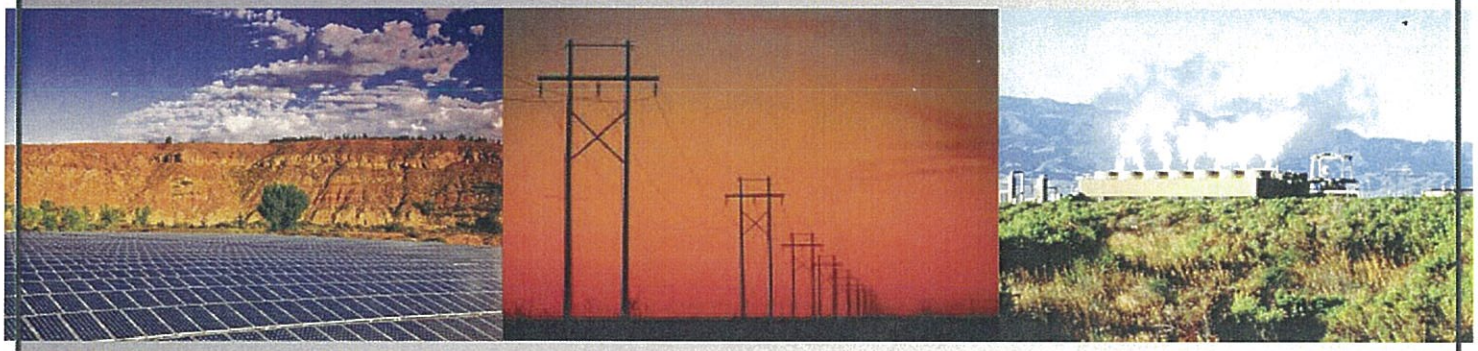
Transmission Initiative Routing Study: Supplemental Report



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NEAC

An Initiative to Export Nevada's Renewable Energy

A COLLABORATIVE EFFORT BY:

EnergySource

TRISAGE CONSULTING

SECTION 2: TRANSMISSION RATES SENSITIVITY ANALYSIS

2.1 SECTION PURPOSE

The purpose of this analysis is to evaluate the projected transmission rates required to provide revenue sufficient to fully recover expenditures for financing and operating each of the proposed and evaluated transmission projects described in the ***Transmission Initiative Routing Study*** Prepared for NEAC submitted February 2012.

The analysis is based on available reasonable assumptions for all necessary parameters, but it is not intended to be a definitive business case for the projects. Many of the parameters cannot be fully verified until the projects are permitted and detailed cost estimates or actuals are provided. Additionally, some parameters are dependent on detailed operating information of transmission utilities which are interconnected to the proposed transmission projects and would need to be verified. In some instances this cannot be 100% accurate until the projects are near completion. The analysis does provide meaningful expectations of relative transmission rates, and the spreadsheets provide convenient sensitivity analysis tools to evaluate results over wide ranging assumptions.

2.2 SUMMARY & CONCLUSION

A transmission rate analysis has been performed in order to provide "representative results" regarding the cost of proposed transmission projects evaluated in the *Transmission Initiative Routing Study* report prepared for NEAC dated 2012. The parameters used for evaluation and cost sensitivity analysis are based on best professional experience and judgment; however, the spreadsheets were developed to allow for sensitivity modeling. As cost and capacity parameters are more defined, the spreadsheets can be easily modified to test the financial results.

<u>The following are the preliminary results based on the assumptions defined in Attachment 2.1:</u>

1. The transmission rate to recover the Project costs in the form of a Project Transmission Rate vary for each Project but range from $4 - $8.5 per kilowatt per month (See page 5 Column J.)

2. If the Projects were not rolled into NV Energy's transmission system and the Project's transmission rates were separately charged, the total transmission rate to deliver generation resources from inside NV Energy's existing control area utilizing the Project

and delivered to the neighboring transmission systems would be $6 - $10.5 per kilowatt per month (See page 5 Column T. The effect on the cost of the delivered energy to the neighboring transmission system would increase the delivered cost by 1 -2 cents/KWh (See page 5 Column S) ($10 -$20 per megawatt hour). Assuming that the current average cost of renewable energy at the buss bar is $100 to $180 per megawatt hour, the incremental increase for delivered renewable generation to neighboring utilities is approximately %10 to %12. This could still provide Nevada based renewable generation to be competitive with California based renewable generation.

3. If the Projects were "rolled into" the NV Energy System transmission rates, the **incremental cost** to all NV Energy transmission systems would be less than $.0018/KWh or .18 cent/kWh (See page 5 Column R). (To put this in perspective an average residential energy customer at an assumed average use of 1000 kwh/month would have to pay an additional cost of approximately $.20 – $1.25/month – See page #6, Column W) The offsetting benefits to the State of Nevada of developing economic diversification should be considered and alternative structures for offsetting these costs should be considered. (See Section 3 - Benefits to Nevada) It will be important to evaluate and consider the Benefits to Nevada when reviewing the impact of the projects' cost to the transmission customer rates.

4. A hypothetical consideration of rolling any of the Projects into the CAISO reflects that the incremental cost for each CAISO transmission user is approximately $.0001 - $.0002/kWh or .01 - .02 cents/kWh (See page 7 Column R). (It should be noted that the California buyer is the ultimate user of the renewable resource and ultimate "payer" of the transmission cost.)

2.3 EXPLANATION OF PROCESS & RESULTS

The sensitivity spreadsheet and supporting data has been attached to this discussion as Attachment 2-1. This attachment is referenced in the following discussion and should be referenced.

2.3.1 Project Summary Costs - Page 1 of Attachment 2-1

The summary information presented in on page 1 is taken from the *Transmission Initiative Routing Study* prepared for NEAC and submitted in February 2012. This information provides two key elements necessary for evaluation. The total estimated installed cost for the evaluated projects and the estimated firm transmission export rating in megawatts.

2.3.2 Transmission Rate Simplified Flow – Page 2 of Attachment 2-1

This flow chart provides an example calculation given the information for **"Project Parameters 345 kV East Project"** a cost of the Project of $230.57 million, the estimated firm export rating of 400 megawatts and subscription by shippers (generators) on the transmission line of 80%.

The amortization of the cost of **"Financing"** 60% financed by debt at 5%, and 40% financed by equity with a return on equity of 10% the monthly cost recovery would be $742,650 and the monthly return of equity would be $809,367. The total monthly capital cost recovery would then be: $1,552,016. The assumptions of the split of debt and equity and interest for debt and equity could vary widely based on financing structure and prevailing interest rates available at the time of financing. The spreadsheet model can easily be utilized to perform sensitivity studies for varying these assumptions. For this evaluation financing was modeled to reflect utility type financing, but could be altered based on specific financing structures to reflect the differences in results.

- **Operations and Maintenance (O&M)** cost is estimated at 30% of capital cost recovery including debt and equity or $466,605 per month. Each project ownership structure would affect the O&M costs.

- **Calculated Project Transmission Rate** is calculated by dividing $1,784,819 (the total of $1,552,016 & $465,605) by 320 megawatts (80% of firm capacity of 400 megawatts) resulting in a calculated transmission rate for this Project of $6.31/kw-month.

- **Calculated Project Transmission Rate for all kWh's transported** is calculated by dividing the calculated transmission rate ($6.61/kw-month) by the pro-rated generation type capacity factors and per cent of generation types shipped on project (70.85%) (shown below right in the box on Page 2) and then dividing by 730 hours per month to result in average cost for transmission for the generation shipped on this project assuming all cited parameters of $.0122/kWh.

- **Summary Results** calculates, for the cost of transmission for a typical generation type transported on the transmission project. If the typical cost of renewable generation is approximately $100 -$180/mwh (10 - 18 cents/kWh) and the cost of transmission is 1 -2 cents/kWh; the effective additional cost of generation (all other factors remaining the same) is 10% - 12% additional cost to generation.

This simplified flow example is then similarly utilized for all other evaluated projects on pages (3-7) for various other assumptions regarding options of rolling in transmission rates to reflect the resulting changes to transmission rates and the corresponding rate effects on all kWh's shipped on the projects. These scenarios are discussed below.

2.3.3 Example - Page 3 of Attachment 2-1

This example expands the calculations for the 345 kV East Project to project the impact if the Project was rolled into the proposed combined NV Energy state wide transmission system. Additionally a projected cost impact for all transmission users is provided in $/kwh. In order to perform this calculation, it necessary to estimate a likely transmission rate for the combined Nevada Power Company and Sierra Pacific Power Company (NV Energy).

The calculation is shown on page #8. The existing rates for the separate transmission systems are shown on page #9. Assumptions are made that the existing coincident transmission load for both Nevada Power Company (5015 megawatts) and Sierra Pacific Power Company (2200 megawatts) would result in combined monthly revenue of approximately $13,269,000. The calculation was performed dividing revenue by megawatts per month which results in an imputed transmission rate of $1.84/kw-month. Some additional revenue was calculated for additional transmission system revenue as listed to result in gross monthly transmission revenue of $14,372,451.

It is noted that the presumption has been that NV energy would file a FERC combined system rate in anticipation of the completion of the "On-line" which is under construction. NV Energy has not filed a rate application and until all transmission costs and revenues are addressed and approved by FERC it is difficult to accurately predicts what the combined system rate or monthly revenue requirement will be. The application of the estimated $1.84 rate to the sensitivity modeling does not dramatically affect the premise of the results.

The "Example" page 3 & Column "O" Rows "19 & 20" show that the rolled in rate for the Project to NV energy would increase the transmission rate from $1.84/kW-month to $2.02/kW-month or $1.98/kW-month (All other factors remaining the same). The effect on all users of the transmission rate would be approximately .4 of a cent for all kilowatt hours transported on the rolled in transmission system. Columns "Q & R" and Rows "19 & 21" provide the calculation of the incremental cost to all transmission users given a rolled into NV Energy rate including the 345 kV East Project. This incremental amount for rolling in the 345 kV East Transmission Project is 14 to 18 cents/kW/per month in the transmission rate and the effect on the incremental cost of delivered energy is approximately .03 cents/kWh.

