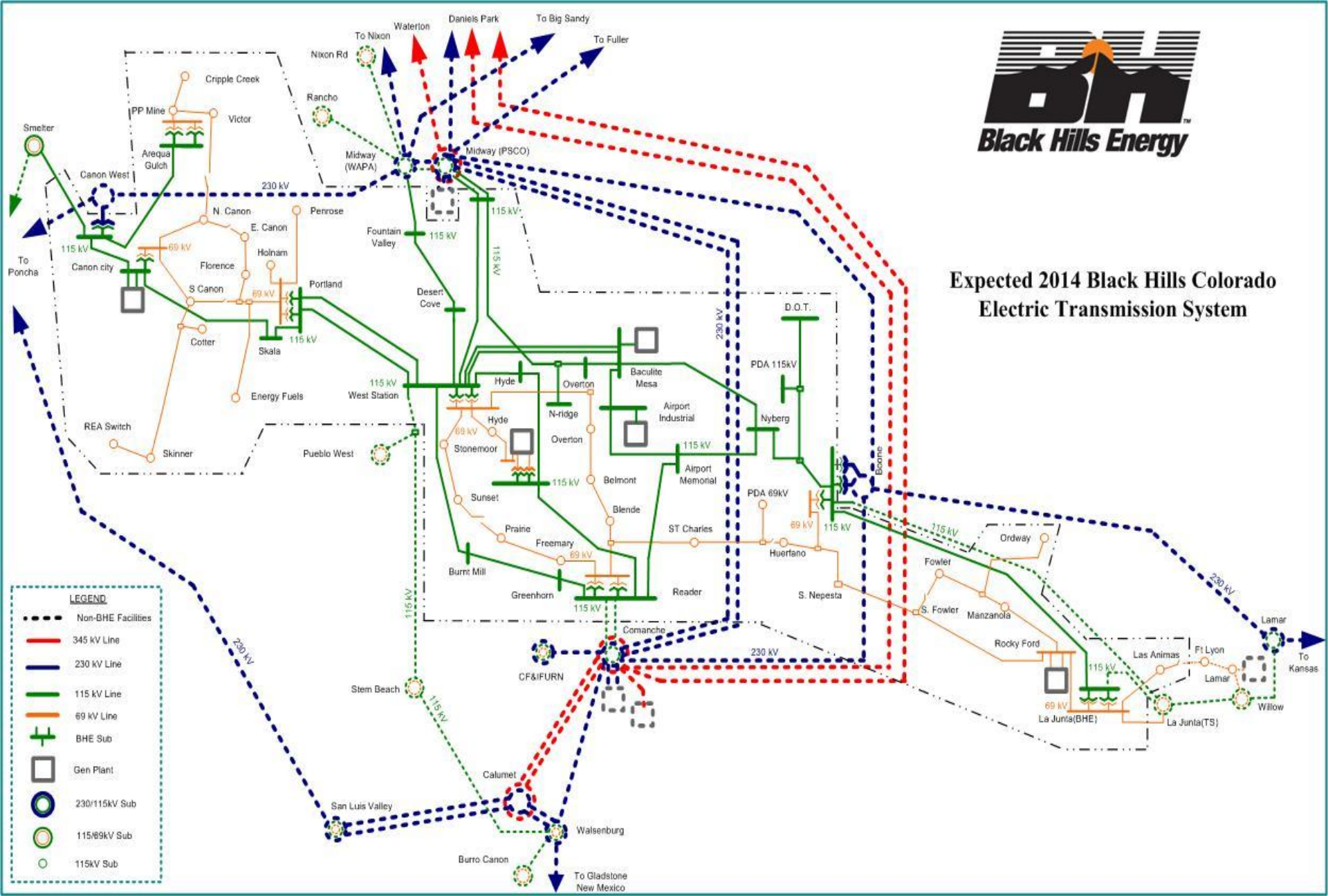


LTP Study Scope

- 2014, 2015 and 2021 timeframes
- Analyze peak and off-peak scenarios
 - Power Flow
 - Transient Stability
- Use NERC/WECC planning criteria
- Evaluate N-0, N-1, N-2 and N-1-1 scenarios (Category A-C)
- Worst-case extreme outages evaluated (Category D)
- Validate committed projects/recommend additional solutions



Expected 2014 Black Hills Colorado Electric Transmission System



Near Term Baseline Cases

- 2015 Heavy Summer (peak)
 - Starting Case: TSG&T 2015HS LGI Case
- 2014 Light Autumn (off-peak)
 - Starting Case: 2010 CCPG 14LA Case

