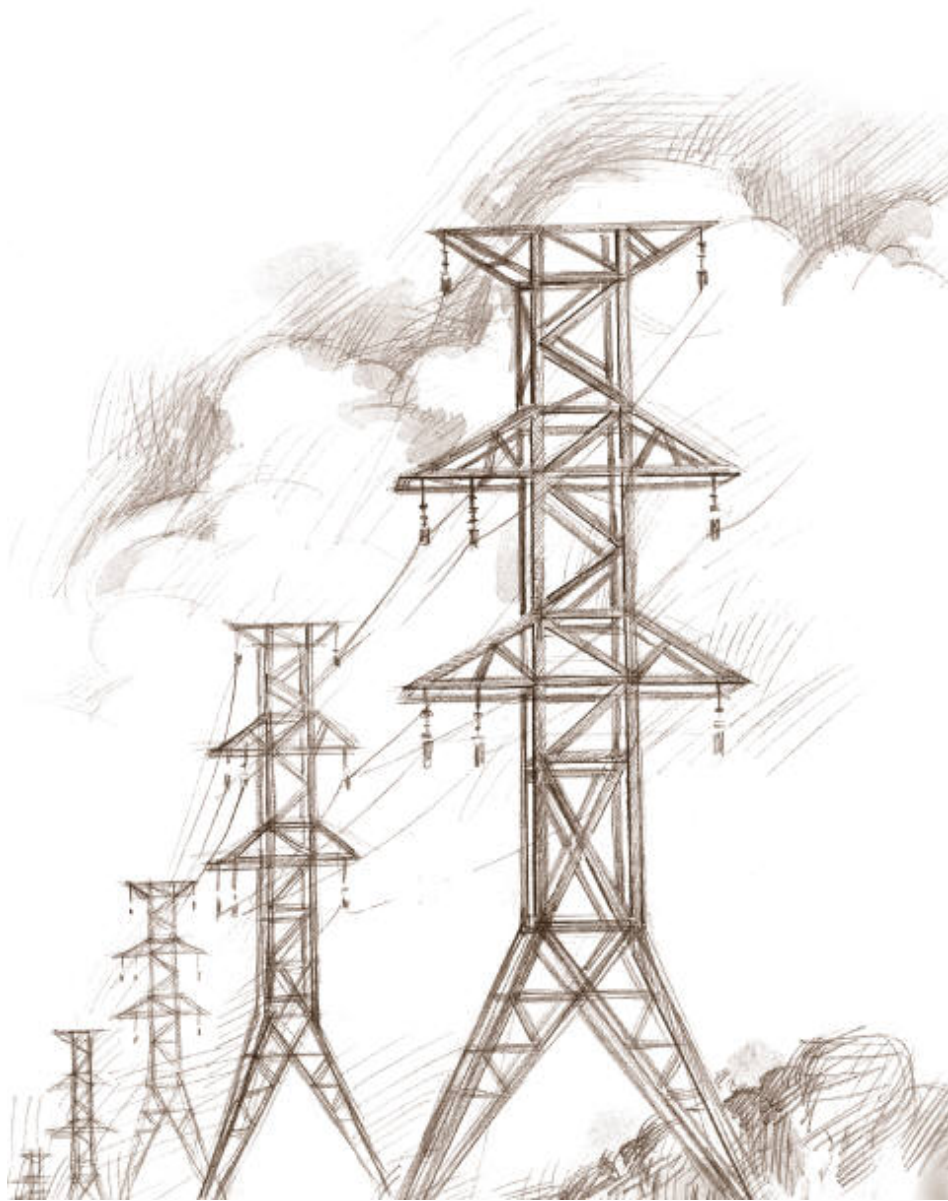


Report of the Task Force on Reliable Electricity Infrastructure



November 1, 2006

Report on the Task Force on Reliable Electricity Infrastructure

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Report on the Task Force on Reliable Electricity Infrastructure

Executive Summary

Pursuant to House Bill 06-1325, this is the Report of the Task Force on Reliable Electricity Infrastructure to the Governor and General Assembly of the State of Colorado.

The subject matter of electric transmission infrastructure is complex and highly technical, but the basic problem is simple and straightforward: without enough transmission lines in the right places the lights won't stay on. In addition, Colorado's ability to ensure continued affordable, reliable electricity and to build a vibrant economy depends on sufficient transmission capability. Today the system is strained and, if current trends continue, there will not be adequate transmission to meet the needs. The Task Force concurs that action needs to be taken at a multitude of levels including changes in policy, legislation, and in the electric utility industry's relationship with state and local government.

The scope of inquiry defined in the statute for the Task Force to investigate was comprehensive and ambitious. After the appointments were made, there was limited time available for the Task Force to complete its work. The Task Force held four public meetings receiving testimony and presentations from electric utility experts, renewable resource experts, and regional reliability organization representatives on each of the topics delineated in the statute. The Task Force meeting process was open (web cast and recorded) and all presentations and written material were documented on separate Internet web pages.

The Task Force sought input from the public by various means, but received only minimal public comment.

After consideration and discussion the Task Force, by majority vote, makes the following recommendations to the Governor and the General Assembly:

Recommendation Number 1: **Transmission Cost Recovery Rider**

The Task Force supports efforts to efficiently and effectively develop transmission infrastructure necessary to create a robust and reliable transmission system to meet Colorado's future energy needs. Therefore, the Task Force recommends that a Transmission Cost Recovery Rider be established to provide a mechanism for an annual automatic adjustment of Construction Work in Progress (CWIP) charges for an electric utility to recover the

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investments in and expenses related to eligible new transmission facilities.

Recommendation Number 2: Identify Renewable Generation Resource Development Areas.

In order to develop economic, safe, reliable, and low-cost renewable generated electric power for consumers, the Task Force recommends that the State identify renewable generation resource development areas that have potential to support competition among renewable energy developers for development of renewable resource generation projects.

Recommendation Number 3: Governmental involvement with organizations like the Colorado Coordinated Planning Group.

The Task Force supports increased communication to local government officials on the electric transmission activities. Therefore, the Task Force supports municipal and county government involvement with organizations like the Colorado Coordinated Planning Group (CCPG) to focus on transmission activities throughout the state.

Recommendation Number 4: Appropriate adequate funding for the Public Utilities Commission (PUC) to actively participate in regional electricity transmission planning, reliability and regulatory forums.

The Task Force recognizes that transmission is a regional reliability issue. Therefore, the Task Force recommends that as a matter of state policy the Colorado State Legislature appropriate adequate funding for the PUC to actively participate in regional electricity transmission planning, reliability and regulatory forums.

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Further, the Task Force identified a critical shortage in the electric utility industry of specialized and highly trained workers.

The Task Force encourages the Governor and the General Assembly to facilitate Colorado utilities' ability to increase their workforce through apprenticeships and the utilization of available training funds to develop our state workforce. The Task Force encourages the Executive Branch and the Legislature to reexamine its current activities to determine if an opportunity for investment is worthwhile in this industry. The Task Force commends the joint activities of the Utility Careers Task Force and Community Colleges. The Task Force encourages such further activities to develop curriculum for the training of Utility Land Planners/Right-of-way Agents and local government planning employees.

Task Force Process

Organization of Report

The organization of this report is designed so as not to overburden the intended reader with too much complexity. Therefore this report is fairly succinct. Throughout this report are links to web sites that contain full documents, papers, presentations and background material. The interested reader is encouraged to pursue these links. In particular, on the Task Force "Resources" and "Links" web pages are documents that provide educational and contextual information about transmission reliability issues facing Colorado.

Background

An interim task force was convened to study electric transmission reliability issues in Colorado and make recommendations to the governor and state lawmakers.

House Bill 06-1325 created the Task Force on Reliable Electricity Infrastructure. Its purpose was to "engage affected stakeholders to develop a comprehensive plan that addresses the state's future electric infrastructure needs for the benefit of Colorado and its citizens."

The Task Force was comprised of four members designated by the legislation, ten members appointed by the governor and legislative leaders, and one member appointed by

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mutual consent of the Governor and the legislative leaders.

In this report the Task Force makes recommendations to the Governor and the General Assembly regarding the sufficiency of Colorado's electric transmission infrastructure and its ability to meet the state's existing and projected needs. The Task Force took testimony on the topics listed in the law and submits this report to the Governor and the General Assembly based on all the information presented, and testimony heard.