Column "S & T" and Row "19 & 21" reflect what the "not rolled in" transmission cost of energy delivered from a generator connected to NV Energy and transported across the Project to the interconnected utility and eventually the purchasing utility. The result is estimated to be approximately 1-1.5 cent/kWh.

2.3.4 Example (with comments)- Page 4 of Attachment 2-1

This page is the same as the Example on Page 3, with Comments shown for each calculation performed to aid in understanding the analysis.

2.3.5 Project Rate Analysis - Page 5 of Attachment 2-1

This page provides calculations for all evaluated transmission projects and provides the same calculations and analysis as shown in both page 3 and page 4 where only one project was analyzed.

The calculations are based on a "consolidated line loading" of 45% geothermal, 1.4% wind, 3.4% photovoltaic and 21% concentrated solar, and the respective representative capacity factors for each generation type. A proration is performed to provide a representative effective capacity factor of 70.85% for each transmission Project. All these assumptions can be varied to yield different mixes of generation types; however until the actual subscription of generation types are known, this is an estimate of likely subscriptions and estimated capacity factors.

The results reflect that the individual projects would likely have less than a .1 cent/kWh incremental increase to energy costs if rolled into the NV Energy transmission system. The cost to the out of state purchaser by the resulting "and" pricing for transmission where NV Energy's Transmission Rate and the Project transmission rate are both charged is approximately 1.0 to 1.5 cents/kWh (Column "T").

The following is an example (for information) of a current NV Energy utility bill that reflects all the current additional charges that are applied to the Nevada ratepayers. These additional charges consist of multiple adders that include renewable energy programs, undergrounding of power lines surcharge, and other programs. Note that from page 6 of Attachment 2.1 (see column W), this fee would range between $.23 to $1.27 per 1,000kwh based on the various project evaluations.

ELECTRIC - DOMESTIC SERVICE

Meter Number	Service Category	Service Period From	To	Bill Days	Meter Readings Previous	Current	Meter Multiplier	Billing Usage
KWH	Jan 19	Feb 17	29	64925	66223	1	1,298	

ELECTRIC CONSUMPTION	1,298.00	KWH x	.1043100	135.39
DEFERRED ENERGY ADJUSTMENT	1,298.00	KWH x	.0156500CR	20.31CR
TEMP. GREEN POWER FINANCING (TRED)	1,298.00	KWH x	.0014200	1.84
RENEWABLE ENERGY PROGRAM (REPR)	1,298.00	KWH x	.0059500	7.72
ENERGY EFFICIENCY (EE) CHARGE	1,298.00	KWH x	.0029800	3.87
BASIC SERVICE CHARGE				9.25
LOCAL GOVERNMENT FEE			4%	5.51
UNIVERSAL ENERGY CHARGE	1,298.00	KWH x	.0003900	.51
WASHOE CO. UNDERGROUNDING SURCHARGE	1,298.00	KWH x	.0015900	2.06
TOTAL ELECTRIC SERVICE AMOUNT				$145.84

2.3.6 Rate Analysis & Checks - Page 6 of Attachment 2-1

This page is the same as page 5 with additional Columns "U", "V" and "W". Columns "U" & "V" verify calculations for additional costs in $/month of the incremental Project transmission costs on a monthly basis.

Column "V" calculates the estimated incremental costs for a residential customer using 1000 kWh's per month. The range of impact is approximately $.20 - $1.30 per month.

2.3.7 Rolled Into CAISO - Page 7 of Attachment 2.1

This page reflects a hypothetical evaluation if the Projects transmission costs were rolled into the CAISO. Page 9 provides the CAISO transmission rate, system loading and monthly revenue requirements in order to calculate the hypothetical effect of rolling each of the transmission Projects in to the CAISO. "Q & R" provide the resulting calculations for both the incremental transmission rate and the incremental effect on $/kWh of energy in the CAISO system. While the ultimate determination of costs would be more complicated this is an indicative effect to pricing as calculated on page 5.

As shown in column "R" the $/kWh cost no greater than approximately $.0002/kWh or .02 cents/kWh. Rolling in the Projects to a much larger transmission system dilutes the incremental cost to all transmission users.

ATTACHMENT 2.1

TRANSMISSION RATES SENSITITY ANALYSIS SPREADSHEET

&

SUPPORTING DATA

Project Summary Costs

Project & Description	Voltage	Project Mileage	Transmission Estimated Cost[1]	Substation Names	Substation Estimated Cost[1]	Total Project Estimated Cost[1]	Average Total Estimated Cost/Mile[1]	Potential Incremental Path Rating (mw)		Total Cost per kw		Comments
								Low	High	Low	High	
North Project:												
Oreana to Viewland & No LMUD	345 kV	126	$172,880,000	Oreana Sub	$8,900,000							Assumes Viewland Sub is built from a green field site. Assumes that NVE RTI from Ft. Sage to Viewland is not constructed, but NVE RTI from Dixie Valley to Oreana is constructed.
				Viewland Sub	$16,100,000							
Assumes partial RTI only (see comments)				Phase Shifter	$3,200,000							
Total		**126**	**$172,880,000**		**$28,200,000**	**$201,080,000**	**$1,596,000**		**70**		$2,873	
or												
Oreana to Viewland & LMUD	345 kV	126	$172,880,000	Oreana Sub	$8,900,000							This project combined with the LMUD project, have a combined 1000MW incremental path increase. Same RTI scenario as above.
				Viewland Sub	$12,900,000							
Assumes partial RTI only (see comments)				Phase Shifter	$3,200,000							
Total		**126**	**$172,880,000**		**$25,000,000**	**$197,880,000**	**$1,570,000**		**500**		$396	
East Project:												
Robinson Summit to IPP	345 kV	167	$207,870,000	Robinson Summit	$13,000,000							
				IPP Sub	$9,700,000							
Not RTI Dependent **Total**		**167**	**$207,870,000**		**$22,700,000**	**$230,570,000**	**$1,381,000**	**400**	**600**	$576	$384	
or												
Robinson Summit to IPP	500 kV	167	$303,840,000	Robinson Summit	$17,900,000							
				IPP Sub	$92,000,000							
Not RTI Dependent **Total**		**167**	**$303,840,000**		**$109,900,000**	**$413,740,000**	**$2,477,000**	**750**	**1000**	$552	$414	
South Project:												
Anaconda to Clayton Substation	230 kV	37	$20,840,000	Anaconda Moly	$12,100,000							Most of the transfers must come from Tonopah area generation. High-speed transfer tripping required.
&				Clayton Sub1	$75,350,000							
Clayton to Antelope Substation	500 kV	253	$476,120,000	Antelope Sub	$10,900,000							
Assumes No RTI **Total**		**290**	**$496,960,000**		**$98,350,000**	**$595,310,000**	**$2,053,000**	**750**	**1000**	$794	$595	
or												
Anaconda to Clayton Substation	230 kV	37	$20,840,000	Anaconda Moly	$12,100,000							Half the rating increase must be scheduled to Pahrump/Eldorado and half to Antelope. Some high-speed transfer tripping may be required.
&				Clayton Sub1	$75,350,000							
Clayton to Antelope Substation	500 kV	253	$476,120,000	Antelope Sub	$10,900,000							
&				Clayton Sub2	$17,650,000							
Clayton to Pahrump Substation	500 kV	174	$299,790,000	Pahrump Sub	$17,900,000							
Assumes No RTI & with VEA **Total**		**464**	**$796,750,000**		**$133,900,000**	**$930,650,000**	**$2,006,000**	**1500**	**2000**	$620	$465	
or												
Lida to Antelope Substation	500 kV	251	$476,230,000	Lida Sub	$30,300,000							
				Antelope Sub	$10,900,000							
Assumes RTI **Total**		**251**	**$476,230,000**		**$41,200,000**	**$517,430,000**	**$2,061,000**	**750**	**1000**	$690	$517	

[1] *Costs are rounded*

Trans Rate Simplified Flow

Note: **All assumptions are for "order of magnitude" and example purposes**

Key: Blue font = Input
Green font = Results

Project Parameters:
(345 kV - East Project)

Project Cost	Example	$230.57 million
Project Firm Capacity	Example	400 megawatts
Project Subscription Factor	Example	80%

Financing:

% Debt & Equity	Example	60%/40%
Cost of Debt & Equity	Example	5%/10%
Amortization Period	Example	30 years
Results:		
Cost Recovery for Debt		**($742,650)/month**
Cost Recovery for Equity		**($809,367)/month**
Total Cost Recovery		**($1,552,016)/month**

O&M:

% Monthly Capital Cost Recovery	Example	30%

Includes:
Monthly Maintenence Cost
Monthly Adminstrative Labor & Overheads
Monthly Taxes
Monthly Insurance
All Other Operating Costs

Results:
Total O&M Cost Recovery **($465,605)/month**

Calculated Project Transmission Rate:

Total Capital & O&M Recovery	Example	($2,017,621) million
Divided by kW/month of Subscribed Capacity	Example	320,000 kW/month
Transmission Rate Results:	**Example**	**($6.31)/ kW/month**

Calculated Project Transmission Rate effect for All kwh's transported:

Transmission Rate	Example	($6.31)/ kW/month
Divided by the pro-rated generation type Capacity Factors		
(See Calculation box below)	Example	70.85 %
& divided by 730 kwh/month		
Results:	**Example**	**($.0122)/kwh**

Summary Results:
For each kwh (on average) of generation transported on the project the cost of transmission is:
1 cent/kwh
If typical renewable generation cost is : **10 cents /kwh**
The cost of generation increase for the transmission project is: **10%**