Far Term Baseline Cases

- 2021 Heavy Summer (peak)
 - Starting Case: WECC 21hs1a1p.sav
- 2021 Light Winter (off-peak)
 - Starting Case: 2010 TCPC 2020LW Study Case (with updates)

SB-100 Overview

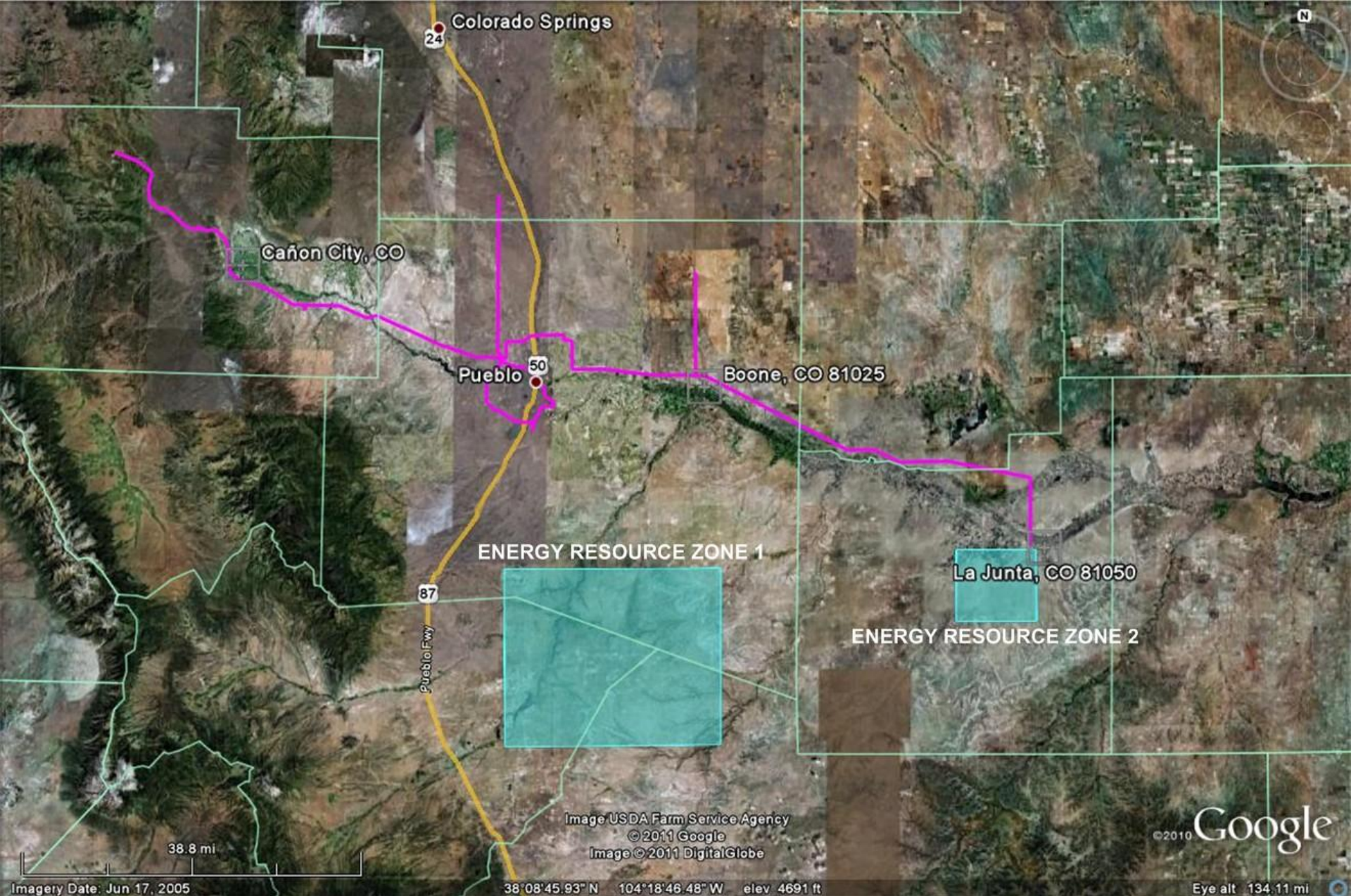
- On or before October 31 of each odd-numbered year, submit to the Commission:
 - Designated Energy Resource Zones
 - Plans for construction or expansion of transmission facilities
 - Applications for Certificates of Public Convenience and Necessity