The Task Force held four meetings, which were open to the public. The Task Force solicited and received comments from members of the public, and included opportunities for the public to submit written comments. The Task Force considered and gave weight to comments received during the public hearing process as well as written comments from affected counties, cities, electric providers and customers, environmental groups and other interested stakeholders.

Scope of Inquiry

The Task Force took comments on the following topics:

1. The current and projected demand for electricity in Colorado through the year 2020.
2. An inventory of the electric transmission infrastructure that serves Colorado, with estimates of its sufficiency to meet current and projected demand.
3. Additions or improvements to the state's electric transmission system that will be required to meet the projected demand.
4. The electric transmission needs related to implementation of Section 40-2-124, C.R.S., as approved by Colorado voters in November 2004 (Amendment 37).
5. The decision-making process for routing transmission lines.
6. The financial resources and time required to build or improve transmission infrastructure as required to meet the projected demand.
7. The existing and anticipated future impediments to improving Colorado's electric transmission infrastructure.
8. Possible policy choices to ensure that Colorado will have a reliable electric grid and reasonably priced electricity supplies, and
9. Additional transmission issues, including, without limitation:
 - a. siting and permitting;

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- b. establishing or enhancing the transmission system interconnection with such systems in other states;
 - c. the benefits, detriments, and impediments of multi-state planning;
 - d. issues regarding transmission project financing and cost recovery;
 - e. issues regarding accessing transmission capacity created by new investments;
 - f. accommodating renewable sources;
 - g. upgrading and maximizing the use of existing transmission corridors;
 - h. eminent domain;
 - i. revenue sharing among jurisdictions along transmission corridors;
 - j. independent transmission ownership;
 - k. electric utility workforce training opportunities; and
 - l. other issues.
10. The Task Force also considered the results of any recent studies that address Colorado's transmission infrastructure.

Task Force Organization

Appointed members of the Task Force were:

Four members designated by statute:

Doug Dean, Director of the Public Utilities Commission.

Sam Mamet, Executive Director of Colorado Municipal League.

Mike Geile, Weld County Commissioner, representing Colorado Counties Incorporated.

Dave Lock, Executive Director, Colorado Association of Municipal Utilities.

Six members appointed by the Governor:

Ray Clifton, Executive Director, Colorado Rural Electric Assoc., representing cooperative electric associations that distribute electricity.

Kenneth Anderson, V.P. Transmission, Tri-State Generation & Transmission, representing cooperative electric associations that generate and transmit electricity.

Sandra Johnson, Director, Transmission Asset Management, Xcel Energy, representing investor-owned electric utilities.

Roger Kort, Manager External Affairs, Aquila, Inc., representing investor-owned electric utilities.

Thomas Feiler, Clipper Wind, (at times represented by proxy by Craig Cox), representing wind-electric generation interests.

Dianna Orf, (once represented by proxy by Ted Orf), representing large

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commercial consumers of electricity.

Two members appointed by the Speaker of the House:

John Stulp, (represented by proxy by Chris Rundell).

Jerry Bellah, International Brotherhood of Electrical Workers, (once represented by proxy by Patrick Zamora).

Two members appointed by the President of the Senate:

1. Steve Edelstein.
2. Ron Lehr, attorney.

One member appointed with the consent of the Governor, Speaker and President:

1. James K. Tarpey, attorney.

At its first meeting the Task Force elected Mr. Doug Dean, Director of the Colorado PUC as Chairman, and Mr. Ray Clifton, Executive Director of Colorado REA as Vice Chairman. The Task Force met on four occasions at the offices of the PUC and took testimony and engaged in discussion on the topics contained in the Scope of Inquiry as follows:

Meeting 1 – Aug. 21st

Topics Addressed:

- An inventory of the electric transmission infrastructure that serves Colorado, with estimates of its sufficiency to meet current and projected demand.
- The decision-making process for routing transmission lines.
- Public Comment.

Meeting 2 – Sept 5th

Topics Addressed:

- The current and projected demand for electricity in Colorado through the year 2020.
- Additions or improvements to the state's electric transmission system that will be required to meet the projected demand.

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- Public Comment.

Meeting 3 – Sept 18th

Topics Addressed:

- Electric transmission needs related to implementation of Section 40-2-124, C.R.S., as approved by Colorado voters in November 2004. [Renewable Energy Standard - Amendment 37]
- Financial resources and time required to build or improve transmission infrastructure as required to meet projected demands.
- Public Comment.

Meeting 4 – Oct. 5th

Morning Session:

Topics Addressed:

- Existing and anticipated future impediments to improving Colorado's electric transmission infrastructure.
- Additional transmission issues.
- Public Comment.

Meeting 4 – Oct. 5th

Afternoon Session:

Topics Addressed:

- Possible policy choices to ensure that Colorado will have a reliable electric grid and reasonably priced electricity supplies.
- Recommendations to the Governor and the General Assembly.

In order to assist interested parties in following its work and to facilitate receipt of comments, the task force established a web page at:

<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/ReliableInfrastructure.htm>.

The web page gives information about each meeting, including annotated agendas, electronic copies of testimony and presentations received, as well as related reference materials, studies, and white papers. The Task Force meetings were web cast and recorded. Instructions on how to view the proceedings are found via the Task Force web page.

Anyone interested in submitting comments on any of the topics could do so by e-mailing the task force at taskforce@dora.state.co.us. Public comment is discussed later in this report.

Report on the Task Force on Reliable Electricity Infrastructure

Summary of Information Received by the Task Force

At a minimum, the Task Force was charged to take comments on a list of topics as specified in Section 40-15-115(3) C.R.S. The following is a summary of the major comments received by the Task Force, listing the commenter, the meeting date comments were made and links to complete documents submitted to the Task Force:

(a) The current and projected demand for electricity in Colorado through the year 2020:

At its second meeting, the Task Force received a presentation by Mr. Bruce Smith, Executive Director of the Colorado Energy Forum (CEF), and his associates, Dr. Gary Schmitz, an economist, and Mr. Tim Corrigan of R.W. Beck. The Colorado Energy Forum is a non-profit educational foundation. The Forum's web site is www.coloradoenergyforum.org. The CEF works to educate Colorado citizens on the need for increased investment in Colorado's energy infrastructure so that economic growth, job creation and conservation can be maintained in our state for future generations. The CEF had just completed its study entitled "Colorado's Energy Future." The study was an effort conducted by three respected entities: R.W. Beck Inc., Schmitz Consulting, LLC and the Colorado School of Mines. The study provides an in-depth and unbiased look at Colorado's total need for electricity supply and transmission over the next 20 years. The study found that Colorado will need to develop 4,900 megawatts (MW) of new electricity sources – either with new base load plants, increased conservation measures, or both – as well as hundreds of miles of new high-voltage transmission lines by the year 2025 in order to avoid costly future energy shortages, such as those that have led to blackouts in California and the East Coast-in recent years, along with market problems and transmission operating failures.

The executive summary of CEF report may be found at:

http://www.coloradoenergyforum.org/Report_Executive_Summary.pdf, and the full report may be found at: <http://www.coloradoenergyforum.org/Report.pdf>.

At its second meeting the Task Force also received a report entitled "A Balanced Energy Plan for the Interior West" produced by the Western Resources Advocates (WRA). WRA's web site is: <http://www.westernresources.org>. The plan shows how energy efficiency, renewable

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energy and combined heat and power resources can be integrated into the region's existing power system to meet growing electric demand, while reducing risks, saving money, and reducing pollution. The full report may be found at:

http://www.westernresourceadvocates.org/energy/BEP/WEB_pdfs/BEP_West_lwres.pdf.