Resource Type	Geothermal	Wind	PV	CSP
X'mission Line Load	50%	5%	15%	30%
CF	90%	28%	23%	70%
eff CF	45.00%	1.40%	3.45%	21.00%
			Total	**70.85%**

Capacity Factors & Resource Loading

Example

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	**NEAC Transmission Rate Analysis**								**CONSOLIDATED TRANSMISSION USE**											
2	**EXAMPLE**										effective CF						Additional Cost		Additional Cost	
3											70.85%	NV Energy Rolled in Rate Info			Rolled In		Rolled In		Not Rolled In	
4						30%					Average	Projected	Total	Calculated	Rolled In	Average	Diff	Average	Average	Average
5				Total	Capital	O&M	Total				Cost	Rate	Load	Cost	Rate	Cost	Rate	Cost	Rate	Cost
6	Project	Line	Voltage	Cap Cost	Cost	Cost	Cost	Capacity	Subscription	Trans rate	Not	Combined	average	Recovery	Projected	Rolled In	Projected	Rolled In	& Pricing	& Pricing
7		Length	AC	(million)	Recovery	Recovery	Recovery	Firm	Factor		Rolled In	System					Diff	Diff		
8		miles	kV	$	$/month	$/month	$/month	mw	%	$/Kw/mo	$/kwh	$/Kw/mo	mw/month	$/month	$/Kw/mo	$/kwh	$/Kw/mo	$/kwh	$/Kw/mo	$/kwh
9																				
10												(1.84)	7,815	(14,379,600)						
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19								400	80%	($6.31)	($0.0122)				(2.02)	($0.0039)	(0.176)	($0.0003)	($8.15)	($0.0157)
20	East	167	345	230.57	($1,552,016)	$ (465,605)	($2,017,621)													
21								600	80%	($4.20)	($0.0081)				(1.98)	($0.0038)	(0.137)	($0.0003)	($6.04)	($0.0117)
22																				
23																				
24																				
25																				
26																				
27					Debt/Equity	Interest	Amortization		Notes:					Resource Type	Geothermal		Wind	PV	CSP	
28						Rate	Period							Line Load	50%		5%	15%	30%	
29					%	%	Years		1	All NV Energy Data has not been verified				CF	90%		28%	23%	70%	
30														eff CF	45.00%		1.40%	3.45%	21.00%	
31				Debt	60%	5.00%	30		2	7,215 megawatts consolidated Peak in 2010								Total	70.85%	
32				Equity	40%	10.00%				Source EEI presentation NYSE										
33				Financial Parameters						EEI fall financial conference				Capacity Factors & Resource Loading						
34																				
35				Check Calculations																
36				Debt	($742,650)	$138.34														
37				Equity	($809,367)	$92.23		RATE												
38				Total	($1,552,016)	$230.57	checks	($4.85)	See Row 14 &15											
39					PMT	PV														

Example & Comments

NEAC Transmission Rate Analysis

EXAMPLE & COMMENTS

CONSOLIDATED TRANSMISSION USE

Note 1
This is based on assumed experienced "Cost of Ownership"

Note 2
Calculation based on assumed parameters (see below)

Note 5
Calculation based on combined rate and coincident loads

effective CF 70.85%

30%

Project	Line Length	Voltage AC	Total Cap Cost (million)	Capital Cost Recovery	O&M Cost Recovery	Total Cost Recovery	Capacity Firm	Subscription Factor	Project Trans rate	Average Cost Not Rolled In	Projected Combined System	Total Load average	Calculated Cost Recovery	Rolled In Rate Projected	Rolled In Average Cost Rolled In	Additional Cost Rolled In Diff Rate Projected Diff	Additional Cost Rolled In Average Cost Rolled In Diff	Additional Cost Not Rolled In Average Rate & Pricing	Additional Cost Not Rolled In Average Cost & Pricing
	miles	kV	$	$/month	$/month	$/month	mw	%	$/Kw/mo	$/kwh	$/Kw/mo	mw/month	$/month	$/Kw/mo	$/kwh	$/Kw/mo	$/kwh	$/Kw/mo	$/kwh
											(1.84)	7,815	(14,379,600)						
East	167	345	230.57	($1,552,016)	$ (465,605)	($2,017,621)	400	80%	($6.31)	($0.0122)				(2.02)	($0.0039)	(0.176)	($0.0003)	($8.15)	($0.0157)
							600	80%	($4.20)	($0.0081)				(1.98)	($0.0038)	(0.137)	($0.0003)	($6.04)	($0.0117)

Results 1
Calculated transmission rate for Project only to recover costs based on $/kw/mo

Results 2
This is the cost effect for each kwh transported on the Project.

Results 3
If the Project was constructed and rolled into existing transmission the resulting rate would be as shown.

Results 4
This would be the cost effect for every kwh on the transmission system

Results 5
This would be the combinded rate to transport on existing and Project transmission

Results 6
This is the cost effect for every kwh moved across combined transmission system.

Note 6
Assumes that Project would be funded by % debt and % equity.

Note 7
Assumed interest rates for debt and equity respectively.

Note 8
Assumed amortization period for Project financing.

	Debt/Equity	Interest Rate	Amortization Period
	%	%	Years
Debt	60%	5.00%	30
Equity	40%	10.00%	

Financial Parameters

Notes:

1. All NV Energy Data has not been verified
2. 7,215 megawatts consolidated Peak in 2010

Source EEI presentation NYSE

EEI fall financial conference

Resource Type	Geothermal	Wind	PV	CSP
Line Load	50%	5%	15%	30%
CF	90%	28%	23%	70%
eff CF	45.00%	1.40%	3.45%	21.00%
			Total	70.85%

Capacity Factors & Resource Loading

Check Calculations

Debt	($742,650)	$138.34
Equity	($809,367)	$92.23
Total	($1,552,016)	$230.57
	PMT	PV

checks ($4.85) See Row 14 &15

Note 9
Assumed resource loading of Renewable Energy Types for transmission service

Note 10
Assumed Capacity Factors for Renewable Energy Types in Nevada

Note 11
This is the pro-rata calculation reflecting both Resource Types and their respective Capacity Factors

Note 12
This is a check on payment calculation for verification

Project Rates Analysis

NEAC Transmission Rate Analysis

Line	Line Length miles	Voltage AC kV	Total Cap Cost (million) $	Capital Cost Recovery $/month	O&M Cost Recovery $/month	Total Cost Recovery $/month	Capacity Firm mw	Subscription Factor %	Trans rate $/Kw/mo	Average Cost Not Rolled In $/kwh	Projected Rate Combined System $/Kw/mo	Total Load average mw/month	Calculated Cost Recovery $/month	Rolled In Rate Projected $/Kw/mo	Average Cost Rolled In $/kwh	Diff Rate Projected Diff $/Kw/mo	Average Cost Rolled In Diff $/kwh	Average Rate & Pricing $/Kw/mo	Average Cost & Pricing $/kwh
CONSOLIDATED TRANSMISSION USE																			
effective CF										70.85%	NV Energy Rolled in Rate					Rolled In Additional Cost		Not Rolled In	
					30%						(1.84)	7,815	(14,379,600)						
North	126	345	197.88	($1,331,973)	$ (399,592)	($1,731,565)	500	80%	($4.33)	($0.0084)				(1.96)	($0.0038)	(0.121)	($0.0002)	($6.17)	($0.0119)
							1000	80%	($2.16)	($0.0042)				(1.87)	($0.0036)	(0.030)	($0.0001)	($4.00)	($0.0077)
							400	80%	($6.31)	($0.0122)				(2.02)	($0.0039)	(0.176)	($0.0003)	($8.15)	($0.0157)
East	167	345	230.57	($1,552,016)	$ (465,605)	($2,017,621)													
							600	80%	($4.20)	($0.0081)				(1.98)	($0.0038)	(0.137)	($0.0003)	($6.04)	($0.0117)
							750	80%	($6.03)	($0.0117)				(2.14)	($0.0041)	(0.299)	($0.0006)	($7.87)	($0.0152)
East	167	500	413.74	($2,784,973)	$ (835,492)	($3,620,465)													
							1000	80%	($4.53)	($0.0088)				(2.09)	($0.0040)	(0.249)	($0.0005)	($6.37)	($0.0123)
							750	80%	($8.68)	($0.0168)				(2.33)	($0.0045)	(0.488)	($0.0009)	($10.52)	($0.0203)
South Alt (w/o RTI)	200	500	595.31	($4,007,160)	$ (1,202,148)	($5,209,308)													
							1000	80%	($6.51)	($0.0126)				(2.27)	($0.0044)	(0.434)	($0.0008)	($8.35)	($0.0161)
							1500	80%	($6.79)	($0.0131)				(2.50)	($0.0048)	(0.658)	($0.0013)	($8.63)	($0.0167)
South +	452.3	500	930.65	($6,264,406)	$ (1,879,322)	($8,143,728)													
South Alt (w/o RTI)							2000	80%	($5.09)	($0.0098)				(2.39)	($0.0046)	(0.552)	($0.0011)	($6.93)	($0.0134)
							750	80%	($7.55)	($0.0146)				(2.25)	($0.0043)	(0.407)	($0.0008)	($9.39)	($0.0181)
South (w/RTI)	252.3	500	517.43	($3,482,933)	$ (1,044,880)	($4,527,813)													
							1000	80%	($5.66)	($0.0109)				(2.19)	($0.0042)	(0.355)	($0.0007)	($7.50)	($0.0145)

Financial Parameters	Debt/Equity	Interest Rate	Amortization Period
	%	%	Years
Debt	60%	5.00%	30
Equity	40%	10.00%	

Check				
Debt	($742,650)	$138.34		
Equity	($809,367)	$92.23		RATE
Total	($1,552,016)	$230.57	Accurate	($4.85)
	PMT	PV		

Notes:

