

SWIP North Transmission Project

Regional Planning Project Report

Project Description

The Southwest Inter-tie Project (SWIP) North as proposed by Great Basin Transmission, LLC is a 500 kV transmission project from White Pine Generating Station to the Midpoint substation in south central Idaho

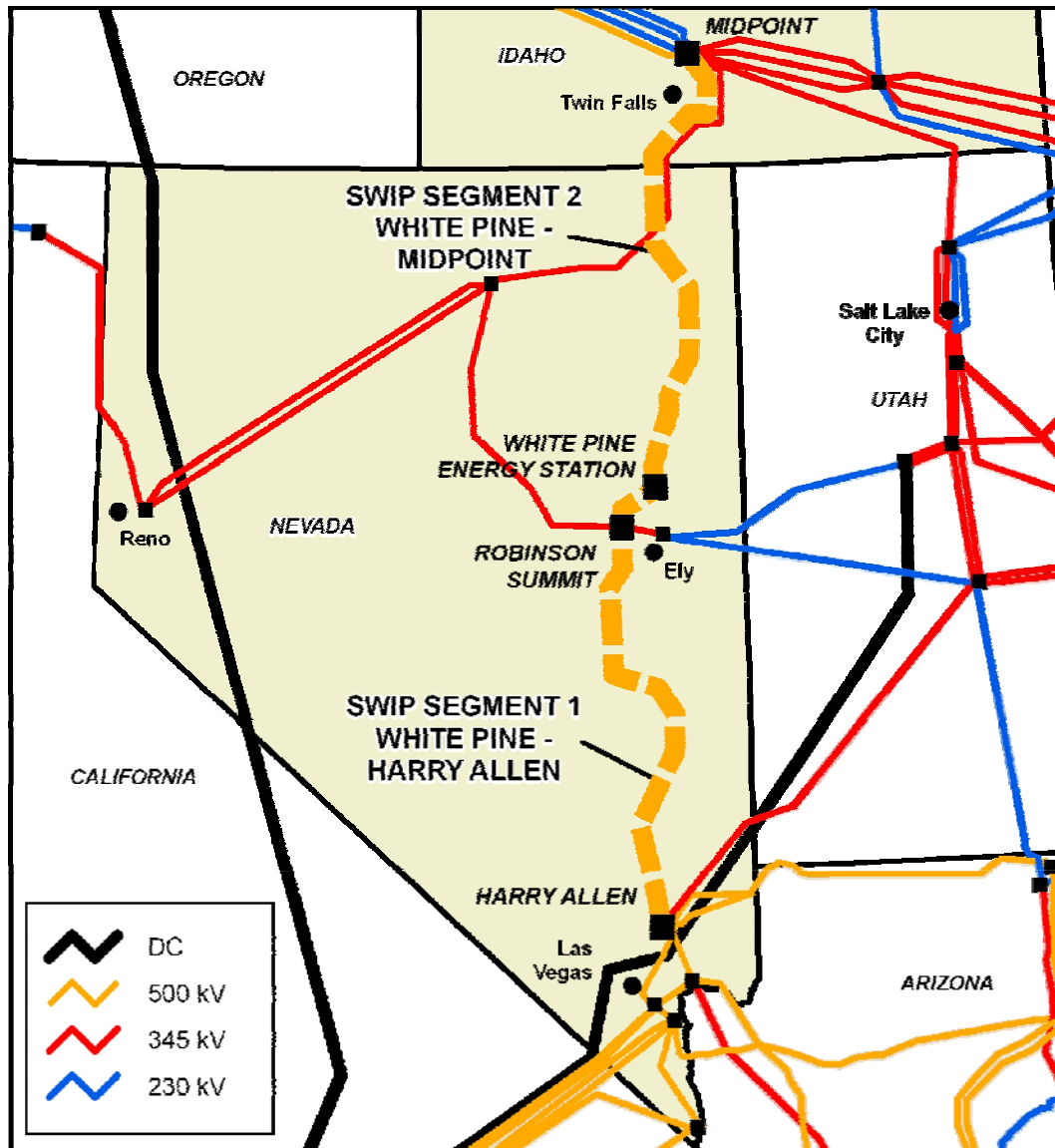


Figure 1. SWIP North Transmission Project.

Regional Planning Process

This project, along with several others, is the result of the Northern Tier Transmission Group¹ (NTTG) Regional Planning Process. During the first half of 2007, the NTTG members held planning stakeholder meetings to formulate a plan for the forecasted load and resources of the NTTG Region. This planning process identified a collection of projects that were determined to be beneficial to the region. These projects are collectively referred to as the NTTG Fast Track Projects² and are shown along with the forecasted loads and resources on the following map, Figure 2 (this map will be referred to throughout this document).