Senate Bill 07-100 Scenarios

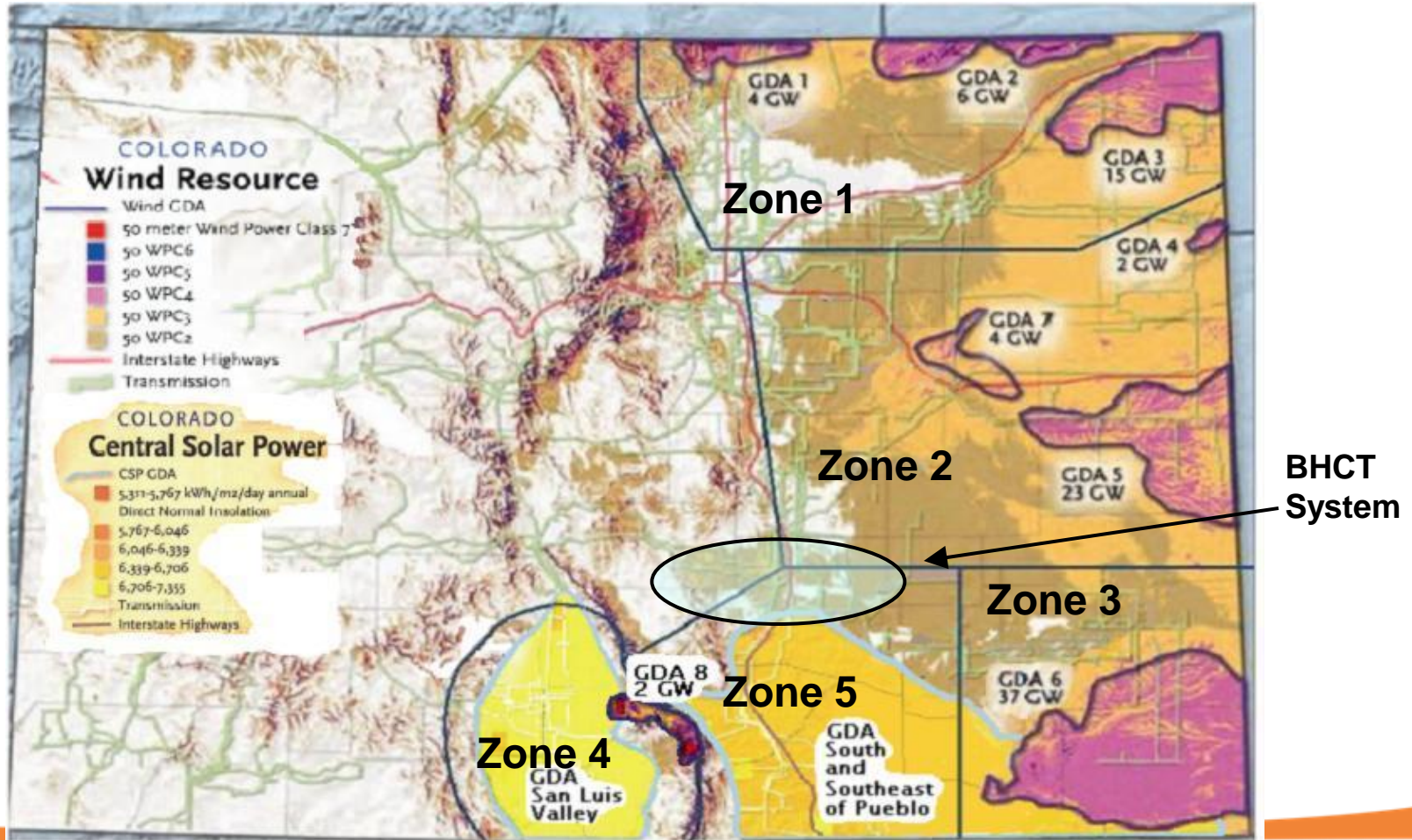
- Model transmission facilities to accommodate resource injection from Energy Resource Zones (ERZ)
- Identify maximum resource injection into BHCE system from each ERZ
- Perform SB-100 sensitivity for each of the four TCPC study cases

SB-100: ERZ Identification

- Selected based on publicly announced generation projects and the BHCT Queue
- Two active requests used for the 2011 SB-100 ERZ selection



Xcel SB-100 Energy Resource Zones



Stakeholder Comments

Comments / Suggestions

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