1. All NV Energy Data has not been verified
2. 7,215 megawatts consolidated Peak in 2010
   Source EEI presentation NYSE
   EEI fall financial conference

See Row 14 &15 (No O&M)

Capacity Factors & Resource Loading					
Resource Type	Geothermal	Wind	PV	CSP	
Line Load	50%	5%	15%	30%	
CF	90%	28%	23%	70%	
eff CF	45.00%	1.40%	3.45%	21.00%	
			Total	70.85%	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	W
1	**NEAC Transmission Rate Analysis**								**CONSOLIDATED TRANSMISSION USE**												**Check**	**Check**
2										**effective CF**							**Rolled In**					**1000 kwh/mo**
3											**70.85%**	**NV Energy Rolled in Rate**					**Additional Cost**		**Not Rolled In**		**Rolled In**	**Rolled In**
4						**30%**																
5				**Total**	**Capital**	**O&M**	**Total**				**Average**	**Projected**	**Total**	**Calculated**	**Rolled In**	**Average**	**Diff**	**Average**	**Average**	**Average**	**Incremental**	**Incremental**
6	**Line**	**Line**	**Voltage**	**Cap Cost**	**Cost**	**Cost**	**Cost**	**Capacity**	**Subscription**	**Trans rate**	**Cost**	**Rate**	**Load**	**Cost**	**Rate**	**Cost**	**Rate**	**Cost**	**Rate**	**Cost**	**Revenue**	**Rate**
7		**Length**	**AC**	**(million)**	**Recovery**	**Recovery**	**Recovery**	**Firm**	**Factor**		**Not**	**Combined**	**average**	**Recovery**	**Projected**	**Rolled In**	**Projected**	**Rolled In**	**& Pricing**	**& Pricing**	**Subsidy**	**Subsidy**
8		**miles**	**kV**	**$**	**$/month**	**$/month**	**$/month**	**mw**	**%**	**$/Kw/mo**	**Rolled In $/kwh**	**System $/Kw/mo**	**mw/month**	**$/month**	**$/Kw/mo**	**$/kwh**	**Diff $/Kw/mo**	**Diff $/kwh**	**$/Kw/mo**	**$/kwh**	**$/month**	**Residential $/month**
9												(1.84)	7,815	(14,379,600)									
10								500	80%	($4.33)	($0.0084)				(1.96)	($0.0038)	(0.121)	($0.0002)	($6.17)	($0.0119)	(947,089)	($0.23)
11	North	126	345	197.88	($1,331,973)	$ (399,592)	($1,731,565)															
12								1000	80%	($2.16)	($0.0042)				(1.87)	($0.0036)	(0.030)	($0.0001)	($4.00)	($0.0077)	(235,461)	($0.06)
13																						
14								400	80%	($6.31)	($0.0122)				(2.02)	($0.0039)	(0.176)	($0.0003)	($8.15)	($0.0157)	(1,372,617)	($0.34)
15	East	167	345	230.57	($1,552,016)	$ (465,605)	($2,017,621)															
16								600	80%	($4.20)	($0.0081)				(1.98)	($0.0038)	(0.137)	($0.0003)	($6.04)	($0.0117)	(1,068,777)	($0.26)
17																						
18								750	80%	($6.03)	($0.0117)				(2.14)	($0.0041)	(0.299)	($0.0006)	($7.87)	($0.0152)	(2,337,038)	($0.58)
19	East	167	500	413.74	($2,784,973)	$ (835,492)	($3,620,465)															
20								1000	80%	($4.53)	($0.0088)				(2.09)	($0.0040)	(0.249)	($0.0005)	($6.37)	($0.0123)	(1,948,956)	($0.48)
21																						
22								750	80%	($8.68)	($0.0168)				(2.33)	($0.0045)	(0.488)	($0.0009)	($10.52)	($0.0203)	(3,812,595)	($0.94)
23	South Alt	200	500	595.31	($4,007,160)	$ (1,202,148)	($5,209,308)															
24	(w/o RTI)							1000	80%	($6.51)	($0.0126)				(2.27)	($0.0044)	(0.434)	($0.0008)	($8.35)	($0.0161)	(3,390,257)	($0.84)
25																						
26								1500	80%	($6.79)	($0.0131)				(2.50)	($0.0048)	(0.658)	($0.0013)	($8.63)	($0.0167)	(5,145,614)	($1.27)
27	South +	452.3	500	930.65	($6,264,406)	$ (1,879,322)	($8,143,728)															
28	South Alt							2000	80%	($5.09)	($0.0098)				(2.39)	($0.0046)	(0.552)	($0.0011)	($6.93)	($0.0134)	(4,316,078)	($1.07)
29	(w/o RTI)																					
30								750	80%	($7.55)	($0.0146)				(2.25)	($0.0043)	(0.407)	($0.0008)	($9.39)	($0.0181)	(3,179,691)	($0.79)
31	South	252.3	500	517.43	($3,482,933)	$ (1,044,880)	($4,527,813)															
32	(w/RTI)							1000	80%	($5.66)	($0.0109)				(2.19)	($0.0042)	(0.355)	($0.0007)	($7.50)	($0.0145)	(2,772,046)	($0.69)
33																						
34					**Debt/Equity**	**Interest**	**Amortization**			**Notes:**				**Resource Type**		**Geothermal**		**Wind**	**PV**	**CSP**		
35						**Rate**	**Period**							**Line Load**		50%		5%	15%	30%		
36					**%**	**%**	**Years**		**1**	**All NV Energy Data has not been verified**				**CF**		90%		28%	23%	70%		
37														**eff CF**		45.00%		1.40%	3.45%	21.00%		
38				**Debt**	60%	5.00%	30		**2**	**7,215 megawatts consolidated Peak in 2010**									**Total**	**70.85%**		
39				**Equity**	40%	10.00%				**Source EEI presentation NYSE**												
40				**Financial Parameters**						**EEI fall financial conference**				**Capacity Factors & Resource Loading**								
41																						
42				Check																		
43				Debt	($742,650)	$138.34																
44				Equity	($809,367)	$92.23		RATE														
45				Total	($1,552,016)	$230.57	Accurate	($4.85)	See Row 14 &15													
46					**PMT**	**PV**																

Rolled in to CAISO

NEAC Transmission Rate Analysis

									CONSOLIDATED TRANSMISSION USE								CAISO			Delivered to CA
									effective CF								Rolled In			Not Rolled In
											70.85%	CAISO Energy Rolled in Rate					Additional Cost			thru NV Energy
						30%					Average	Projected	Total	Calculated	Rolled In	Average	Diff	Average	Average	Average
				Total	Capital	O&M	Total				Cost	Rate	Load	Cost	Rate	Cost	Rate	Cost	Rate	Cost
	Line	Line	Voltage	Cap Cost	Cost	Cost	Cost	Capacity	Subsrciption	Trans rate	Not	Combined	average	Recovery	Projected	Rolled In	Projected	Rolled In	& Pricing	& Pricing
		Length	AC	(million)	Recovery	Recovery	Recovery	Firm	Factor		Rolled In	System					Diff	Diff		
		miles	kV	$	$/month	$/month	$/month	mw	%	$/Kw/mo	$/kwh	$/Kw/mo	mw/month	$/month	$/Kw/mo	$/kwh	$/Kw/mo	$/kwh	$/Kw/mo	$/kwh
												(4.94)	23,767	(117,408,980)						
	North	126	345	197.88	($1,331,973)	$ (399,592)	($1,731,565)	500	80%	($4.33)	($0.0084)				(4.93)	($0.0095)	0.010	$0.0000	($6.17)	($0.0119)
												NV Energy								
								1000	80%	($2.16)	($0.0042)	(1.84)	7,815	(14,379,600)	(4.85)	($0.0094)	0.090	$0.0002	($4.00)	($0.0077)
								400	80%	($6.31)	($0.0122)				(4.96)	($0.0096)	(0.018)	($0.0000)	($8.15)	($0.0157)
	East	167	345	230.57	($1,552,016)	$ (465,605)	($2,017,621)													
								600	80%	($4.20)	($0.0081)				(4.93)	($0.0095)	0.015	$0.0000	($6.04)	($0.0117)
								750	80%	($6.03)	($0.0117)				(4.97)	($0.0096)	(0.027)	($0.0001)	($7.87)	($0.0152)
	East	167	500	413.74	($2,784,973)	$ (835,492)	($3,620,465)													
								1000	80%	($4.53)	($0.0088)				(4.93)	($0.0095)	0.013	$0.0000	($6.37)	($0.0123)
								750	80%	($8.68)	($0.0168)				(5.03)	($0.0097)	(0.092)	($0.0002)	($10.52)	($0.0203)
	South Alt	200	500	595.31	($4,007,160)	$ (1,202,148)	($5,209,308)													
	(w/o RTI)							1000	80%	($6.51)	($0.0126)				(4.99)	($0.0097)	(0.051)	($0.0001)	($8.35)	($0.0161)
								1500	80%	($6.79)	($0.0131)				(5.03)	($0.0097)	(0.089)	($0.0002)	($8.63)	($0.0167)
	South +	452.3	500	930.65	($6,264,406)	$ (1,879,322)	($8,143,728)													
	South Alt							2000	80%	($5.09)	($0.0098)				(4.95)	($0.0096)	(0.009)	($0.0000)	($6.93)	($0.0134)
	(w/o RTI)																			
								750	80%	($7.55)	($0.0146)				(5.00)	($0.0097)	(0.064)	($0.0001)	($9.39)	($0.0181)
	South	252.3	500	517.43	($3,482,933)	$ (1,044,880)	($4,527,813)													
	(w/RTI)							1000	80%	($5.66)	($0.0109)				(4.96)	($0.0096)	(0.023)	($0.0000)	($7.50)	($0.0145)