(b) An inventory of the electric transmission infrastructure that serves Colorado, with estimates of its sufficiency to meet the current and projected demand:

At its first meeting the Task Force received a presentation from Mr. Tom Green, Principal Planning Engineer, Xcel Energy, describing the "Background and Electric Transmission Planning in Colorado." His presentation may be found at: <http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Aug21TFMeeting/clrtpgpres0806-r1.ppt>. Mr. Green also presented to the Task Force the report entitled "*Colorado Long Range Transmission Planning Study 2005-2015*" (CLRTP), which was jointly prepared by Aquila Networks, Colorado Springs Utilities, Platte River Power Authority, Public Service Company of Colorado (Xcel Energy), Tri-State Generation and Transmission, and the Western Area Power Administration. Based upon load forecasts of the participating utilities the plan projects that during the period 2005-2015, 4,000 MW of new generation will be needed to meet the increased demands of Colorado. One megawatt (MW) of generation capacity can serve from 850 to 1,000 households. Commensurately, significant new high-voltage lines will be required to reliably deliver the additional generation to customer loads. The report analyzed various alternatives to accommodate the anticipated new generation. The study estimates that approximately \$2.0 billion in investment will be needed in new transmission infrastructure over the next ten years.

All the major load serving utilities in the state that own the majority of the bulk power transmission lines in the State of Colorado participate in the Colorado Coordinated Planning Group (CCPG). The CCPG is a joint, high-voltage transmission system planning forum for the purpose of assuring a high degree of reliability in the planning, development, and operation of the high voltage transmission system in the Rocky Mountain Region. The CCPG provides the technical forum required to complete reliability assessments, develop joint business opportunities, and accomplish coordinated planning, under the single-system planning concept in the Rocky Mountain Region of the Western Electricity Coordinating Council. The CCPG was

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formed in 1992 and is a voluntary transmission planning organization.

The entire report may be found at:

<http://www.rmao.com/wtpp/Clrtpg/CLRTPG%202015%20Report%20.pdf>.

Specifically, Appendix C to the CLRTP report entitled “**Transmission Infrastructure Data Sheet**” provides an inventory of additional electric transmission infrastructure required to accommodate future potential generation. The CLRTP report presents a series of transmission alternatives for both a Northern and a Southern Scenario. The Northern Scenario is an analysis of alternatives to integrate resources currently in the PSCo generation interconnection queue as part of PSCo’s current generation solicitation arising from its most recent Least Cost Plan filing at the Colorado PUC. The Southern Scenario is an examination of transmission alternatives to meet Tri-State’s load requirements and relieve existing transmission constraints. The study scope of the CLRTP was specifically to evaluate potential new generation additions within the TOT constrained region. As such, the CLRTP did not study the two scenarios simultaneously nor did it engage in an evaluation of the TOT limits (import capability for other states. Significant portions of the long-range study were conducted under a non-disclosure agreement with the transmission owners to adhere to FERC regulations.

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ROCKY MOUNTAIN POWER POOL 2006

- A-1 ARIZONA PUBLIC SERVICE CO. ARIZ.-N.M.
- A-2 ARKANSAS RIVER POWER AUTHORITY
- B-1 BIG HORN RURAL ELEC. CO. WYO.
- B-2 BLACK HILLS POWER & LIGHT CO. S.D.-WYO.
- B-3 BRIDGER VALLEY ELEC. ASSN. WYO.
- B-4 BUSH ELECTRIC POWER COOPERATIVE N.D.
- C-1 CARBON POWER & LIGHT WYO.
- C-2 CHEYENNE LIGHT, HEAT, & POWER CO. WYO.
- C-3 CHEYENNE ROCK FPD, NEB.
- C-4 CITY OF COLORADO SPRINGS COLO.
- C-5 CITY OF LAMAR COLO.
- C-6 CITY OF LAS ANIMAS COLO.
- C-7 CITY OF FOUNTAIN COLO.
- C-8 CITY OF GLENWOOD SPRINGS
- C-9 COLORADO GREEN, LLC
- D-1 DIXIE MOUNTAIN RURAL POWER LINES INC. COLO.
- D-2 DESERT GENERATION & TRANSMISSION
- E-1 EMPIRE ELEC. ASSN. COLO.
- G-1 GARLAND LIGHT & POWER COMPANY, WYO.
- G-2 GRAND VALLEY RURAL FPD, NEB.
- G-3 GRAND VALLEY RURAL POWER LINES INC. COLO.
- G-4 GARRISON COUNTY ELEC. ASSN. COLO.
- H-1 HIGHLINE ELEC. ASSN. INC. COLO.
- H-2 HOLT CROSS ELEC. ASSN. COLO.
- H-3 HIGH PLAINS POWER
- H-4 HOME LIGHT & POWER CO. COLO.

- I-5 ISABO POWER CO. IDAHO
- I-6 IMPERIAL FPD, NEB.
- I-7 JEFFERSON MOUNTAIN REA, COLO.
- K-1 K.C. ELEC. ASSN. COLO.
- L-1 LA PLATA ELEC. ASSN. COLO.
- L-2 LITCHFIELD SERVICE CORP., NEB.
- M-1 MONTANA ELECTRIC MEMBERSHIP COOP., NEB.
- M-2 MONTANA DIXIE UTILITIES WYO.
- M-3 MOUNTAIN LAKE ELEC. ASSN. COLO.
- M-4 MORGAN COUNTY REA, COLO.
- M-5 MOUNTAIN PARKS ELEC. INC. COLO.
- M-6 MOUNTAIN VIEW ELEC. ASSN. COLO.
- M-7 MONTANA POWER CO. MONT.
- N-1 NEBRASKA FPD, NEB.
- N-2 NEBRASKA ELEC. ASSN. WYO.-NEB.
- N-3 NORTHWEST RURAL FPD, NEB.
- P-0 PACIFICORP
- P-1 PANDORA F. RURAL ELEC. MEMB. ASSN. NEB.
- P-2 PLATE RIVER POWER AUTHORITY COLO.
- P-3 Poudre VALLEY REA, COLO.
- P-4 PUBLIC SERVICE COMPANY OF COLO.
- P-5 PUBLIC SERVICE COMPANY OF NEB. MFD/CO
- P-6 PUBLIC SERVICE COMPANY OF NEB. MFD/CO
- P-7 POWER RIVER ENERGY CORP.
- R-2 ROOSEVELT FPD, NEB.
- R-3 RUSH ELEC. CO. NEB.

- S-0 SALT RIVER PROJECT APT.
- S-1 SANDERS DE ERSTO ELEC. ASSN. COLO.
- S-2 SAN JUAN ELEC. ASSN. COLO.
- S-3 SAN LUIS VALLEY RURAL ELEC. CO-OP INC. COLO.
- S-4 SAN JUAN POWER ASSN. COLO.
- S-5 S.E. COLORADO POWER ASSN. COLO.
- (S-6 SHERMAN JOHNSON REA, WYO.) MERGED WITH 10-COUNTY ELECTRIC (S-10)
- S-7 SPOKESME RIVER POWER INC. WYO.
- S-8 SW. FPD, NEB.
- (T-1 10-COUNTY ELEC. ASSN. WYO.) MERGED WITH SHERMAN JOHNSON REA, WYO. (S-6)
- U-1 UNITED POWER REA.
- U-2 WESTERN AREA POWER ADMIN. ALL FACILITIES ARE IN (PMP)/ROCKY MOUNTAIN REGION UNLESS NOTED FOR (UPR)/UPPER GREAT PLAINS REGION
- U-4 U.S. BUREAU OF RECLAMATION (ALL FACILITIES ARE IN S.P. UNLESS NOTED FOR U.C.)
- W-2 WESTPLAINS FRENCHY (AGUA)
- W-3 WHEATLAND REA, NEB.
- W-4 WINTER RIVER ELEC. ASSN. COLO.
- W-5 WYLLIE CO. FPA, NEB.
- Y-1 YAMPA VALLEY ELEC. ASSN. COLO.
- Y-2 Y.W. ELEC. ASSN. COLO.