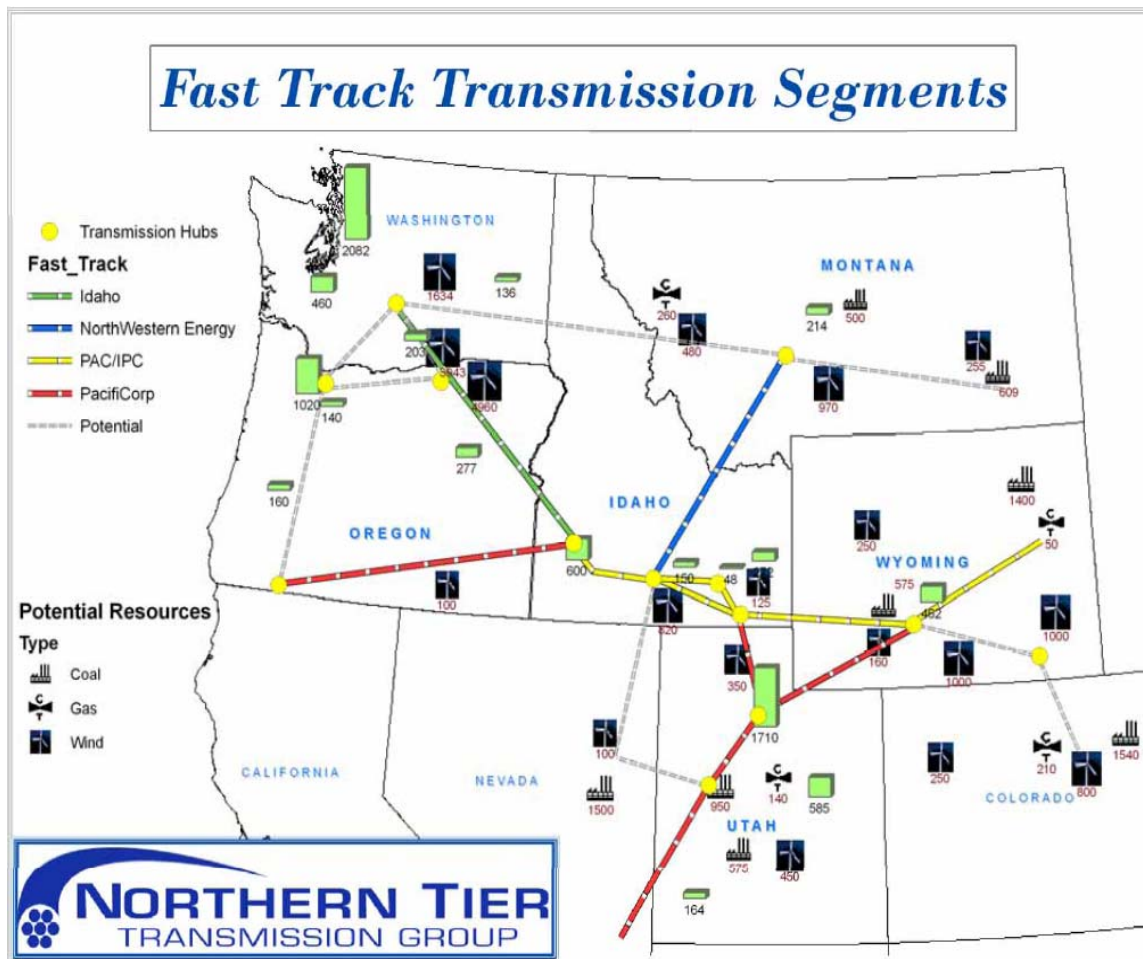


Figure 2: NTTG Fast Track Transmission Project Map

Each NTTG Fast Track Project has initiated the WECC Three Phase Rating Process and is developing a project specific Regional Planning Report. As such, the SWIP North project has formed a regional planning group beyond the NTTG planning stakeholders.

Compliance with WECC Regional Planning Guidelines:

1. *Take multiple project needs and plans into account, including identified utilities' and non-utilities' future needs, environmental and other stakeholder interests;*

The SWIP North project was initiated through the Northern Tier Transmission Group's (NTTG) Fast Track Project Process. Recognizing the long lead time to develop transmission, the NTTG members determined that a quick assessment of the regional transmission requirements was needed. The Fast Track Project Process was a stakeholder engaged process to formulate a transmission plan to meet the ten year requirements of the NTTG region. This process was completed during the first half of 2007 and incorporated 1.) the member utilities Integrated Resource Plans (IRP), 2.) past studies highlighting regional through-put and export needs, and known congestion areas, and 3.) existing regional projects. In this process, NTTG identified several transmission projects as high priority infrastructure improvements that should be built in the near term to improve the reliability and capacity of member utilities, as shown in Figure 2.

Information concerning NTTG and documents produced during the Fast Track Project Process may be found on the website: www.nttg.biz.

2. *Cooperate with others to look beyond specific end points of the sponsors' project to identify broader regional and sub-regional needs or opportunities;*
 - a. LS Power Development, LLC (representing Great Basin Transmission, LLC) participates in Northern Tier Transmission Group (NTTG) Planning Stakeholder meetings. The NTTG members are Deseret Power Electric Cooperative, Idaho Power, NorthWestern Energy, PacifiCorp and Utah Associated Municipal Power Systems. NTTG also includes utility commission representation from the states of Idaho, Oregon, Utah, Wyoming and Montana. The members of NTTG are actively coordinating various 500-kV projects throughout the region.
 - b. Through NTTG, LS Power Development, LLC is in active discussions with other transmission providers and developers to coordinate Gateway West with various regional projects. These projects ,as shown in the NTTG Fast Track Projects map below, include;
 - i. Gateway West, Gateway South and TransWest Express Transmission Project
 - ii. Mountain States Transmission Intertie
 - iii. Hemingway to Boardman Transmission Project