					Debt/Equity	Interest	Amortization			Notes:					Resource Type		Geothermal		Wind	PV	CSP
						Rate	Period								Line Load		50%		5%	15%	30%
					%	%	Years		1	All NV Energy Data has not been verified					CF		90%		28%	23%	70%
															eff CF		45.00%		1.40%	3.45%	21.00%
				Debt	60%	5.00%	30		2	7,215 megawatts consolidated Peak in 2010										Total	70.85%
				Equity	40%	10.00%				Source EEI presentation NYSE											
				Financial Parameters						EEI fall financial conference					Capacity Factors & Resource Loading						
				Check																
				Debt	($742,650)	$138.34														
				Equity	($809,367)	$92.23		RATE												
				Total	($1,552,016)	$230.57	Accurate	($4.85)	See Row 14 &15											
					PMT	PV														

NVE Combined Trans Rate

NV Energy Combined Transmission Rate Calculation

		NV Power		SPPCo
Total Coincident Tranmission Average Montly Load	**megawatts**	5015		2200
Current Tranmission Rate	**$/kw-mo**	1.4		2.84
Calculated Revenue	**$/month**	$ 7,021,000		$ 6,248,000
Total Revenue	**$/month**			$ 13,269,000
Calculated Transmission Combined Rate	**$/kw-mo**			**$ 1.84**
IF:				
Additional tranmsission Load				
Barrick	**megawatts**			150
Newmont	**megawatts**			100
Mt Wheeler	**megawatts**			25
Fallon	**megawatts**			15
TDPUD	**megawatts**			25
Plumas	**megawatts**			6
Wells	**megawatts**			120
Liberty	**megawatts**			100
	Total			**541**
Overton	**megawatts**	15		
Lincoln County	**megawatts**	8		
	Total	**23**		
All other transmission	**Total**			**564**
			Use	**600**
Then:				
Total Tranmission Load	**megawatts**			**7815**
Calculated Revenue				**$ 14,372,451**

Schedule 7:
Long-Term Firm and Short-Term Firm
Point-To-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity up to the sum of the applicable charges set forth below:

1) **Yearly delivery:** one-twelfth of the demand charge of
   Zone A: $34.08/kW of Reserved Capacity per year or
   Zone B: $16.80/kW of Reserved Capacity per year.

2) **Monthly delivery:**
   Zone A: $2.84/kW of Reserved Capacity per month or
   Zone B: $1.40/kW of Reserved Capacity per month.

3) **Weekly delivery:**
   Zone A: $0.6554/kW of Reserved Capacity per week or
   Zone B: $0.3231/kW of Reserved Capacity per week.

4) **Daily On-Peak delivery:**
   Zone A: $0.1092/kW of Reserved Capacity per day or
   Zone B: $0.0538/kW of Reserved Capacity per day.

5) **Daily Off-Peak delivery:**
   Zone A: $0.0936/kW of Reserved Capacity per day or
   Zone B: $0.0462/kW of Reserved Capacity per day.

The On-Peak Period for Daily service shall be all hours Monday through Saturday, excluding holidays as designated annually by the WECC. For each calendar year, these additional Off-Peak days will be posted on the OASIS on or before November I preceding the applicable Calendar year. The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any day during such week. Energy losses associated with Point-To-Point service under this schedule will not affect the Reserved Capacity.

CAISO TAC Rate

January 01, 2012 TAC Rates
Based on Filed Annual TRR/TRBA and Load Data

TAC Components:		Filed Annual TRR ($) [1]	Filed Annual Gross Load (MWh) [2]		HV Utility Specific Rate ($/MWH) [3] = [1] / [2]		TAC Rate ($/MWH) [4] = total [1]/total [2]		TAC Amount ($) [5] = ([2]) * [4]
PGE	$	374,768,325	89,530,000	$	4.1860	$	6.7722	$	606,311,064
SCE	$	597,707,320	89,629,647	$	6.6686	$	6.7722	$	606,985,889
SDGE	$	200,683,999	21,539,407	$	9.3171	$	6.7722	$	145,868,209
Anaheim	$	29,551,469	2,507,620	$	11.7847	$	6.7722	$	16,981,992
Azusa	$	2,191,184	257,416	$	8.5122	$	6.7722	$	1,743,261
Banning	$	1,623,807	144,652	$	11.2256	$	6.7722	$	979,606
Pasadena	$	14,264,576	1,231,980	$	11.5786	$	6.7722	$	8,343,160
Riverside	$	29,304,431	2,180,985	$	13.4363	$	6.7722	$	14,769,969
Vernon	$	1,241,060	1,181,728	$	1.0502	$	6.7722	$	8,002,846
Atlantic P15	$	30,341,744	-	$	-	$	6.7722	$	0
Startrans	$	5,215,580	-	$	-	$	6.7722	$	0
Trans-Bay Cable	$	123,092,500	-	$	-	$	6.7722	$	0
ISO Total	**$**	**1,409,985,995**	**208,203,435**			**$**	**1,409,985,995**		

Calculated Equivalent Trans Rate ($/kW-month)					
	208,203,435 MWh	**$**	**6.7722**	**$**	**1,409,985,995**
	8760 hrs/yr		**1000 kW/MW**		**12**
	23,767.52 average MW/hr		**730 hrs/month**	**$**	**117,498,833**
		$	**4.944 /kw-month**		

Sample Monthly Residential Energy Bill (1298 KWH)

Service Service Period Bill Meter Readings Meter Billing
Meter Number Category From To Days Previous Current Multiplier Usage
KWH Jan 19 Feb 17 29 64925 66223 1 1,298

ELECTRIC CONSUMPTION 1,298.00 KWH X .1043100 135.39
DEFERRED ENERGY ADJUSTMENT 1,298.00 KWH X .0156500CR 20.31 CR
TEMP. GREEN POWER FINANCING (TRED) 1,298.00 KWH X .0014200 1.84
RENEWABLE ENERGY PROGRAM (REPR) 1,298.00 KWH X .0059500 7.72
ENERGY EFFICIENCY (EE) CHARGE 1,298.00 KWH X .0029800 3.87
BASIC SERVICE CHARGE 9.25
LOCAL GOVERNMENT FEE 4% 5.51
UNIVERSAL ENERGY CHARGE 1,298.00 KWH X .0003900 .51
WASHOE CO. UNDERGROUNDING SURCHARGE 1,298.00 KWH X .0015900 2.06

TOTAL ELECTRIC SERVICE AMOUNT $145.84

SECTION 3: PRELIMINARY TEMPLATE OF ECONOMIC BENEFITS TO NEVADA

3.1 SECTION PURPOSE

The following information has been prepared as a "macro" level evaluation to facilitate discussions and strategy on moving forward with the NEAC proposed projects. The benefits to Nevada are a key element in project justification and should be clearly evaluated in order to gain clarity on "orders of magnitude" of those benefits.

The four projects evaluated herein have been routed and conceptually estimated and designed. There is sufficient life of the projects that investors have indicated interest and regulators and agencies are showing support and interest for further exploration. Moving these projects into the next phase requires an understanding of the risks and benefits, to maintain the current momentum of the efforts and to capitalize on the investor interest The NEAC Board and the State of Nevada should be comfortable with potential economic benefits to provide a sound basis for future development of any of these proposed transmission projects. To support the development process, this sensitivity analysis of the benefits to Nevada has been prepared in a template format to allow for consideration of multiple scenarios and inputs.

While there are multiple evaluation approaches to establish the benefits of these projects to Nevada, this sensitivity evaluation is intended to provide a macro level of information needed at this point of time in the project life while not focusing resources and time on micro level details that can be established and evaluated once policy and direction is determined for these projects. As such, the data included in the three evaluations discussed herein have been obtained from the most current references available, and in some cases based on transmission development knowledge and experience. A conservative approach has been used to present a realistic view point of the resulting benefits. Again, as these evaluations are reviewed, keep in mind that the assumptions can be revised to allow for the sensitivity evaluation of both aggressive and conservative inputs. It should be noted that further verification of some parameters will be required by the Nevada Board of Equalization and it would be beneficial to have some review by the State of Nevada Economic Development Department. The numbers used in this sensitivity analysis allow for the consideration of impacts of variable inputs of economic parameters including economic multipliers, tax rates, project life span, and multiple other factors. These variables often require extensive studies to establish the most applicable tax rates, multipliers and assumptions necessary to perform these sensitivity analyses. As this sensitivity template is reviewed and analyzed, it is critical to maintain the focus on the intent

which is to assist in the evaluation of the macro level benefits to Nevada in order to facilitate the next steps required for further development of these projects.

3.2 SUMMARY

Once the evaluations were completed, the team reviewed the data to evaluate the significance of the results. It is apparent substantial benefits could be R to Nevada from the construction and continued operation of these projects. The summary of results is shown below:

Project	Total Construction Benefits (Trans & Generation)	1st Year Benefits	30yr life Total Benefits	Net Present Value (30yr)
East Project ***500kV***	$2,029,570,120	$60,211,094	$1,168,590,444	$1,135,605,212
East Project ***345kV***	$1,029,401,287	$30,214,638	$585,931,593	$569,354,340
North Project ***345kV***	$839,413,417	$22,609,482	$435,007,230	$422,424,475
South Project ***500kV with RTI***	$1,554,145,398	$47,129,783	$917,161,255	$891,469,332

When a sensitivity analysis is complete on this data, it is clear that any form of tax abatement would affect these economic benefits to both the l State and Counties.

3.3 EVALUATION DISCUSSION

An economic spreadsheet "template" has been developed to allow for consideration of multiple variables and multipliers. The spreadsheet allows for a sensitivity analysis with both fixed inputs based on the project routing, conceptual design, and estimating completed as well as assumptions obtained from current and relevant economic factors and data. All of this is detailed in this discussion with back-up provided where available.