ELECTRIC TRANSMISSION LINES:

PRIVATELY OWNED	FEDERALLY OWNED	PUBLICLY OWNED	JOINTLY OWNED (Ownership Rights)
60KV AND BELOW LINES	115KV TO 138KV LINES	230KV LINES	345KV AND ABOVE LINES

FUEL ELECTRIC GENERATING PLANTS

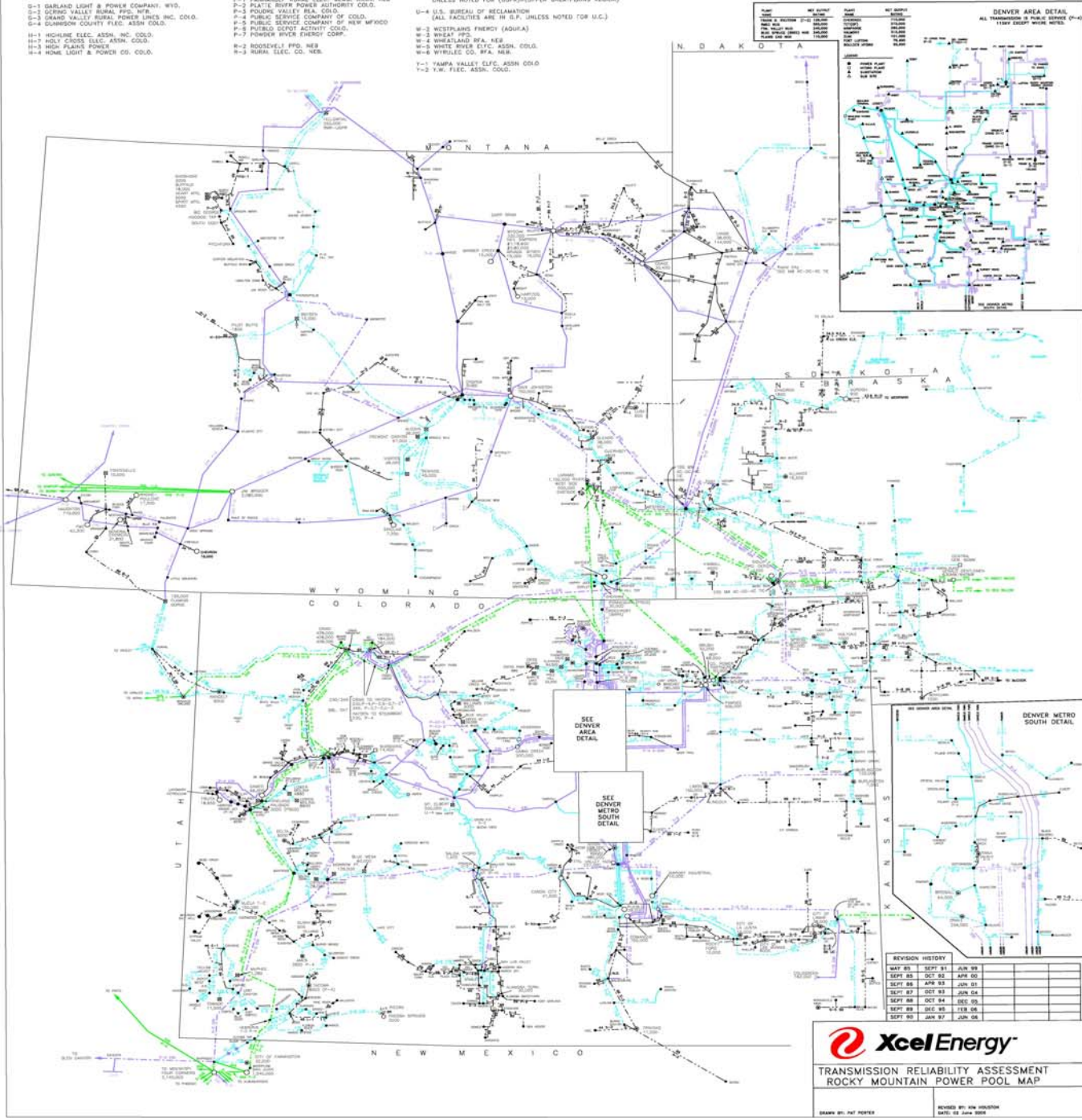
HYDRO ELECTRIC GENERATING PLANTS

WIND TURBINE GENERATING PLANTS

INDICATES CHANGE IN OWNERSHIP

UNDER GROUND

NOTE: Partial Generator Net Output Ratings (Nameplate) are in kW and Line Voltages are in kV.



REVISION	DATE	DESCRIPTION
MAY 05	SEPT 01	JUN 05
SEPT 05	DEC 03	APR 05
SEPT 05	APR 03	JUN 05
SEPT 07	DEC 03	JUN 04
SEPT 08	OCT 04	DEC 05
SEPT 08	DEC 05	FEB 06
SEPT 08	JAN 07	JUN 06

Xcel Energy

TRANSMISSION RELIABILITY ASSESSMENT
ROCKY MOUNTAIN POWER POOL MAP

DESIGN BY: PAT PEREY
REVISED BY: DAN ANDERSON
DATE: 02 June 2006

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(c) **Additions or improvements to the state’s electric transmission system that will be required to meet the projected demand:**

At its second meeting, the Task Force received six presentations regarding planned additions or improvements that will be required to meet projected demands. Each of the state’s major electric load serving entities and who are also transmission facility providers were represented. Each utility described a number of planned additions to their transmission system. The additions were both directly load serving and enhancements to the bulk power system.

All the utilities that the Task Force heard from expressed their compliance with the NERC/WECC reliability standards as well as some individual additional criteria. In practical terms these criteria can be summarized as:

- **Normal Voltage:** The bus voltages at substations stay between 0.95 per unit and 1.05 per unit of the nominal voltage on the system.
- **Capacity:** During normal operations no facilities are loaded above the normal rating.
- **Reactive Capacity:** The system is designed to meet the reactive demands of the system and support acceptable voltage levels.
- **Transfer Capability:** the system is capable of carrying all committed transfers as well as emergency reserve assistance.
- **Contingencies:** A contingency is an unexpected failure or outage of a system component such as a generator, transformer, or a transmission line. An “N-1” (number of high voltage elements minus one) contingency is where one of the elements is out of service. The system is planned to continue to serve customers for the vast majority of all “N-1” contingencies. (Some load shedding occurs in the instance of radial lines and some local network customers.)
- **Reserve Capacity:** Each utility maintains a planning and an operating generation reserve margin.
- **National Electric Safety Code (NESC):** As a minimum level of safety all utilities comply with all applicable NESC standards in planning, constructing and operating lines.

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- **Stability:** During contingency situations certain generators may speed up and others slow down. If the variations in speed get too large a generator will become unstable and be protectively tripped from the system. The transmission systems are planned to avoid cascading instability from one area to the rest of the interconnection.

The complete presentations may be viewed via the recorded web-cast at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept5TFMeeting/HB06-1325_09-05-06Meeting2_part2.wmv, and the individual PowerPoint presentation may be downloaded via the shortcuts shown below.

- Mr. Gerald Stellern, Manager, Transmission Reliability Assessment, PSCo:
“PSCo Planned Transmission Improvements 2006-2011”
<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept5TFMeeting/PSCoCapitalpres0905-r5.ppt>
- Mr. Kenneth Anderson, Vice President Transmission, Tri-Sate Generation & Transmission:
http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept5TFMeeting/Tri-State_ReliabilityTaskForce090506.ppt
- Mr. Robert Easton, Manager, Operations Engineering & Planning, Western Area Power Administration’s Rocky Mountain Region:
<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept5TFMeeting/WAPAPUCpresentation090506.ppt>
- Mr. Chuck Sisk, Principal/Managing Electrical Engineer, Colorado Springs Utilities:
http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept5TFMeeting/CoSpgsUtes_TaskForcePresentation.ppt
- Mr. John Collins, Senior Operations & Planning Engineer, Platte River Power Authority: “Planning Reliable Power through 2016”
http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept5TFMeeting/PRPA_PUCmtg09-05-06.ppt

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- Mr. Alan Myers, Manger Transmission Services, Aquila Inc, WestPlains Energy – Colorado: “Aquila Planning Procedures”

<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept5TFMeeting/AquilaPlans.ppt>

(d) The electric transmission needs related to implementation of Section 40-2-124, C.R.S., as approved by Colorado voters in November 2004 (renewable energy standards - Amendment 37):

At its third meeting the Task Force heard three presentations regarding the electric transmission needs related to implementing the renewable energy resource standards contained in Amendment 37 (2004). The complete presentations may be viewed via the recorded web-cast at: http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/HB06-1325_09-18-06meeting3_part1.wmv, and the individual PowerPoint presentations may be downloaded via the shortcuts shown below:

- Mr. Rich Mignogna, Senior Professional Engineer, Colorado Public Utilities Commission: “Renewable Energy in Colorado”

<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/RichMignognaTransmissionInfrastructurePresentation18Sep2006.ppt>

- Mr. Rick Gilliam, Energy Project Senior Technical Advisor, Western Resource Advocates: “Amendment 37”

[http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/WRA_Amendment37TransmissionTF\(2\).ppt](http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/WRA_Amendment37TransmissionTF(2).ppt)

- Mr. Craig Cox, Interwest Energy Alliance:

“Pro-active transmission Development: Bringing Benefits Online - Sooner”

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/COX_TransmissionTF18Sept06.ppt

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Mr. Cox noted that access to transmission to deliver the output of economically viable wind generation has been a hindrance to development. There appears to be a mismatch in development timelines. New wind turbines can be constructed in one to two years while new transmission lines have typical construction period of five or more years. Mr. Cox suggested that the recent Minnesota and Texas laws serve as possible models. He identified the first step in Texas SB-20 to be the identification of Competitive Renewable Enterprise Zones to which trunk-like transmission would be built prior to full development of the renewable resources.