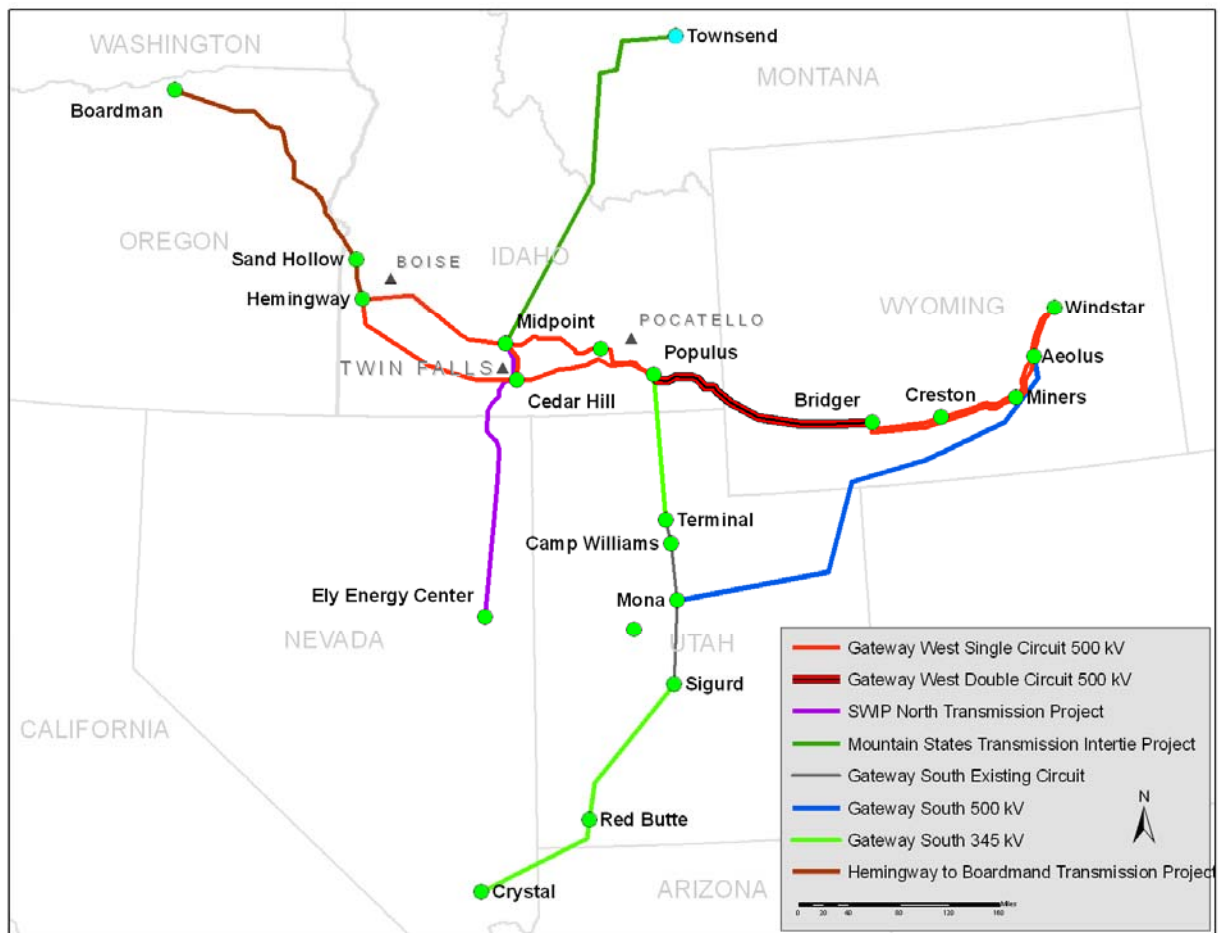


Figure 3 Project Coordination

- c. The installation and operation of SWIP North in conjunction with SWIP South provides a 500 kV north/south regional tie between southern Nevada and southern Idaho. It will be in parallel with existing north/south regional ties both to the east and to the west of the Project and is expected to influence flows on California-Oregon and Nevada-Utah-Idaho paths. Additional power transfer opportunities may result from the SWIP North project.
3. *Address the efficient use of transmission corridors (e.g. rights-of-ways, new projects, optimal line voltage, upgrades, etc.);*
 - a. All transmission in this project is proposed to operate at 500 kV. Because of the distances involved, a lower voltage would not provide the necessary capacity to transmit 1,200 MW without an excessive number of circuits and real power losses.
 - b. The project is proposed in the previously permitted SWIP corridor.
4. *Identify and show how the project improves efficient use of, or impacts exiting and planned resources of the region (e.g., benefits and impacts, transmission constraint mitigation);*

- a. It is anticipated that the White Pine Energy Station and wind generation in development in Nevada may utilize SWIP North to transfer resource output to energy markets to points north of the facility. With an expected north/south rating, and in conjunction with SWIP South, other existing or new southern or northern resources may also have seasonal or other periodic opportunities to utilize these new transmission facilities.
- b. Since 2001 there have been several committees that have evaluated the cost and benefits of the transmission additions from Wyoming to the west. Two specific studies are the Rocky Mountain Area Transmission Study (RMATS)³ of 2004 and WECC Seams Steering Group-Western Interconnection (SSG-WI)⁴ of 2005. The RMATS Phase 1 Report recommended the SWIP corridor as one potential transmission path beyond the RMATS footprint to support the development of Wyoming resources. This path is shown in Figure 3 below.