3.3.1 Project Data

To provide an accurate evaluation, project data was taken from the Transmission Initiative Routing Study completed in February 2012. This data provides a conceptual design level estimate that details out the labor and materials, as well as the percentage of line located in Nevada. All of this is critical data that will provide as accurate as possible results in this analysis. The following details were used:

Project	Projected MW Rating	Total Installed Cost	Total Labor % Distribution[1]	Total Material % Distribution[1]	% of Project in Nevada
East Project ***500kV***	1,000	$413,740,000	55.9%	44.1%	45.6%
East Project ***345kV***	500	$230,570,000	60.1%	39.9%	45.6%
North Project ***345kV***	500	$201,080,000	64.2%	35.8%	82.6%
South Project ***500kV with RTI***	1,000	$517,430,000	58.8%	41.2%	12.1%

(1) *Labor and Material Cost Distribution based on conceptual transmission line design and assumes substation distribution to be similar.*

3.3.2 Multipliers

The economic benefits of these transmission line projects include both direct and indirect benefits as well as induced benefits to the State of Nevada. In summary, these benefits consist of the following:

Direct economic benefits that would be realized from the NEAC transmission projects come from the immediate or short term effects created by the construction of the transmission lines, the substations and the resulting renewable generation development.

These direct effects consist in part of:

- Transmission line material import taxes at the County level
- Labor to construct the transmission line
- Labor to construct the renewable generation facilities
- Property taxes
- Permitting fees
- Income of local manufacturers and suppliers and services providers
- Payroll Taxes

Indirect economic benefits resulting from the construction of these transmission projects is realized from in those sectors that help produce the technologies. This is often considered the intellectual capital opportunities that arise in the state from the development and expansions of renewable generation. This indirect effect of renewable energy development and export in general has already begun to take shape in Nevada and can be seen in technological

development, the creation of manufacturing suppliers supporting renewable development, and the increase of firms choosing to establish Nevada as their corporate headquarters. These factors are more difficult to track but should be considered in the final in-depth economic evaluation completed by the State. This high level evaluation presented herein has not captured this indirect effect but notes that it is a factor of value to Nevada.

Examples of indirect benefits to Nevada include:

- Increase in business development within the state
- Expansion and development of suppliers in Nevada
- Intellectual technology development by the developers
- University level expansion of courses of study and research
- Attraction of federal grant funding for students and research in the renewable sector

Induced economic benefits of these transmission projects will occur when the income generated from the direct and indirect effects is re-spent into the local economy. This is typically realized through gas, groceries, and general living expenses and services. Taxes on goods purchased are also realized through this indirect benefit. To account for these factors, State Economic Development Departments typically track and establish multipliers that are applied to the labor and material costs of projects. This calculation then results in a value that captures this benefit.

For example, induced benefits could include increases in:

- Sales of groceries in the towns where generation is developed or construction is completed (of lines, substations and generation plants)
- Income of local businesses in the towns where construction labor spends money
- Jobs increased at local businesses where the new wages are spent

The specific multiplier used for this evaluation was drawn from multiple documents prepared within Nevada over the past 5 years. A current, industry specific multiplier was not known at the time of this evaluation and should be reviewed and better detailed by the State of Nevada or under their direction. However, based on review of available data as well as review of multipliers used on other similar recent projects, the Tri Sage team established the following multipliers for this initial evaluation:

Multiplier	Rate
Economic multiplier applied to construction labor	1.40
Economic multiplier applied to continuing labor force	1.66

1.40 is considered to be a conservative multiplier to account for "leakage" of the labor benefits. Normally this multiplier for construction type projects is in the range of 2.0 or higher. For this evaluation, a lower multiplier was used to account for the transient labor that is common to transmission line construction. The leakage effect is based on the assumption that some portion of the paid labor will be sent to the labor force's home states. A multiplier specific to the construction of transmission lines in the state of Nevada was not found during this evaluation. As such, an assumption of 1.40 was established considering all the above factors.

1.66 is the multiplier applied to the permanent jobs realized from these projects. This is slightly higher than that used for construction labor since these jobs will be based in the State of Nevada. Recent calculation of multipliers by geothermal firms in Nevada arrived at a much higher multiplier, in the range of 4.0. However, this evaluation is intended to provide a conservative evaluation that can be modified and increased in the final in-depth study.

These multipliers were applied to the project data to identify the induced effects on the economy. These values in the spreadsheet have been highlighted to note further validation is required.

3.3.3 Rates / Taxes

It was also critical to capture appropriate taxation benefits on both property and materials. This information was derived from review of the statewide property and sales tax rates and applications by County. The following tax rates are those presently used in the sensitivity template and can be modified to reflect different results:

Tax	Rate
Material Sales Tax	7%
County Tax Rate	3%
Real Property Tax	35% of current value

- The statewide rates were reviewed and an average or typical rate was used for the County tax rate.

- The 35% tax on real property has been used based on the installed cost of either transmission or generation projects. There will be a tax on the real property as well as a tax on the installation. The land portion is not separately identified herein as it is an element of the project cost used in project data.

- A straight-line depreciation is assumed on both the transmission line and associated generation development.

- It was assumed that sales tax would be applicable to the material purchased and installed in the respective state (for example, the portion of the transmission line in Nevada will be taxed within Nevada, as will be the case for both California and Utah.)

- Property taxes would be applicable to the assessed value of infrastructure by County.

3.3.4 Other Evaluation Assumptions

Several basic assumptions were necessary to develop the template analysis. These assumptions are:

- All generation development will occur within a coincident timeframe in order to support the subscriptions on the transmission lines. (Some lag of generation development will likely occur to reach the full build out of the transmission line ratings. For purposes of modeling it was assumed coincident construction and coincident initial operation. The net effect is that the initial benefits might be spread out over a longer period but should not make a material difference.)
- A net present value discount rate of 1% was used.
- No attempt was made to capture the indirect benefits of intellectual capital development resulting from these projects, but it is noted that there is indeed a tangible benefit that should be evaluated further.
- Permanent labor positions for renewable generation are based on 15 FTE positions per 100MW development. (The team was not aware of any studies defining specific labor force levels.)
- Permanent labor position for transmission line development is based on ½ FTE position per 100MW of capacity. (The team was not aware of any studies defining specific labor force levels.)
- The average salary for each of the permanent positions, both in transmission and generation, is assumed to be $70,000/year.
- 30 year depreciation period for both transmission and generation infrastructure.
- Business tax was not included but was identified in the spreadsheet but may be considered at some point. This should be applied if or where applicable.

3.3.5 Depreciation Evaluation

A straight line depreciation schedule was created to capture the net present value of property tax for the overall economic benefit to Nevada.

ATTACHMENT 3.1

BENEFITS TO NEVADA - SENSITITY ANALYSIS TEMPLATES

&

SUPPORTING DATA

Benefits Model 500 kV East

Template For Economic Benefits Analysis

Project	Unit Cost $/Kw	Installed Cost	% Labor	% Materials	Labor Cost	Material Cost	% NV	Nevada Construction Benefits: Labor Economic w/ Multiplier (1.40 Economic mult)	Nevada Construction Benefits: Material Sales Tax (7.00%)
Firm Transmission Capacity & Generation		1000 Megawatts							
500 kV East Project	N/A	$ 414,000,000	55.9%	44.1%	$ 231,426,000	$ 182,574,000	45.6%	$ 147,742,358	$ 5,827,762
Renewable Generation	4,000	$ 4,000,000,000	30%	70%	$ 1,200,000,000	$ 2,800,000,000	100%	$ 1,680,000,000	$ 196,000,000
Totals for Construction								$ 1,827,742,358	$ 201,827,762
Grand Totals for Construction									$ 2,029,570,120

Key:
- ###### = Input
- ###### = Verified Input
- ###### = Needs to be Verified

				Nevada Continuing Benefits/Year: Permanent Jobs # multiplier	Property Tax Calc	Business Tax Base (if applicable)	Business Tax (rate) (if applicable)	
				1.66	3.00%	?	?	
			NV		35.00%			
500 kV East Project	employee/100mw	0.5	45.6%	2.28	$ 1,916,157.60	$ -	$ -	
Renewable Generation	employee/100mw	15	100%	150	$ 40,600,000	$ -	$ -	
			Total	152.28				
Average Salary/year				$ 70,000				
Totals				$ 17,694,936	$ 42,516,158 (first year only, then depreciated)	$ -	$ -	
Grand Totals for Continued Operation							$ 60,211,094	first year
				$ 17,694,936	$ 21,258,079 Average	$ -	$ -	
							$ 38,953,015 Average	per year
Lifetime Value (30 year)							$ 1,168,590,444	30 years
					NPV			
				$ 530,848,080	$604,757,132		$ 1,135,605,212	30 years

Note 1: Based on # of megawatts of export transmission to support same # of megawatts of Renewable Generation Development

Note 2: The development of additional renewable generation & trans will similarly amplify the benefits: (For example, the next 1000 megawatts would approximately double the benefits)

Note 3: No attempt has been made to quantify the economic stimulus of technical support services and manufacturing of related renewable energy industries.