(e) The decision-making process for routing transmission lines:

At its first meeting the Task Force heard a presentation regarding the decision-making process for routing transmission lines from Mr. Mike Diehl, Senior Team Lead in the Siting and Land Rights Department, Xcel Energy. Mr. Diehl concluded that the decision-making process for routing transmission lines is getting more complex, requiring more and more time. The general process he described takes from 19 months to more than three years. His complete presentation may be viewed on the recorded web-cast at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Aug21TFMeeting/HB06-1325_08-21-06TFMeeting1_part2.wmv, and his power-point presentation may be downloaded from:

<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Aug21TFMeeting/PermittingProcessPowerPoint.ppt>.

(f) The financial resources and time required to build or improve transmission infrastructure as required to meet the projected demand:

At its third meeting the Task Force heard four presentations regarding financial resources and time required to build or improve transmission infrastructure as required to meet projected demands. The complete presentations may be viewed via the recorded web-cast at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/HB06-1325_09-18-06meeting3_part3.wmv, and the individual PowerPoint presentation may be downloaded via the shortcuts shown below:

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- Ms. Margaret Hunt, Edison Electric Institute:
“Transmission Line Siting Across the US - State Approaches to Transmission Siting”
<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/StateApproachestoSiting091806-2.ppt>
- Mr. John Lupo, Manager of Siting and Land Rights, Xcel Energy: How Siting is done in Colorado: Approaches to Siting – *“Siting and Permitting in Colorado”*:
<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/JohnLupoColoradoSiting.ppt>
- Mr. Rick Evans, Director of State Government Affairs, Xcel Energy:
“CapX2020: A Vision for Transmission Infrastructure Investment for Minnesota”:
http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/CapX2005CO_TF.ppt
- Ms. Robin Kittel, Director, Regulatory, Xcel Energy: Financial Resources: Change for Colorado
“Meeting Colorado’s Demand - A Vision for Transmission Infrastructure Investments for Colorado”:
<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/ChangeforColoradoNN.ppt>

(g) The existing and anticipated future impediments to improving Colorado’s electric transmission infrastructure:

At its fourth meeting the Task Force received a presentation from Mr. Benjamin Fowke III, Vice President and Chief Financial Officer of Xcel Energy, regarding *“Transmission Project Financing – ensuring a Reliable Electric Transmission Infrastructure.”* His complete presentation may be viewed on the recorded web-cast at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Aug21TFMeeting/HB06-1325_10-05-06meeting4_part1.wmv, and his PowerPoint presentation may be downloaded from: <http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/XcelEnergyFowkeTransmissionPresentation10-05-2006.ppt>

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The Task Force also received a presentation from Mr. P.B. Schechter, Rate Analyst, Office of Consumer Counsel, entitled “*Cost Recovery Issues in Transmission Investment: An OCC Perspective.*” His complete presentation may be viewed on the recorded web-cast at: http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/HB06-1325_10-05-06meeting4_part3.wmv, and his PowerPoint presentation may be downloaded from: http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/OCC_CostRecoveryIssuesinTransmissionInvestment.ppt.

Those who make significant financial investments required to build transmission lines must justify their investment to bankers or to the capital markets. In recent years, due to major changes to the electric power markets and new financial uncertainties in those markets, entities have not built new major transmission line projects. Some people would say the reason little transmission has been built is because it is difficult to raise capital to make any large investment. Some people would say that in the recent past new transmission projects weren't needed. Recently the choice for new generation additions has been gas-fired combined cycle combustion turbines, which are usually located near load centers and thus obviate the need for major new transmission projects. Choices for new generation may be shifting again. The choice of large base-load generating stations located remotely from load centers is once again appearing in utility least cost plans. Also, public policy decisions in numerous states have recently resulted in renewable resource standards. Some argue to meet those requirements transmission lines will have to be built to the best wind resource locations.

Some who agree that new transmission is needed suggest that regulators should give utilities higher rates of return on transmission investments and should allow utilities current earnings on their construction work in progress. This higher return would result in strengthened credit ratings for utilities, reducing the risk and return required on utility equity investment, and attracting more capital for projects. Others who disagree say that transmission rates are a secure, low-risk investment, with no real record of regulatory disallowances or shareholders being forced to maintain investments without appropriate returns.

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(h) Recommendations Regarding the Sufficiency of Colorado's Electric Transmission Infrastructure to Meet the State's Existing and Projected Needs:

Below are the recommendations that the Task Force is forwarding to the Governor and the General Assembly. Included under each is a brief summary of the rationale behind each recommendation.

The Task Force also considered a number of other ideas and possible recommendations. Although these are not being formally forwarded, a brief discussion of those ideas considered is included in this report.

Transmission Cost Recovery Rider.

“The Task Force supports efforts to efficiently and effectively develop transmission infrastructure necessary to create a robust and reliable transmission system to meet Colorado's future energy needs. Therefore, the Task Force recommends that a Transmission Cost Recovery Rider be established to provide a mechanism for an annual automatic adjustment of Construction Work in Progress (CWIP) charges for an electric utility to recover the investments in and expenses related to eligible new transmission facilities.”

Transmission investment is critical to ensuring continued affordable, reliable energy in Colorado. Today, Colorado's transmission infrastructure is operating at or near full capacity as reported by the Colorado Energy Forum. Continued population and electric demand growth over the coming years will further strain the state's electric grid. Moreover, electricity markets have changed dramatically in recent years. Transmission now plays an important role in ensuring affordable energy by providing access to competitive generation resources, wholesale markets, serving as a pathway to less expensive energy sources, as well as bringing renewable resources, such as wind and other Amendment 37 renewable energy resources to market. Access to low-cost energy weighs heavily into Colorado's economic development plans in today's economy.

In recent decades, electric grids have experienced reduced investment in new transmission facilities, both nationally and here in the Rocky Mountain region. Incremental transmission investment by investor-owned utilities (IOUs) has been hampered by concerns that costs will not be recovered in a timely manner. Simply put, today's cost recovery mechanisms

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for transmission investments do not go far enough in providing timely, efficient and certain cost recovery. This is further exacerbated when utilities that wish to invest in large transmission projects, which often span several years and cost hundreds of millions of dollars, have to justify transmission investments in competition with other projects for capital dollars. These large capital outlays over many years can also put pressure on a utility's credit ratings, potentially jeopardizing the utility's financial integrity. FERC and many state utility commissions have recently recognized these problems and introduced special cost recovery mechanisms and incentive returns for new transmission investment in an effort to support utilities that are truly interested in making possible new investments in their transmission systems.

Today's recovery mechanisms also have important implications for Colorado consumers. Construction financing costs are capitalized under a mechanism called Allowance for Funds Used During Construction (AFUDC). As with capitalized interest on any loan, this ultimately increases the total dollars that consumers will pay over the life of the project. Moreover, relative to a more gradual phasing in of the project's costs over the construction period, AFUDC can create a "rate shock" effect when a large project is placed into service and rates are adjusted to reflect the cumulative construction costs and multiple years of capitalized AFUDC. By allowing faster cost recovery, and avoiding interest payments, consumers can benefit much like they do if they pay their credit card debts rather than paying interest on their accumulated debts. Current cost recovery also reduces risks to utility shareholders. Utility shareholders take less risk since ratepayers are paying for investments on a current basis. Task Force participants and presenters from Xcel Energy also assured the Task Force that there would be no overall impact on consumer's electricity rates. To the contrary, current earnings on CWIP would have the beneficial effect of eliminating large and sudden rate changes while not causing an overall long-term rate increase in and of itself.