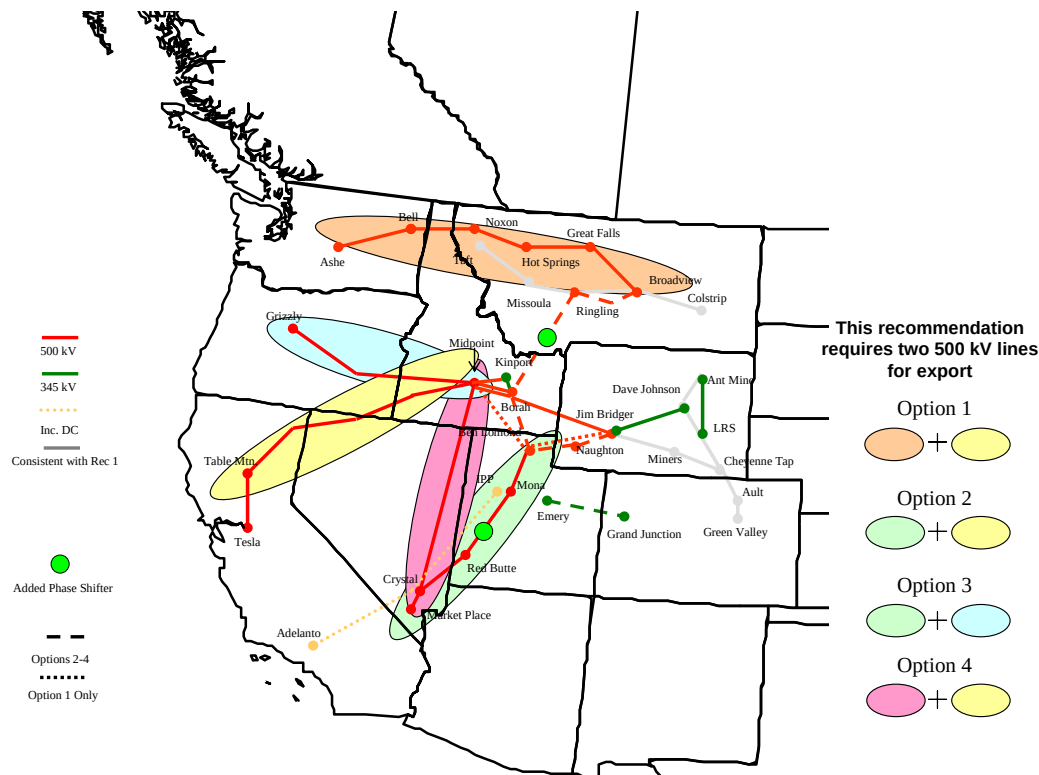


Figure 3: RMATS Transmission Expansion Beyond RMATS Regional Recommended for Further Development

5. *Cooperate with Regional Planning Review Group members in determining the benefits and impacts due to the project;*
 - a. Review Group meetings were held in conjunction with NTTG Planning Stakeholder meetings on October 17 (conference call) and November 13. Minutes from these meetings can be found in Appendix C.
 - b. All meeting notices, presentations, and minutes were posted on the NTTG website if the meetings were held in conjunction with NTTG Planning Stakeholder meetings.

6. *Identify transmission physical and operational constraints resulting from the project or that are removed by the project;*

SWIP North is expected to have at least some interaction with existing parallel north/south transmission paths between WECC southern and northern regions. Established paths that may experience an interaction connect southern California through PG&E to the Pacific Northwest and southern Nevada through PacifiCorp to southern Idaho. The Northwest to Idaho connection may also be influenced by the new transmission project.

7. *Coordinate project plans with and seek input from all interested members, sub-regional planning groups, power pools, and region-wide planning group(s);*

LS Power Development, LLC participates in the NTTG Planning Stakeholder meetings. At these meetings, SWIP North is presented to participants and feedback has been received concerning the project. Additionally, these planning meetings are used to coordinate the various transmission projects proposed by NTTG members.

Status of the project has been shared with members of the Northwest Power Pool through the Transmission Planning Committee. Finally, the regional WECC Transmission Expansion Planning Committee (TEPC) has kept members informed about SWIP North progress.

8. *Coordinate project plans with and seek input from other stakeholders including utilities, independent power producers, environmental and land use groups, regulators, and other stakeholders that may have an interest;*

Regional Planning Review Group Members included regulators, utilities and other stakeholders. Additionally, NTTG Planning Stakeholder meetings were attended by environmental and land use groups and their input was solicited for SWIP North.

9. *Review the possibility of using the existing system, upgrades or reasonable alternatives to the project to meet the need (including non-transmission alternatives where appropriate);*

SWIP North will utilize the permitted 500 kV rights-of-way for the installation of this new 500 kV transmission line. This new line will provide a 500 kV north/south regional tie between southern Nevada and southern Idaho. The transfer capability on existing transmission in the area of the new White Pine Energy Station and renewable resources (1750 MW) is inadequate to serve regional markets from this location. Even trying to match local markets to the WPES capability would likely require significant upgrades of existing transmission or the construction new transmission to the east and west. A northern market would then require further upgrades or new facilities.

10. *Indicate that the sponsor's evaluation of the project has taken into account costs and benefits of the project compared with reasonable alternatives;*

At this time, there are no known reasonable alternatives to provide the capacity needs addressed by this project. Alternative routes were considered during the NEPA review of the

project, and the final route identified was the agency selected route considering all costs, benefits, and environmental impacts.

11. Coordinate with potentially parallel or competing projects and consolidate projects where practicable;

At this time, there are no known parallel or competing projects that could provide the capacity needs addressed by this project.

Appendix A – Regional Planning Project Review Group Invitation Letter



GREAT BASIN TRANSMISSION, LLC

c/o LS Power Development, LLC
400 Chesterfield Center, Suite 110
St. Louis, Missouri 63017
636-532-2200 · Fax 636-532-2200

February 21, 2007

Planning Coordinating Committee
Technical Studies Subcommittee
615 Arapeen Drive, Suite 210
Salt Lake City, UT 84108-1262

RE: Project Rating Review: Midpoint-Robinson Summit

Great Basin Transmission, LLC (“Great Basin”) is initiating the Project Rating Review process and Regional Planning Project Review Process for the Midpoint-White Pine 500 kV transmission line, and requests Phase 1 status in the Project Rating Review process. This line represents the northern portion of the Southwest Intertie Project (“SWIP”). The SWIP, is a planned 500 kV transmission line between Midpoint in Idaho and Las Vegas, Nevada originally proposed by Idaho Power Company (“Idaho Power”). Great Basin holds an exclusive option to purchase Idaho Power’s interest in this project.

Great Basin plans to construct the SWIP in two stages, with the first stage consisting of the southern segment of this line from a new substation known as Robinson Summit in east-central Nevada to the Harry Allen substation in southern Nevada. The proposed Harry Allen-Robinson Summit transmission project is currently in Phase 2 of the Project Rating Review process. The second stage consists of the northern segment of the SWIP, from Midpoint to White Pine County, Nevada (See Attachment A – Project Map). The initial proposed rating of the White Pine-Midpoint 500 kV line is 2,000 MW north to south and 2,000 MW south to north, such proposed ratings subject to the results of the Phase 1 Comprehensive Progress Report.