Assumptions:

1. Coincident or near coincident development of generation with the transmission project
2. It is likely that some lag would occur in order to develop 1000 megawatts of generation
3. Any tax rebates or abatements would greatly effect the economic benefits
4. Discount rate for NPV calculations at 1%

Benefits Model 345 kV East

Template For Economic Benefits Analysis

Firm Transmission Capacity & Generation		500	Megawatts					Nevada Construction Benefits	
Project	Unit Cost $/Kw	Installed Cost	% Labor	% Materials	Labor Cost	Material Cost	% NV	Labor Economic w/ Multiplier	Material Sales Tax
								1.40	7.00%
								Economic mult	
345 kV East Project	N/A	$ 230,570,000	60.1%	39.9%	$ 138,572,570	$ 91,997,430	45.6%	$ 88,464,729	$ 2,936,558
Renewable Generation	4,000	$ 2,000,000,000	30%	70%	$ 600,000,000	$ 1,400,000,000	100%	$ 840,000,000	$ 98,000,000
					Totals for Construction			$ 928,464,729	$ 100,936,558
					Grand Totals for Construction				$ 1,029,401,287

Key:
- ###### = Input
- ###### = Verified Input
- ###### = Needs to be Verified

					Nevada Continuing Benefits/Year			
					Permanent Jobs #	Property Tax Calc	Business Tax Base	Business Tax (rate)
					multiplier		(if applicable)	(if applicable)
					1.66	3.00%	?	?
				NV		35.00%		
345 kV East Project		employee/100mw	0.5	45.6%	1.14	$ 1,067,170.19	$ -	$ -
Renewable Generation		employee/100mw	15	100%	75	$ 20,300,000	$ -	$ -
				Total	76.14			
Average Salary/year					$ 70,000			
Totals					$ 8,847,468	$ 21,367,170	$ -	$ -
						first year only, then depreciated		
		Grand Totals for Continued Operation						$ 30,214,638 first year
					$ 8,847,468	$ 10,683,585	$ -	$ -
						Average		
								$ 19,531,053 per year
								Average
		Lifetime Value (30 year)						$ 585,931,593 30 years
						NPV		
					$ 265,424,040	$303,930,300		$ 569,354,340 30 years

Note 1: Based on # of megawatts of export transmission to support same # of megawatts of Renewable Generation Development

Note 2: The development of additional renewable generation & trans will similarly amplify the benefits: (For example, the next 1000 megawatts would approximately double the benefits)

Note 3: No attempt has been made to quantify the economic stimulus of technical support services and manufacturing of related renewable energy industries.

Assumptions:

1. Coincident or near coincident development of generation with the transmission project
2. It is likely that some lag would occur in order to develop 1000 megawatts of generation
3. Any tax rebates or abatements would greatly effect the economic benefits
4. Discount rate for NPV calculations at 1%

Benefits Model 345 kV North

Template For Economic Benefits Analysis

Firm Transmission Capacity & Generation		500 Megawatts						Nevada Construction Benefits	
								Labor	Material
Project	Unit Cost $/Kw	Installed Cost	% Labor	% Materials	Labor Cost	Material Cost	% NV	Economic w/ Multiplier	Sales Tax
								1.40	7.00%
								Economic mult	
345 kV North Project	N/A	$ 197,880,000	64.2%	35.8%	$ 127,038,960	$ 70,841,040	100.0%	$ 177,854,544	$ 4,958,873
Renewable Generation	4,000	$ 2,000,000,000	30%	70%	$ 600,000,000	$ 1,400,000,000	70%	$ 588,000,000	$ 68,600,000
					Totals for Construction			$ 765,854,544	$ 73,558,873
					Grand Totals for Construction				$ 839,413,417

Key:
- ###### = Input
- ###### = Verified Input
- ###### = Needs to be Verified

					Nevada Continuing Benefits/Year			
					Permanent Jobs #	Property Tax Calc	Business Tax Base	Business Tax (rate)
					multiplier		(if applicable)	(if applicable)
					1.66	3.00%	?	?
				NV		35.00%		
345 kV North Project		employee/100mw	0.5	100.0%	2.5	$ 2,008,482.00	$ -	$ -
Renewable Generation		employee/100mw	15	70%	52.5	$ 14,210,000	$ -	$ -
				Total	55			
Average Salary/year					$ 70,000			
Totals					$ 6,391,000	$ 16,218,482	$ -	$ -
						first year only, then depreciated		
		Grand Totals for Continued Operation						$ 22,609,482 first year
					$ 6,391,000	$ 8,109,241	$ -	$ -
						Average		
								$ 14,500,241 per year
								Average
		Lifetime Value (30 year)						$ 435,007,230 30 years
						NPV		
					$ 191,730,000	$230,694,475		$ 422,424,475 30 years

Note 1: Based on # of megawatts of export transmission to support same # of megawatts of Renewable Generation Development

Note 2: The development of additional renewable generation & trans will similarly amplify the benefits: (For example, the next 1000 megawatts would approximately double the benefits)

Note 3: No attempt has been made to quantify the economic stimulus of technical support services and manufacturing of related renewable energy industries.

Assumptions:

1. Coincident or near coincident development of generation with the transmission project
2. It is likely that some lag would occur in order to develop 1000 megawatts of generation
3. Any tax rebates or abatements would greatly effect the economic benefits
4. Discount rate for NPV calculations at 1%

Benefits Model 500 kV South

Template For Economic Benefits Analysis

Firm Transmission Capacity & Generation		1000	Megawatts							
								Nevada Construction Benefits		
								Labor	Material	
		Installed			Labor	Material	%	Economic	Sales	
Project	Unit Cost	Cost	% Labor	% Materials	Cost	Cost	NV	w/ Multiplier	Tax	
	$/Kw							1.40	7.00%	
								Economic mult		
500 kV South Project	N/A	$ 517,430,000	58.8%	41.2%	$ 304,248,840	$ 213,181,160	12.1%	$ 51,539,753	$ 1,805,644	
Renewable Generation	4,000	$ 4,000,000,000	30%	70%	$ 1,200,000,000	$ 2,800,000,000	80%	$ 1,344,000,000	$ 156,800,000	
					Totals for Construction			$ 1,395,539,753	$ 158,605,644	
					Grand Totals for Construction				$ 1,554,145,398	

Key:
- ###### = Input
- ###### = Verified Input
- ###### = Needs to be Verified

					Nevada Continuing Benefits/Year			
					Permanent Jobs #	Property Tax Calc	Business Tax Base	Business Tax (rate)
					multiplier		(if applicable)	(if applicable)
					1.66	3.00%	?	?
				NV		35.00%		
500 kV South Project		employee/100mw	0.5	12.1%	0.605	$ 635,481.65	$ -	$ -
Renewable Generation		employee/100mw	15	80%	120	$ 32,480,000	$ -	$ -
				Total	120.605			
Average Salary/year					$ 70,000			
Totals					$ 14,014,301	$ 33,115,482	$ -	$ -
						first year only, then depreciated		
	Grand Totals for Continued Operation							$ 47,129,783 first year
					$ 14,014,301	$ 16,557,741	$ -	$ -
						Average		
								$ 30,572,042 per year
								Average
	Lifetime Value (30 year)							$ 917,161,255 30 years
						NPV		
					$ 420,429,030	$471,040,302		$ 891,469,332 30 years

Note 1: Based on # of megawatts of export transmission to support same # of megawatts of Renewable Generation Development

Note 2: The development of additional renewable generation & trans will similarly amplify the benefits: (For example, the next 1000 megawatts would approximately double the benefits)

Note 3: No attempt has been made to quantify the economic stimulus of technical support services and manufacturing of related renewable energy industries.

Assumptions:

1. Coincident or near coincident development of generation with the transmission project
2. It is likely that some lag would occur in order to develop 1000 megawatts of generation
3. Any tax rebates or abatements would greatly effect the economic benefits
4. Discount rate for NPV calculations at 1%

Depreciation

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Depreciation**		30 year life											
2				Year	1	2	3	4	5	6	7	8	9	10
3	Declining Balance Depreciation													
4	Not for Property Tax			Depreciation	$2,186,545,248	$1,045,168,629	$499,590,604	$238,804,309	$114,148,460	$54,562,964	$26,081,097	$12,466,764	$5,959,113	$2,848,456
5	Initial Balance		Balance	$ 4,188,784,000	$ 2,002,238,752	$ 957,070,123	$ 457,479,519	$ 218,675,210	$ 104,526,750	$ 49,963,787	$ 23,882,690	$ 11,415,926	$ 5,456,813	$ 2,608,356
6														
7			Tax		$ 21,023,507	$ 10,049,236	$ 4,803,535	$ 2,296,090	$ 1,097,531	$ 524,620	$ 250,768	$ 119,867	$ 57,297	$ 27,388
8				NPV	$39,747,370									
9														
10	Straight Line Depreciation													
11	Property Tax			Depreciation	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133
12	Initial Balance		Balance	$ 4,188,784,000	$ 4,049,157,867	$ 3,909,531,733	$ 3,769,905,600	$ 3,630,279,467	$ 3,490,653,333	$ 3,351,027,200	$ 3,211,401,067	$ 3,071,774,933	$ 2,932,148,800	$ 2,792,522,667
13														
14			Tax		$ 42,516,158	$ 41,050,083	$ 39,584,009	$ 38,117,934	$ 36,651,860	$ 35,185,786	$ 33,719,711	$ 32,253,637	$ 30,787,562	$ 29,321,488
15	**500 kv East**			NPV	$604,757,132									
16														
17	Straight Line Depreciation													
18	Property Tax			Depreciation	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331
19	Initial Balance		Balance	$ 2,105,139,920	$ 2,034,968,589	$ 1,964,797,259	$ 1,894,625,928	$ 1,824,454,597	$ 1,754,283,267	$ 1,684,111,936	$ 1,613,940,605	$ 1,543,769,275	$ 1,473,597,944	$ 1,403,426,613
20														
21			Tax		$ 21,367,170	$ 20,630,371	$ 19,893,572	$ 19,156,773	$ 18,419,974	$ 17,683,175	$ 16,946,376	$ 16,209,577	$ 15,472,778	$ 14,735,979
22	**345 kv East**			NPV	$303,930,300									
23														
24	Straight Line Depreciation													
25	Property Tax			Depreciation	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667
26	Initial Balance		Balance	$ 1,597,880,000	$ 1,544,617,333	$ 1,491,354,667	$ 1,438,092,000	$ 1,384,829,333	$ 1,331,566,667	$ 1,278,304,000	$ 1,225,041,333	$ 1,171,778,667	$ 1,118,516,000	$ 1,065,253,333
27														
28			Tax		$ 16,218,482	$ 15,659,224	$ 15,099,966	$ 14,540,708	$ 13,981,450	$ 13,422,192	$ 12,862,934	$ 12,303,676	$ 11,744,418	$ 11,185,160
29	**345 kv North**			NPV	$230,694,475									
30														
31	Straight Line Depreciation													
32	Property Tax			Depreciation	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634
33	Initial Balance		Balance	$ 3,262,609,030	$ 3,153,855,396	$ 3,045,101,761	$ 2,936,348,127	$ 2,827,594,493	$ 2,718,840,858	$ 2,610,087,224	$ 2,501,333,590	$ 2,392,579,955	$ 2,283,826,321	$ 2,175,072,687
34														
35			Tax		$ 33,115,482	$ 31,973,568	$ 30,831,655	$ 29,689,742	$ 28,547,829	$ 27,405,916	$ 26,264,003	$ 25,122,090	$ 23,980,176	$ 22,838,263
36	**500 kv South**			NPV	$471,040,302									