The Task Force recognizes both important consumer benefits that come with increased transmission capacity and corresponding needs to remove obstacles to new investment in Colorado. Our state's energy policy must reflect the importance of transmission in ensuring continued affordable, reliable energy for a vibrant economy. Thus, the Task Force recommends legislation be enacted that addresses this cost recovery issue. Specifically, the legislation should provide for a mechanism for an annual automatic adjustment of charges for electric utilities to

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recover their investments, expenses, and financing costs of Construction Work in Progress (CWIP), related to new transmission facilities as incurred. The Task Force's recommended legislation would provide timely, efficient and certain cost recovery for IOUs to attract capital necessary to undertake new large transmission investments for the benefit of Colorado's economy and its energy consumers. Removing current obstacles to transmission investment will help enable Colorado customers to have long-term access to low cost and renewable energy sources, including Amendment 37 requirements and beyond.

Identify Renewable Generation Resource Development Areas (RGRDA).

“In order to develop economic, safe, reliable, and low cost renewable generated electric power for consumers, the Task Force recommends that the State identify renewable generation resource development areas that have potential to support competition among renewable energy developers for development of renewable resource generation projects.”

This recommendation is like a provision in the Texas legislation, which was reviewed but not adopted by the Task Force. In Texas, when the renewable energy standard was more than doubled in 2005, the legislature also included transmission provisions. The Texas transmission provisions required identification of renewable energy development areas that could support competition among developers so that low-cost wind resources that had been curtailed for lack of transmission could reach Texas load centers.

The best wind resources in Colorado are in specific, known areas that are typically remote from customers. To unlock these resources, transmission needs to be provided to bring wind power from Eastern Colorado to the Front Range. The first wind farms in these resource areas have used up the extra transmission capacity available and in some instances new wind farms, or expansions of existing farms are not able to be built because transmission is limited. As noted in the CLRTP, Tri-State is developing new transmission in Eastern Colorado and is encouraging renewable generation developers to contact them with interconnection requests in hopes of providing the needed transmission capacity to move those projects forward.

One presenter argued that there are examples of wind projects that could be saving Colorado consumers money on their utility bills that are not being developed because transmission is lacking. Since wind projects can be constructed in a year or two, and

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transmission takes three to five years to build, a “chicken and egg” problem often arises. In addition, utilities are reluctant to build transmission unless generators have contracts for purchase of their power output, but without transmission, wind projects cannot be developed. Since development of Colorado’s wind resource areas will be accomplished over time by a number of developers competing for contracts for their power, it makes sense to build the transmission to unlock these resource areas and spur competition among wind developers as soon as a commitment is obtained from generators who will use the transmission.

As an example, the Texas legislation breaks through this logjam by providing legislative policy support for building transmission to renewable energy development areas in advance of generation project development. It offers utilities assurance that the transmission lines built to these areas will be in the public interest and necessary so the utilities can go to the Public Utilities Commission and seek recovery of their investments in these lines.

The Texas legislation also speeds up the Commission’s deliberations on applications by utilities to build the needed lines and provides potential for current cost recovery by utilities, along the lines of the first Task Force recommendation.

The Task Force discussed the Texas legislation and its potential for use in Colorado. (Model legislation that the Task Force discussed is available on the Task Force’s web page at: <http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/TFResources/ModelWindTransmissionLegislation.doc>.) The Task Force recommendation is the first step, identifying the resource areas, toward a solution to the transmission needed for cost effective new renewable generation resource development.

Governmental involvement with organizations like the Colorado Coordinated Planning Group.

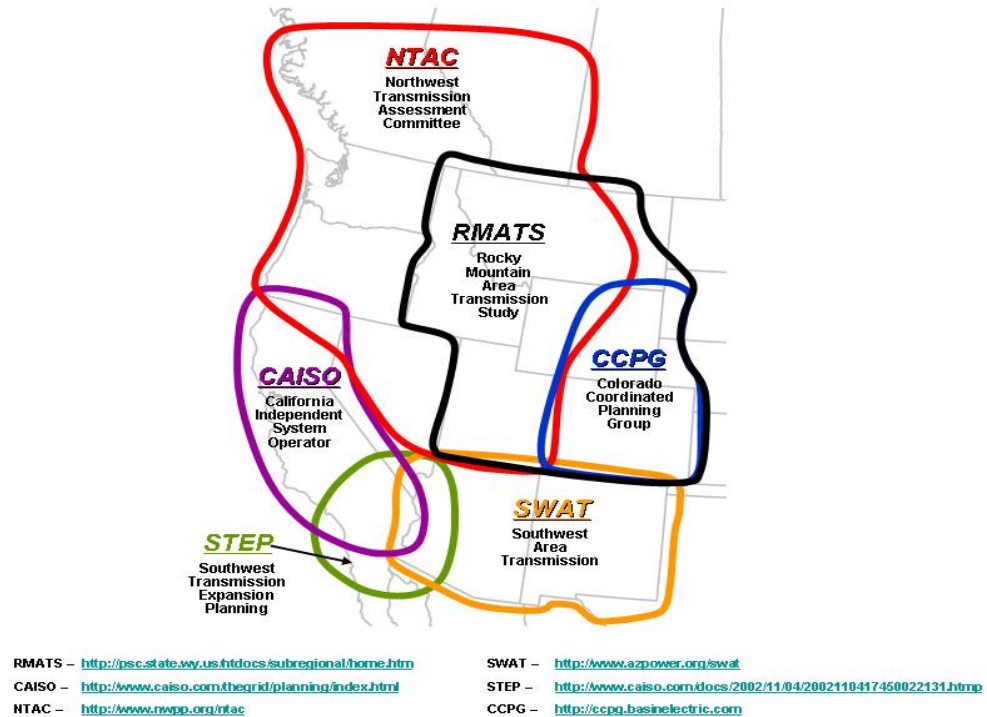
“The Task Force supports increased communication to local government officials on the electric transmission activities. Therefore, the Task Force supports municipal and county government involvement with organizations like the Colorado Coordinated Planning Group (CCPG) to focus on transmission activities throughout the state.”

Transmission is a regional reliability issue, involving both Colorado utilities and those in adjacent states with whom Colorado utilities are interconnected. With that in mind, The Task

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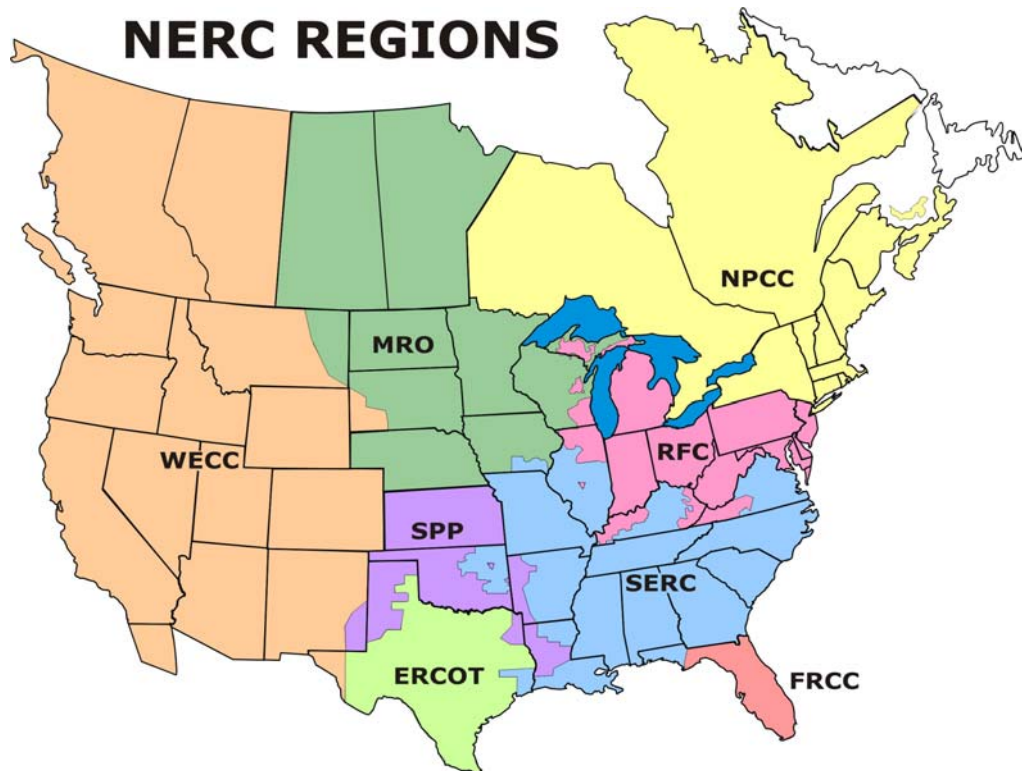
Force supports the transmission planning process of the Western Electricity Coordinating Council (WECC), which serves as a regional reliability entity for the west, and its sub-regional entities of the Colorado Coordinated Planning Group (CCPG), Rocky Mountain Area Transmission Study (RMATS) group (task completed, new study group forming) and Southwest Area Transmission (SWAT) planning group.