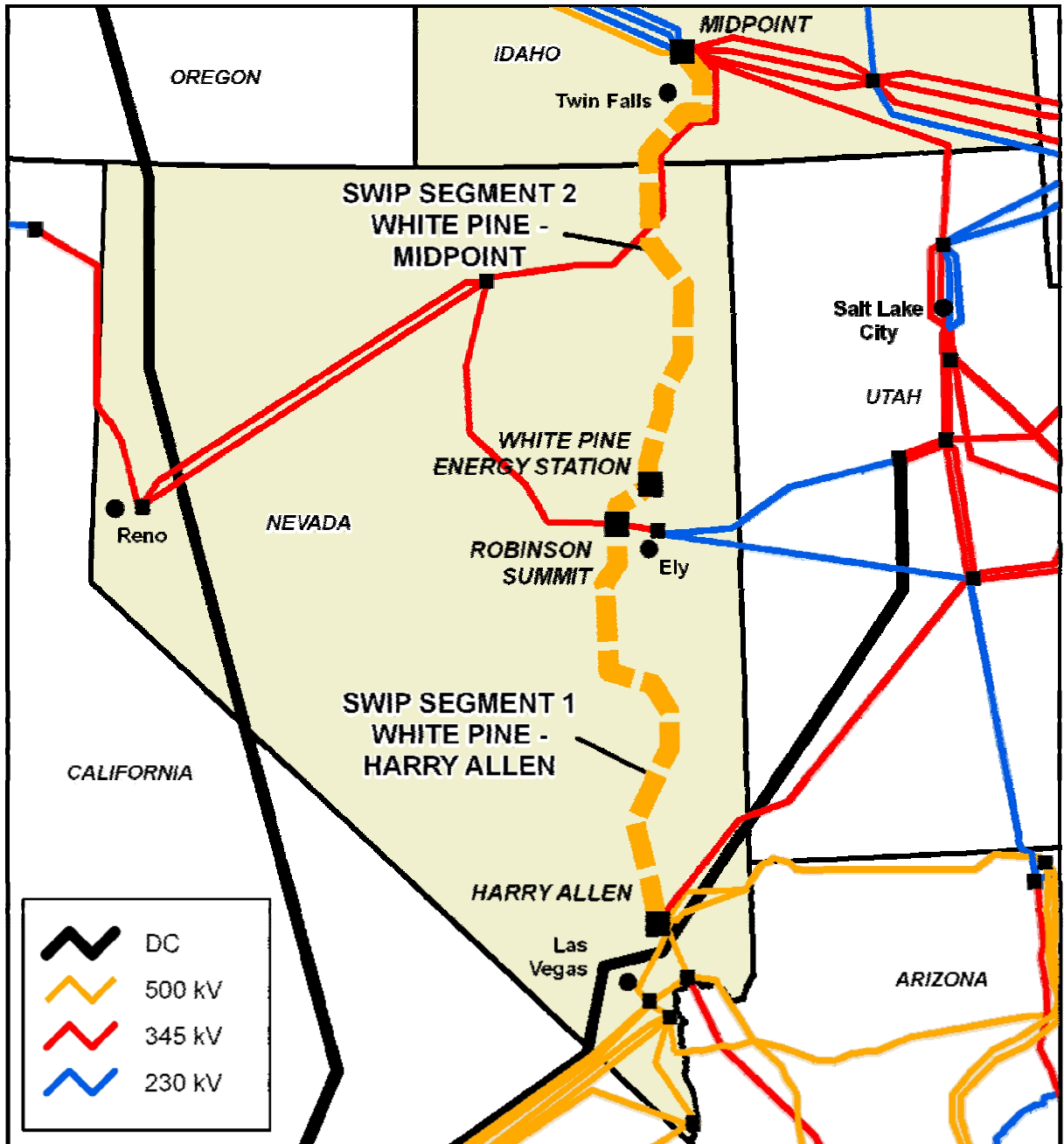
The White Pine-Midpoint 500 kV line is being proposed to deliver new generation resources under development in White Pine County, Nevada to the north, and also provides regional transmission benefits through the completion of a new north-south transmission path in WECC. The projected in-service date of the White Pine-Midpoint 500 kV line is 2011.

At this time, Great Basin requests an indication of interest in participating in a Regional Planning Review Group within 30 days (prior to March 23, 2007). We look forward to working with you in the Project Rating Review Process. If you have any questions regarding this project, please do not hesitate to call me at 636-532-2200.

Sincerely,

Lawrence Willick
LS Power Development, LLC

ATTACHMENT A – PROJECT MAP



Appendix B – Regional Planning Project Review Group Members

Planning Review Group Members		
First	Last	Company
Alex	Fratkin	Sierra Pacific Resources
Bill	Hosie	TransCanada
Chris	Reese	Puget Sound Energy
Joe	Seabrook	Puget Sound Energy

Correspondence Only		
First	Last	Company

Appendix C – Minutes from Regional Project Review Meetings

Note: The Regional Project Review Group Meetings were held in conjunction with NTTG Stakeholder meeting. As such the minutes are included in the NTTG meeting minutes posted on the NTG web site.

Description of Meeting: NTTG Planning Stakeholder Meeting

Meeting Date: Monday October 22nd, 2007

October 22nd, 2007

Boise, Idaho

1. Overview

The NTTG Standard of Conduct and Anti-trust policies were read. Roll call was held for both in-person and phone participants. Phone participants were directed to the NTTG Website for meeting materials.

The agenda and meeting purpose, to stakeholders with basecase information and receive their feedback, was discussed. An overview of the basecases within NTTG was discussed by Dave Angell with assistance from other project sponsors.

2. Summary of Questions/Answers

Comment: (Slide 10) Looking at south of Mona down to Crystal as 345kV with a possible upgrade to 500 kV. TransWest Express will layer in. Next meeting will be in Cheyenne, WY on Nov 7th then again in Phoenix on December 5th.