Depreciation

	A	B	C	D	O	P	Q	R	S	T	U	V	W	X
1	**Depreciation**		30 year life											
2				Year	11	12	13	14	15	16	17	18	19	20
3	Declining Balance Depreciation													
4	Not for Property Tax			Depreciation	$1,361,562	$650,827	$311,095	$148,703	$71,080	$33,976	$16,241	$7,763	$3,711	$1,774
5	Initial Balance		Balance	$ 4,188,784,000	$ 1,246,794	$ 595,968	$ 284,873	$ 136,169	$ 65,089	$ 31,112	$ 14,872	$ 7,109	$ 3,398	$ 1,624
6														
7			Tax		$ 13,091	$ 6,258	$ 2,991	$ 1,430	$ 683	$ 327	$ 156	$ 75	$ 36	$ 17
8				NPV										
9														
10	Straight Line Depreciation													
11	Property Tax			Depreciation	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133
12	Initial Balance		Balance	$ 4,188,784,000	$ 2,652,896,533	$ 2,513,270,400	$ 2,373,644,267	$ 2,234,018,133	$ 2,094,392,000	$ 1,954,765,867	$ 1,815,139,733	$ 1,675,513,600	$ 1,535,887,467	$ 1,396,261,333
13														
14			Tax		$ 27,855,414	$ 26,389,339	$ 24,923,265	$ 23,457,190	$ 21,991,116	$ 20,525,042	$ 19,058,967	$ 17,592,893	$ 16,126,818	$ 14,660,744
15	**500 kv East**			NPV										
16														
17	Straight Line Depreciation													
18	Property Tax			Depreciation	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331
19	Initial Balance		Balance	$ 2,105,139,920	$ 1,333,255,283	$ 1,263,083,952	$ 1,192,912,621	$ 1,122,741,291	$ 1,052,569,960	$ 982,398,629	$ 912,227,299	$ 842,055,968	$ 771,884,637	$ 701,713,307
20														
21			Tax		$ 13,999,180	$ 13,262,381	$ 12,525,583	$ 11,788,784	$ 11,051,985	$ 10,315,186	$ 9,578,387	$ 8,841,588	$ 8,104,789	$ 7,367,990
22	**345 kv East**			NPV										
23														
24	Straight Line Depreciation													
25	Property Tax			Depreciation	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667
26	Initial Balance		Balance	$ 1,597,880,000	$ 1,011,990,667	$ 958,728,000	$ 905,465,333	$ 852,202,667	$ 798,940,000	$ 745,677,333	$ 692,414,667	$ 639,152,000	$ 585,889,333	$ 532,626,667
27														
28			Tax		$ 10,625,902	$ 10,066,644	$ 9,507,386	$ 8,948,128	$ 8,388,870	$ 7,829,612	$ 7,270,354	$ 6,711,096	$ 6,151,838	$ 5,592,580
29	**345 kv North**			NPV										
30														
31	Straight Line Depreciation													
32	Property Tax			Depreciation	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634
33	Initial Balance		Balance	$ 3,262,609,030	$ 2,066,319,052	$ 1,957,565,418	$ 1,848,811,784	$ 1,740,058,149	$ 1,631,304,515	$ 1,522,550,881	$ 1,413,797,246	$ 1,305,043,612	$ 1,196,289,978	$ 1,087,536,343
34														
35			Tax		$ 21,696,350	$ 20,554,437	$ 19,412,524	$ 18,270,611	$ 17,128,697	$ 15,986,784	$ 14,844,871	$ 13,702,958	$ 12,561,045	$ 11,419,132
36	**500 kv South**			NPV										

Depreciation

	A	B	C	D	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1	**Depreciation**		30 year life												
2				Year	21	22	23	24	25	26	27	28	29	30	
3	Declining Balance Depreciation														
4	Not for Property Tax			Depreciation	$848	$405	$194	$93	$44	$21	$10	$5	$2	$1	$4,188,783,999
5	Initial Balance		Balance	$ 4,188,784,000	$ 776	$ 371	$ 177	$ 85	$ 41	$ 19	$ 9	$ 4	$ 2	$ 1	
6															
7			Tax		$ 8	$ 4	$ 2	$ 1	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$40,274,917
8				NPV											
9															
10	Straight Line Depreciation														
11	Property Tax			Depreciation	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 139,626,133	$ 4,188,784,000
12	Initial Balance		Balance	$ 4,188,784,000	$ 1,256,635,200	$ 1,117,009,067	$ 977,382,933	$ 837,756,800	$ 698,130,667	$ 558,504,533	$ 418,878,400	$ 279,252,267	$ 139,626,133	$ (0)	
13															
14			Tax		$ 13,194,670	$ 11,728,595	$ 10,262,521	$ 8,796,446	$ 7,330,372	$ 5,864,298	$ 4,398,223	$ 2,932,149	$ 1,466,074	$ (0)	$ 637,742,364
15	**500 kv East**			NPV											
16															
17	Straight Line Depreciation														
18	Property Tax			Depreciation	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 70,171,331	$ 2,105,139,920
19	Initial Balance		Balance	$ 2,105,139,920	$ 631,541,976	$ 561,370,645	$ 491,199,315	$ 421,027,984	$ 350,856,653	$ 280,685,323	$ 210,513,992	$ 140,342,661	$ 70,171,331	$ (0)	
20															
21			Tax		$ 6,631,191	$ 5,894,392	$ 5,157,593	$ 4,420,794	$ 3,683,995	$ 2,947,196	$ 2,210,397	$ 1,473,598	$ 736,799	$ (0)	$ 320,507,553
22	**345 kv East**			NPV											
23															
24	Straight Line Depreciation														
25	Property Tax			Depreciation	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 53,262,667	$ 1,597,880,000
26	Initial Balance		Balance	$ 1,597,880,000	$ 479,364,000	$ 426,101,333	$ 372,838,667	$ 319,576,000	$ 266,313,333	$ 213,050,667	$ 159,788,000	$ 106,525,333	$ 53,262,667	$ (0)	
27															
28			Tax		$ 5,033,322	$ 4,474,064	$ 3,914,806	$ 3,355,548	$ 2,796,290	$ 2,237,032	$ 1,677,774	$ 1,118,516	$ 559,258	$ (0)	$ 243,277,230
29	**345 kv North**			NPV											
30															
31	Straight Line Depreciation														
32	Property Tax			Depreciation	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 108,753,634	$ 3,262,609,030
33	Initial Balance		Balance	$ 3,262,609,030	$ 978,782,709	$ 870,029,075	$ 761,275,440	$ 652,521,806	$ 543,768,172	$ 435,014,537	$ 326,260,903	$ 217,507,269	$ 108,753,634	$ (0)	
34															
35			Tax		$ 10,277,218	$ 9,135,305	$ 7,993,392	$ 6,851,479	$ 5,709,566	$ 4,567,653	$ 3,425,739	$ 2,283,826	$ 1,141,913	$ (0)	$ 496,732,225
36	**500 kv South**			NPV											

NEAC Route Est & Percentage

NEAC Preferred Route Estimates - Total Expense by Category and State

	3 *N1+N3+N5+N8* *Orena - Viewland*		9 *E1+E2 (345)* *Robinson - IPP*		10 *E1+E2 (500)* *Robinson - IPP*		17 *S4+S6+S8* *Lida - Antelope*	
	Cost	*% of Total*	*Cost*	*% of Total*	*Cost*	*% of Total*	*Cost*	*% of Total*
California								
Labor	$19,309,488	64.2%	$0	0.0%	$0	0.0%	$246,194,718	58.8%
Materials	$10,756,013	35.8%	$0	0.0%	$0	0.0%	$172,223,261	41.2%
Total	$30,065,501		$0		$0		$418,417,979	
% of Project in California	17.4%		0.0%		0.0%		87.9%	
Nevada								
Labor	$91,724,494	64.2%	$56,955,112	60.1%	$77,459,877	55.9%	$34,016,619	58.8%
Materials	$51,093,525	35.8%	$37,770,731	39.9%	$60,996,955	44.1%	$23,796,014	41.2%
Total	$142,818,019		$94,725,842		$138,456,832		$57,812,633	
% of Project in Nevada	82.6%		45.6%		45.6%		12.1%	
Utah								
Labor	$0	0.0%	$68,030,760	60.1%	$92,522,938	55.9%	$0	0.0%
Materials	$0	0.0%	$45,115,731	39.9%	$72,858,591	44.1%	$0	0.0%
Total	$0		$113,146,491		$165,381,529		$0	
% of Project in Utah	0.0%		54.4%		54.4%		0.0%	
Total Project								
Labor	$111,033,982	64.2%	$124,985,872	60.1%	$169,982,814	55.9%	$280,211,336	58.8%
Materials	$61,849,537	35.8%	$82,886,461	39.9%	$133,855,547	44.1%	$196,019,275	41.2%
Total	$172,883,520		$207,872,333		$303,838,361		$476,230,612	