Western Interconnection Sub-Regional Planning Groups



The WECC sub-regional groups include public processes that provide opportunity for public information and input from interested parties. The Task Force heard a presentation from Ms. Louise McCarren, CEO of WECC, which focused on the reliable operation and performance of the Western Interconnected Transmission System. The WECC presentation outlined the EAct legislation of 2005, which establishes a national Electric Reliability Organization (ERO), which FERC has designated to be North Electric Reliability Council (NERC). Several Regional Reliability Organizations (RROs) were also delegated new transmission planning and reliability responsibilities.

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In the West it is anticipated that the WECC will be the RRO for the Western interconnection, including Colorado. The new legislation also provides both reliability and planning requirements for those who participate in electric energy production and delivery and include those entities, which would have direct impacts on consumers' cost of electricity. Additionally, EAct provides for establishment of a FERC-recognized advisory body created by the Governors of the various states impacted by the RRO actions. For the West, FERC has designated the Western Interconnection Regional Advisory Body (WIRAB) as that body to offer continual advice to the ERO, RRO, DOE, and FERC.

From Task Force discussions it was evident that city and county representatives were not active participants in either statewide or sub-regional transmission planning that impacts the city or county responsibilities to harmonize transmission plans with legitimate land use concerns and expectations that are local government responsibilities. One local government representative noted that every utility comes before each local government for each transmission line they want approved, rather than presenting a coherent, coordinated, long-range plan that included the

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transmission requirements for all utilities.

It is in the State's best interest and the best interest of the cities and counties throughout the State to maintain an open dialogue regarding where load growth is taking place, where new generation is likely to be located to meet that load growth, and what the utility transmission plans are for projects that support this growth in demand.

Appropriate adequate funding for the Public Utilities Commission to actively participate in regional electricity transmission planning, reliability and regulatory forums.

“The Task Force recognizes that transmission is a regional reliability issue. Therefore the Task Force recommends that as a matter of state policy the Colorado State Legislature appropriate adequate funding for the Public Utilities Commission to actively participate in regional electricity transmission planning, reliability and regulatory forums.”

The Task Force believes Colorado should provide leadership and direction at regional electricity forums. These include the WECC (including the WIRAB, and the Transmission Expansion Planning Policy Committee) as well as subregional planning venues such as the SWAT, the CCPG the Committee on Regional Power Cooperation (CREPC), and various committees and subcommittees of the National Association of Regulatory Utility Commissioners (NARUC). To ensure Colorado's interests and reliability concerns are addressed and considered in these forums, it is important that the state be represented. The Task Force recommends that Colorado ensure sufficient appropriations be made so that the PUC and its staff can actively engage in these activities and provide leadership in these forums. The Task Force believes it will be important that those representing the state in these various forums be informed on these regional transmission activities and provide conduits for information to flow back to the state and interested parties in Colorado as to the direction and impacts these organizations may have on both producers and consumers in Colorado.

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Critical shortage in the electric utility industry of specialized and highly trained workers.

“The Task Force encourages the Governor and the General Assembly to facilitate Colorado utilities’ ability to increase their workforce through apprenticeships and the utilization of available training funds to develop our state workforce. The Task Force encourages the Executive Branch and the Legislature to reexamine its current activities to determine if an opportunity for investment is worthwhile in this industry. The Task Force commends the joint activities of the Utility Careers Task Force and Community Colleges. The Task Force encourages such further activities to develop curriculum for the training of Utility Land Planners/Right-of-way Agents and local government planning employees.”

The electrical construction and utility industry currently has a high demand for skilled tradesmen, especially lineman, system operators, substation technicians, and land Right-of-Way agents that is unlike anything the state has previously seen. This is a critical issue in the face of what is likely to be a time of need for increased investment in electric infrastructure in the State. Further, it is anticipated that there will be a significant turnover of the existing workforce currently employed in the electric utility industry in the next eight to ten year period due to such factors as the aging of the workforce. The Task Force is informed of significant Federal dollars that are available to the Departments of Local Affairs (DOLA) and the Department of Labor (DOL) for work force training. The Task Force encourages utilities, the PUC, DOLA, and DOL to work with the legislature to take maximum advantage of these Federal resources.

Additionally Considered Policy Recommendations

During the course of the Task Force meetings a number of far-ranging ideas were discussed among the members, as is documented in the recordings of its various public meetings. In an effort to focus its deliberations due to the shortness of time, the Task Force agreed that its members would reduce to writing any specific recommendations regarding policy choices. The Task Force members originally circulated the following additional possible policy choices for consideration:

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Recommendation/ Author	PROS	CONS
<p>Increased state involvement in regional transmission planning /</p> <p style="text-align: center;">Jim Tarpey</p> <p>Requires: appropriate delegation, personnel with expertise, adequate appropriation</p>	<p>Other states (for example Wyoming, Utah, Nevada) actively participate in transmission-related issues. By doing so, each state represents its respective interests regarding Federal/State jurisdictional issues as well as cost allocation issues regarding multi-state transmission facilities. Each state also enhances its ability to participate in discussions regarding transmission to serve the region as a whole.</p>	
<p>Single point of contact at state level for transmission permitting /</p> <p style="text-align: center;">Jim Tarpey</p> <p>Requires: appropriate delegation, personnel with expertise, adequate appropriation</p>	<p>While the role for the single point of contact needs definition, the goals are to provide for greater transparency and input in the transmission planning and permitting processes; and to provide for an expanded role for the state in the planning and permitting processes.</p>	

The first of the above possible policy considerations was resolved by the adoption of Recommendation No. 4, and no action was necessary on the second proposal in light of the adoption by the Task Force of Recommendation No. 3.

A possible policy recommendation was made by Mr. Lehr to require utilities to file their transmission plans with the PUC every two years for public hearings and approval, as is done in Arizona. The purpose of such a process is to require utilities to coordinate their plans in a mandatory process providing for local governments and other interested parties an opportunity to have notice of the utilities' plans and have concerns about the plans be heard before a neutral expert decision making body. Municipal and cooperative utility representatives objected to this recommendation on the grounds that their utilities are not under the jurisdiction of the PUC. Jurisdictional utility representatives stated that the current planning process is taking care of any problems. This possible policy recommendation was not pursued.

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(i) Additional transmission issues:

1. Siting and permitting;

Testimony regarding siting issues was included in presentations to the Task Force as noted in Topics (e) and (f) above.

2. Regarding establishing or enhancing the transmission system interconnection with such systems in other states;

3. The benefits, detriments, and impediments of multi-state planning;

At its third meeting the Task Force heard a presentation regarding the role of multi-state transmission planning from Louise McCarren, CEO, Western Electricity Coordinating Council regarding Transmission Planning in the Western Interconnect. She also addressed the recent reliability legislation - EAct 2005 - and the direction of the ERO and WECC's role as RRO, as well as the scope and direction of the new standing committee at the WECC called the Transmission Expansion Planning Policy Committee (TEPPC) that is focused on regional transmission issues. Her complete presentation may be viewed on the recorded web-cast at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Sept18TFMeeting/HB06-1325_09-18-06meeting3_part1.wmv.