Q: (Slide 15) Could you expand on Midpoint-Summer Lake what you mean by, “It’s just an upgrade?”

A: Midpoint-Summer Lake from west to east is allowed a transfer capability of 400 MW and increased to 550MW with no facility improvements.

Q: Should we have both projects modeled 500 kV from Ely energy center down to southern Nevada just a single line

A: Just one, however it depends on which one we get the data from.

Q: (Slide 16) Is the coal facility identified at 870 MW a single facility?

A: It could be distributed around Montana

Q: (Slide 16) What is the time frame that you are looking at for all this?

A: MSTI 2013; And projects proposed operational date isn’t till around that time, anywhere from 2011-2014

Comment: Keep in mind TEPPC database and additions there to see how these match up

Response: We are in process in responding to your data request for all that information, there probably aren’t that many new generators in Montana.

Comment (Slide 17): We hope to finalize resource numbers for TransWest Express within two weeks time frame.

Comment: (Slide 20) Typing was wrong on 2015 HS; The NorthWestern Energy area should be 1900.

Comment: Resources in WY are in extended resource plan and would come on after the facilities are in service

Comment: The year that was selected for the resource portfolio for WY was essentially a 2023 timeframe

Q: What assumptions are being made for resources in Idaho, Oregon, and Washington?

A: The resources that show up in the 2015 case would be any of the resources that were allocated in the WECC process for loads and resources in that area that could be quite a few years out. The resources that I expect in Oregon and Washington will be wind in the Columbia Gorge area.

Q: And those are not reflected in the basecase because you were making the assumption that they are not going to be there?

A: If they were in the WECC 2015 case then they were modeled in, we have gone out a little bit beyond that and identified some resources in WY of various portions into the West.

Q: When was the WECC 2015 case put together?

A: In the last 6 or 9 months. These are the latest WECC cases available. They were approved this last winter or spring.

Comment: It would be good to show some resources in Washington or Oregon area even though they may be wind.

Response: We will compare the 2010 to the 2015 and see what differences there are in the resources and then come back to 2007 or 2006 case and screen again to identify in the Northwest what additional resources are showing up. We can put that out on the NTTG website in a week or two when we post the minutes.

Q: Does anyone disapprove of the basecases as it has been presented today? Anything out of reasonableness

A: Hearing no objections we will move forward

Q: Have you guys put together a study plan of basecases that have been approved as of today and what methodology you will use in purpose of this study and what you are really looking at in respect to the output? For anything that NTTG is going to study?

A: NTTG approved these as Fast Track projects believing that they add value to the region. It is up to each of the project sponsors to take them through the stakeholder process that are set up through WECC rating process.

Q: Do you need to provide your name and information to each project sponsor?

A: Yes, to make sure that you are on their regional planning list.

Q: And all the information regarding the project will be at the appropriate party's website, not at the NTTG website?

A: Correct

Description of Meeting:**Planning Stakeholder Meeting****Meeting Date: Tuesday November 13th, 2007****November 13th, 2007****Portland, Oregon****1. Overview**

The NTTG Standard of Conduct and Anti-trust policies were read. Roll call was held for both in-person and phone participants. Phone participants were directed to the NTTG Website for meeting materials.

The agenda and meeting purpose, to provide a venue for stakeholder input on progress and studies results to date on the proposed transmission expansion projects undergoing regional review in the NTTG footprint. The PowerPoint presentation was discussed.

2. Summary of Questions/Answers**Questions following the Inland Project update by Northern Lights/TransCanada:**

Q: Any possibility that the transmission could be built only for renewable sources, or will you need gas?

A: We are basically a merchant developer, so we provide the freeway for the energy to flow on. It will be up to the load serving entities and the generators to decide what the resources will be.

Q: On slide 11, please expand on “Equity and Operating Partnerships-discussions underway” and “Indicative Tariff Proposals”. Has that proposal been written? Has it been discussed with Canadian as well as U.S. agencies?

A: We talked with almost all the utilities that are in the footprint and we talked about what approach Trans Canada would like to take. And your second question surrounding the indicative tariff proposals - each one of those has been done around a confidentiality agreement and given to individual entities that have expressed an interest in understanding the tariffs that might apply to the project.

Q: Does that mean that you talked with Pacific Gas and Electric on their proposal on the eastern side of B.C. to the same area of your line in that area?

A: Yes we have had discussions with PG&E

Q: Is there any reason it is not represented on your map about that project?

A: I took this slide from an NTTG presentation and modified it for this presentation to NTTG to give it some context for this meeting.

Q: On slide 3; do the squares that represent sub-stations or proposed sub-stations imply that they are multi-terminal DC lines?

A: We do believe that they will be multi-terminal DC lines.

Q: We assume that if you are proposing multi-terminal DC, that you have found someone who has a technical solution to DC breakers for isolating DC line faults between terminals?

A: We will not involve DC breakers, it would involve the shut-down of a pole; we would use sectionalizing equipment to open it up; and sectionalize the converter station

Q: When you said “sectionalizing equipment to open it up” - that is not a breaker?

A: No. If you had a fault on a pole you would shut the pole down. If the fault happened to be between the line and the converter station then you would need to isolate that converter station.

C: The concern is that when you shut down that pole you shut it down for the entire system not just from point to point and we aren’t sure if anyone has the solution to that yet.

R: It would be a challenge.

Q: What is the status of your WECC rating process on the projects?

A: We are just getting ready to submit the report for WECC approval and will move into the path rating process in parallel with other projects that are moving ahead in that region.

Questions following the MSTI update by NorthWestern Energy:

Q: (slide 41) Which case did you run this on?

A: 2010 light load

C: (slide 43) Concerning slide titled “LL, NTTG CCL1 Results,” he has some additional results that aren’t on slide.

- The voltage deviations are up to 7%; there may be a simple solution or it may be a basecase issue. As the case is tuned up it can probably be resolved.
- Midpoint 345/230 kV transformer problem is existing and not created by MSTI.

Q: You didn’t include California as growing loads on Point #2, why is that?

A: That was just an oversight.

C: MSTI is not building new wire to California.

C: In the post-NTTG projects we do show Great Basin and Ely projects, so there is a path from southern Nevada which could go into California. There isn’t new wire but there may be ways to get to California from there.

Q: On point #5 there was some work done on the RMAAT studies with regard to a phase regulator, is there some cost beneficial information on the MSTI project?

A: We think that there is. This fits nicely with RMATS. The benefits are much more with 1500 vs. 1000.

Q: On your cases that you described on the heavy load and light load, was it 1500 MW for both cases or not?

A: Yes, we pushed 1500 MW for both.

Q: You have two different points of connection, either Garrison or someplace west of Townsend and Idaho was Midpoint or Borah, which did you assume for the studies?

A: Townsend to Midpoint

Q: For Townsend did you assume both new lines?

A: We would put a breaker and a half scheme there and make a big bus at Townsend

C: Our plan is to look at the Populus connection in phase 2

C: One of the reasons for Populus is to be a northern terminal to move power south towards Salt Lake City so it should be looked at and is a viable option.

Q: Where is the basecase generation tied into Montana?

A: Some is tied in to the 500 with a radial 230 kV and a lot of it is tied into a collector system. Which is bringing the power to Broadview, or to Garrison, and then onto the 500.

Q: And then they all come to what we call Montana Intertie - the transmission to Garrison to the 500kV. Is that what you are referring to at Northwest Intertie?

A: Not necessarily. At Garrison there is a 500-230 autobank. Under that there is a 230/160 kV system all in western Montana. The same at Broadview –two 500-230 auto banks with underlying 230/160kV that spreads out into eastern and northern Montana. All of the generation is tied into that underlying system.

Q: 1500 MW of generation connected via your 230-500 at Garrison?

A: Garrison or Broadview

Q: Does the line 1500 use any series compensation?

A: Yes, at a level of 35% comp. We started here and it seems to work right now. We don't need a lot of angle on that to push it at 35% comp.

C: By having the MSTI comp you add a complexity to the system.

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R: The 3 phase WECC study process is not the end of the study work on this line; the next part is the SSR, etc. which will take place as the project moves forward. The WECC process protects that and we plan to respect the WECC process.

Q: You mentioned improving reliability for Montana NW either east or west; does this help Idaho to NW, especially in the light loads (without any NTTG projects)?

A: We didn't look into that level of detail. What will really help Idaho NW are the other NTTG projects (to Captain Jack and up to McNary).

C: In the light load we did have the phase shifter maxed out at 60° but this is only the beginning of the project and we will work with all of the points that you have made.

Q: When will MSTI be operational?

A: 2013

Questions following the Southwest Intertie Project update by IPC/LS Power:

Q: Who is the Transmission Owner for the project?

A: LS Power is the developer of the project under the name Great Basin Transmission. The permits are under Idaho Power's name.

Q: Who will be operating the transmission contracts?

A: That detail hasn't been worked out yet.

Q: Will the products be offered under open access tariffs?

A: Probably, but we have not decided for certain.

Q: Eddy; In the basecase, what was the southern terminus of this Great Basin? Was it connected to Sierra system and if it was, at what location?

A: Harry Allen

Q: That means that you did have the southern side modeled as in-service according to the northern. Then in White Pine is there a total of 3000MW of coal (1500 south and 1500 north), or is it just 1500MW of coal?

A: The generation is a total of 1500MW at that location. On the case we are running, Light autumn 2010, the northwest is set up to be an importing load base - energy is coming out of California and from the east to the northwest. When generation is added at that location it is being sucked north. We have not done any other studies.

Q: How is it connected? Was the station in Robinson Summit and is that how it is connected to the Sierra's 345/230 kV system?

A: We have the connection to Las Vegas and Harry Allen, and 500 up to Robinson Summit, but I don't have the details off hand.

C: I am quite surprised that this doesn't impact on 2c, 2b, and 2a.

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R: The way the Great Basin project Phase 1 works out (the way the southern half of SWIP is modeled) is you have the generation located at White Pine. There are two 500 kV lines down to Robinson summit, then there is a 500/345 transformer (there may be 2 of them) and 345 kV phase shifters that connect into the Gonder line and that is how that is how the connection is made to Sierra Pacific. Then you have two (NTTG and Great Basin projects) 500 kV lines south from Robinson Summit to Harry Allen.

R: The model will only show a single line south. Many of these questions will be answered in Phase 2.

Q: On slide 4 you show some numbers - those are line miles I assume?

A: Yes.

Q: What is the line going from Midpoint north?

A: That is the MSTI project

Q: On slide 11 you mention that there are no competing projects - why?

A: That is just looking at SWIP north

Q: We had a presentation from TransCanada which proposed two connections from Las Vegas up to Borah which seems very similar.

A: In a north to south sense they are similar. TransCanada shows a potential converter station as an option.

Questions following the Idaho to Northwest update by IPC:

Q: The direction of the project is both west bound and east bound?

A: Correct. The project was originally identified as inbound, however, we have had requests for outbound as well.

Q: Where is Melba on slide 4?

A: Hemingway was formally Melba.

Q: Hemingway to Midpoint - is that a part of the existing Midpoint to Summer Lake?

A: Those that are shown on this map are all new. There would be a Midpoint to Hemingway and a line from Hemmingway to Summer Lake.

Q: Is Hemingway going to have two 500kV lines coming out of it (One to Capt. Jack and the existing one to Summer Lake)? Your slide presentation does not discuss the upgrade to Summer Lake or Captain Jack. I haven't seen PacifiCorp start to take that through the WECC rating process.

A: Midpoint to Summer Lake is in Phase 2 of the WECC rating process. The intent to get the Midpoint - Summer Lake rating increased before any of the projects are built.