In response to questions from the Task Force, Ms. McCarren referred to following web sites and documents:

- The WECC Transmission Expansion Planning Policy Committee (TEPPC): WECC Transmission Expansion Planning Policy Committee Site: <http://www.wecc.biz/>
- TEPPC Transmission Expansion Planning White Paper - [PDF](#)
- The New England Independent System Operator: <http://www.iso-ne.com/>
- DOE Sec 1221(a): Congestion Study & Designation of National Interest Electric Transmission Corridors – http://www.oe.energy.gov/epa_sec1221.htm

Also, at its third meeting the Task Force heard a presentation regarding the role of multi-state transmission planning from Mr. Doug Larson, Executive Director of the Western Interstate Energy Board, an association of 12 western states and three western Canadian provinces¹.

¹ Alberta, Arizona, British Columbia, California, Colorado, Idaho, Montana, Nebraska, Nevada,

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Members of the Board are appointed by the governor or premier. The Board has responsibility for many energy-related policy issues affecting the West. The Board also serves as the energy arm of the Western Governors Association. Mr. Larson has 31 years of experience in western regional energy issues.

The Board has three committees on electric power, high-level radioactive waste, and coal mine reclamation. The Board's Committee on Regional Electric Power Cooperation (CREPC) includes the regulatory, planning and facility siting agencies from the states and provinces in the western interconnected electric power grid. CREPC is the forum for Western states and provinces to engage FERC and the Western electric power industry in discussions of regional transmission planning, resource adequacy, transmission permitting, and other regional electricity issues.

The Board is also the home of the Western Interconnection Regional Advisory Body (WIRAB) created by Western Governors under Section 215 of the Federal Power Act. WIRAB is to advise the Federal Energy Regulatory Commission, the North American Electric Reliability Corporation, and the Western Electricity Coordinating Council on the implementation of mandatory reliability standards.

His PowerPoint presentation may be viewed at: complete presentations may be downloaded at:

<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Aug21TFMeeting/Wieb08-06ColoradoPUCpresentation8-16.ppt>, and his complete presentation may be viewed at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Aug21TFMeeting/HB06-1325_08-21-06TFMeeting1.wmv.

4. Issues regarding transmission project financing and cost recovery;

Testimony regarding transmission project financing and cost recovery was included in presentations to the Task Force as noted in Topics (f) and (g) above.

5. Issues regarding accessing transmission capacity created by new investments; and

New Mexico, Oregon, Saskatchewan, Utah, Washington, and Wyoming

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6. Accommodating renewable sources;

Testimony regarding transmission project accommodating renewable sources was included in presentations to the Task Force as noted in Topic (d) above.

7. Upgrading and maximizing the use of existing transmission corridors;

8. Eminent domain;

9. Revenue sharing among jurisdictions along transmission corridors;

10. Other Issues

Independent Transmission Owners and Developers:

At its fourth meeting the Task Force received three presentations regarding non-traditional transmission development and ownership. The complete presentations may be viewed at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/HB06-1325_10-05-06meeting4_part1.wmv.

The first presentation by James K. Tarpey, Board Member of the Wyoming Infrastructure Authority, was entitled “*Getting from Here to There.*” Mr. Tarpey’s PowerPoint presentation may be viewed at:

[http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/IndependentTransmission\(COTaskForce\)-SecondRevised.ppt](http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/IndependentTransmission(COTaskForce)-SecondRevised.ppt) .

The second presentation was made by Mr. Bill Pascoe, President of Pascoe Energy Consulting, and who has been retained by Trans-Elect Authority to assist with the development of the TOT3 Expansion Project. His presentation was entitled “*The Role of the Independent Transmission Developer.*” Mr. Pascoe’s PowerPoint presentation may be viewed at:

[http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/IndependentTransmission\(COTaskForce\)-SecondRevised.ppt](http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/IndependentTransmission(COTaskForce)-SecondRevised.ppt).

The third presentation by Robert Stade, Project Manager for National Grid, U.S. Business Development was entitled “*Transmission Developer Perspective.*” His PowerPoint presentation may be viewed at:

<http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/ReliabilityDevel>

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[operPerspective-TFCOLORADO2006-10-05.ppt](#), and his complete presentation may be viewed on the recorded web cast at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/HB06-1325_10-05-06meeting4_part3.wmv.

Electric Utility Work Force Training Opportunities:

At its fourth meeting the Task Force received testimony from Mr. Mike Beasley currently of Xcel Energy and former Executive Director of the Colorado Department of Local Affairs regarding the significant amount of available funding that could be potentially available to State agencies and Higher Education for the development of work force training to meet the current and anticipated needs of the electric utility industry in Colorado. Mr. Beasley's full remarks may be viewed on the recorded web cast at:

http://www.dora.state.co.us/puc/projects/ReliableInfrastructure/Oct5TFMeeting/HB06-1325_10-05-06meeting4_part4.wmv.

(j) Consideration of the results of any recent studies that address Colorado's Transmission infrastructure.

At its fourth meeting the Task Force received a presentation from Robert Stade, Project Manager for National Grid, U.S. Business Development. He presented to the Task Force a report entitled "*Capturing the Prevailing Wind for the Benefit of Customers.*" The complete report may be downloaded from: http://www.nationalgridus.com/non_html/c3-3_NG_wind_policy.pdf

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Public Comment

House Bill 06-1325 emphasized that the Task Force should seek public comment. In an effort to solicit public comment the PUC issued a press release announcing the meeting of the Task Force and encouraging public input. The Task Force prepared and distributed to members of the Task Force a model article that the members could include in their respective professional or organizational newsletters including the Colorado Counties, and the Colorado Municipal League. The Task Force sent its staff to meetings of the Colorado Coordinated Planning Group (CCPG) meeting to solicit comments.

By discussion, the Task Force decided the manner in which public comment would be received. Public comment would be received via two primary methods. First, the Task Force encouraged the public to submit comments in writing. To facilitate such submittals the Task Force established an email address: taskforce@dora.state.co.us. Any written comments mailed to the Task Force would be electronically scanned and placed on the Task Force's web pages, and distributed to the Task Force members. Second, the Task Force allowed public comment to be received at the beginning and at the end of each of its four meetings. Some initial consideration was given to pursuing the option of conducting public hearings at locations throughout the state. This option was not implemented.

The Task Force received no public comment at any of the Task Force's meetings.

The Task Force received emails from the following persons: Mr. Tom Plymell, a homeowner, Mr. Ken Parsons, Rio Blanco County Commissioner, Mr. Stephen Burnage of National Grid, US, Ms. Tammy Newman of Baca County, and Mr. Troy Crane, Chairman of the Board of County Commissioners of Baca County. The full content of these emails can be read on the task Force Web page.

ACRONYMS

1. CCPG - Colorado Coordinated Planning Group
2. CREPC - Committee on Regional Electric Power Cooperation
3. DOC - Department of Commerce
4. DOD - Department of Defense
5. DOI - Department of the Interior
6. EPOA - 2005 Federal Legislation
7. ERO - Electric Reliability Organization
8. FERC - Federal Energy Regulatory Commission
9. IRP/LCP - Integrated Resource Plan / Least Cost Plan
10. NERC - North American Electric Reliability Corporation
11. NOPR - Notice of Proposed Rulemaking
12. NTAC - Northwest Transmission Assessment Committee
13. OASIS - Open Access Same-Time Information System
14. OATT - FERC's mandated Open Access Transmission Tariff
15. RMATS - Rocky Mountain Area Transmission Study
16. RRO - Regional Reliability Organization
17. STEP - Southwest Transmission Expansion Plan
18. SSG-WI - Seams Steering Group – Western Interconnection (now- defunct)
19. SWAT - Southwest Area Transmission
20. TEPPC - Transmission Expansion Planning Policy Committee
21. TOT - (pronounced “tote”) A WECC transmission path is a group of transmission lines that work together, usually in parallel, to transfer power from one area to another. Each TOT has a reliable operating limit that is monitored to insure the reliable operation of the system.
22. USDA - U.S. Department of Agriculture
23. WAPA - Western Area Power Administration
24. WCPSC - Western Conference of Public Service Commissioners
25. WECC - Western Electricity Coordinating Council
26. WGA - Western Governor's Association
27. WIEB - Western Interstate Energy Board
28. WIRAB - Western Interconnection Regional Advisory Body