Q: So the Idaho to Northwest path rating would increase and what you are proposing is in addition to that?

A: Yes

Q: How many lines would be going northwest from Hemingway?

A: There would be 3 lines: Hemmingway to NE Oregon, Hemmingway to Summer Lake (the existing Midpoint to Summer Lake line), and Hemmingway to Capt. Jack (if PacifiCorp determines that that is what they want to do. They have announced it to some level, however, they have not committed yet).

Q: The existing Midpoint - Summer Lake 500 will get looped into Hemingway and if PacifiCorp wants to it will build a new 500 from Hemmingway to Captain Jack.

A: That is correct

Q: Have you run any basdcases for Hemingway to Northwest?

A: We have run a couple initial cases. Recently our focus has been more on the Gateway West project.

Q: On point #2, please describe "coordination."

A: We first need to determine where the project will land. The ability to get 500 in and out of McNary may be very difficult because it has been cited as congested.

C: Captain Jack termination is not concrete. We are looking at several different options.

Questions following the Gateway West update by IPC/PAC:

Q: Is that part of the WECC 3 phase?

A: No

Q: Is the project description for Gateway West going to be officially changed? Because the phase 1 is dependent on the points that you have in Phase 1 which at this point does not include Dave Johnston.

A: That is correct. When the project initially started it actually showed it starting from Dave Johnston.

C: You will need to look at the WECC process instead of the RMATS. Each one will need to be examined.

Q: For your Great Basin projects would you terminate at Hollister instead of Midpoint?

A: Yes we would, just a single line.

Q: Point 10; How do you propose to deal with the fact that since our last study was completed, the brown electrons are more expensive or less valuable?

A: We would put together a report with the RMATS data in it and see comments from those who actually operate the generation. Parts of the RMAT study included CO2 incremental prices, so there may be some good information there.

Q: Point 9 – MSTI ties into Midpoint then north SWIP comes in and ties into Cedar Hill. It seems that you may not be considering a tie between those two.

A: We won't have 3000MW of load. In the sequence of building up the system and the flows coming along in time that tie would be one of the last projects we would take, it may be a matter of timing.

C: I don't think RMATS considered any cost associated with the wind integration. If they did assume anything it may have been too low, and this really needs to be considered in the cost of new transmission.

Q: Do we have a 500/345 transformation via the eastside or Gateway west?

A: That would be portion of Gateway west. We are looking at multiple transformers there and we initially threw in 1500. Our initial mode also puts a phase shifter to maintain loads in that link.

Q: Concerning Jim Bridger to Populous, what are you considering for your contingency analysis?

A: We are going to consider N-2 since it is credible. We must also consider generator tripping, which is what the new system will have.

C: Your transformation on the 500 to 345 needs to be sufficient enough at Jim Bridger otherwise you will need to reduce generation in Wyoming. This should be stated in the studies.

R: No one has ever stated that this could be built without generator tripping. More than likely somewhere along the line we will have generator tripping somewhere wired into it.

C: It needs to be stated "last one on, first one off".

Q: Point #4 – You state that you are removing the operational constraints on Borah west (RAZ); what are those and how are you correcting them?

A: We did 250 MW upgrade by building a 230kV line. Last summer we had 73 MW ATC summer. With studies that were performed we were able to increase from the 2557 to the 5557 on the Borah West without any unit trip. It would relieve the need for the Bridger trip.

C: The double circuit 500kV transmission is more expensive than 2 single circuit 500 kV lines.

R: Studies indicate that a single circuit 500kV is about \$1.25M/mile and double circuit is \$1.75M/mi.

Q: Is there a difference between Hollister and Cedar Hill?

A: They are the same location. It will remain Cedar Hill.

Q: Slide 6 – What will become of the 1500 transformer to Midpoint? Will there be an additional transformer, an upgrade, or will the existing transformer be reinvented?

A: We are contemplating on east to west loads we would be going down to two; the transformer at Midpoint would stay the same.

Q: The Populus/Hollister line is not planning to connect to Borah, is that correct?

A: That is correct. Between Borah and Populous there are three 345 kV lines.

Q: On slide 11, did those studies include MSTI or SWIP north?

A: No but SWIP north does help.

Questions following the Gateway South & TransWest Express update by PAC/NG/APS:

Q: Slide 4 shows a HVDC terminal, and also on slide 6. I don't see much AC network associated with that - I assume that is new generation only.

A: At each one of these locations we have focused on the high voltage. Each one of these will tie back into Dave Johnston. If a terminal does head out appropriate facilities would be added if need be in southern Nevada along with additional studies. The AC hasn't been made explicit on the charts provided.

Questions following the Wrap Up and Next Steps:

Q: Would NWE be ready with comprehensive report?

A: We will provide whatever we have accomplished.

Q: The goal is to present publicly the initial draft of the comprehensive reports. Are the rest of the projects going to be ready?

A: There are 2 reports that we are all syncing – the regional planning report, would we be ready. TransWest Express/Gateway South-no, MSTI-yes, IPC-yes

Q: Is there benefit to holding a December 11th open meeting?

A: It may be better to have the next meeting in January.

References

¹ Visit <http://www.nttg.biz/site/> to download an NTTG Fact Sheet.

² Visit http://nttg.biz/site/index.php?option=com_content&task=blogsection&id=5&Itemid=26 for information on NTTG Fast Track program.

<www.nttg.biz>

<Programs>

Scroll down to FAST TRACK

³ Visit <http://psc.state.wy.us/htdocs/subregional/FinalReport/rmatsfinalreport.htm> to download sections of the RMATS Phase 1 Report.

⁴ Visit

<http://wecc.biz/modules.php?op=modload&name=Downloads&file=index&req=viewsdownload&sid=179>

Otherwise

<www.wecc.biz>

<Committees>

<Transmission Expansion Planning Policy Committee>

<For SSG-WI Documents [click here](#)>