Park City/Midway Study

Bhavana Katyal

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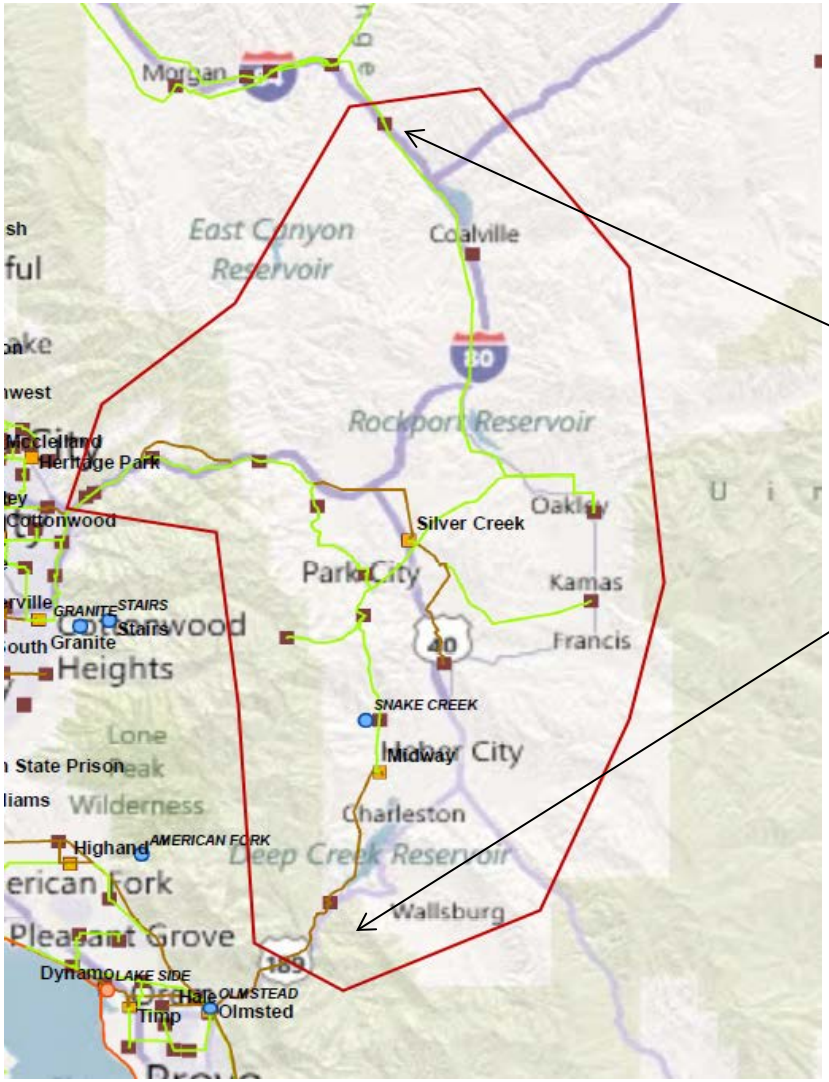
Park City/Midway System Overview



- The study area covers western portion of Summit county and northern portion of Wasatch county in central Utah.
- Parleys Canyon in north.
- Provo Canyon in south.
- Major communities served- Park City, Midway.
- Municipal served - Heber City.

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Park City/Midway Study Info

- There are ~ 20 substations out of which 4 are customer substations.
- Transmission voltages include 138 kV and 46 kV.
- Main transmission sources are –
  - 138 Line from Cottonwood Substation (Parleys Canyon)
  - 138 kV line from Hale Substation (Provo Canyon)

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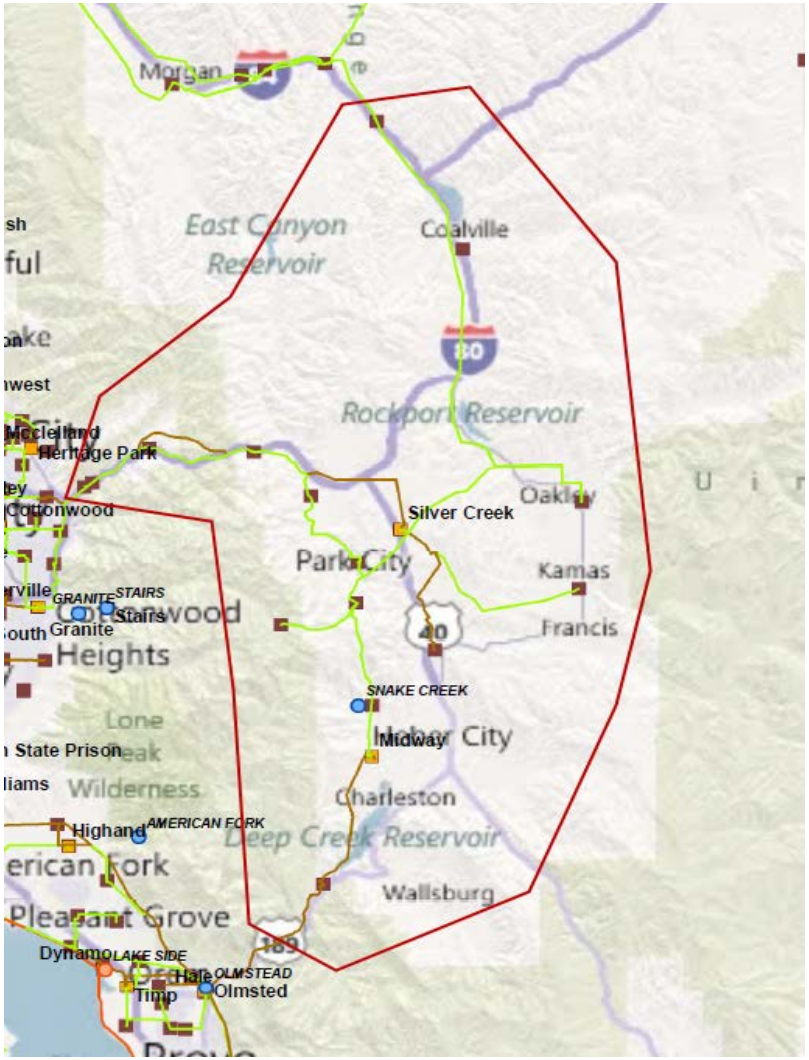

- Three local hydroelectric generation within area on 46 kV system
  - Deer Creek (USBR) (4.95 MW)
  - Wanship (USBR) (1.9 MW)
  - Snake Creek (RMP) (1.18 MW)

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Park City/Midway Study Info

- Winter peaking area
  - Winter snow skiing and outdoor recreational facilities
  - Significant concentration of secondary homeowners who reside for winter only.

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Park City/Midway Area Load Growth

- Base System Loads (Co-incidental)
  - Winter 2011/12: 172 MW
  - Summer 2011: 92 MW
- Growth
  - Winter: 4.5%
  - Summer: 4.0%
- Projected System Loads (Co-incidental)
  - Winter 2016/17: 224 MW
  - Summer 2016: 122 MW

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Park City/Midway Area Distribution Capacity & Losses

- Area Distribution Capacity
  - Summer: 254.38 MVA
  - Winter: 298.08 MVA
- Substation Utilization Factor
  - Summer 2016: 55%
  - Winter 2016/17: 79%
- Transmission losses ~ 6% of area load in Winter 2011/12.

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Recommended Improvements:

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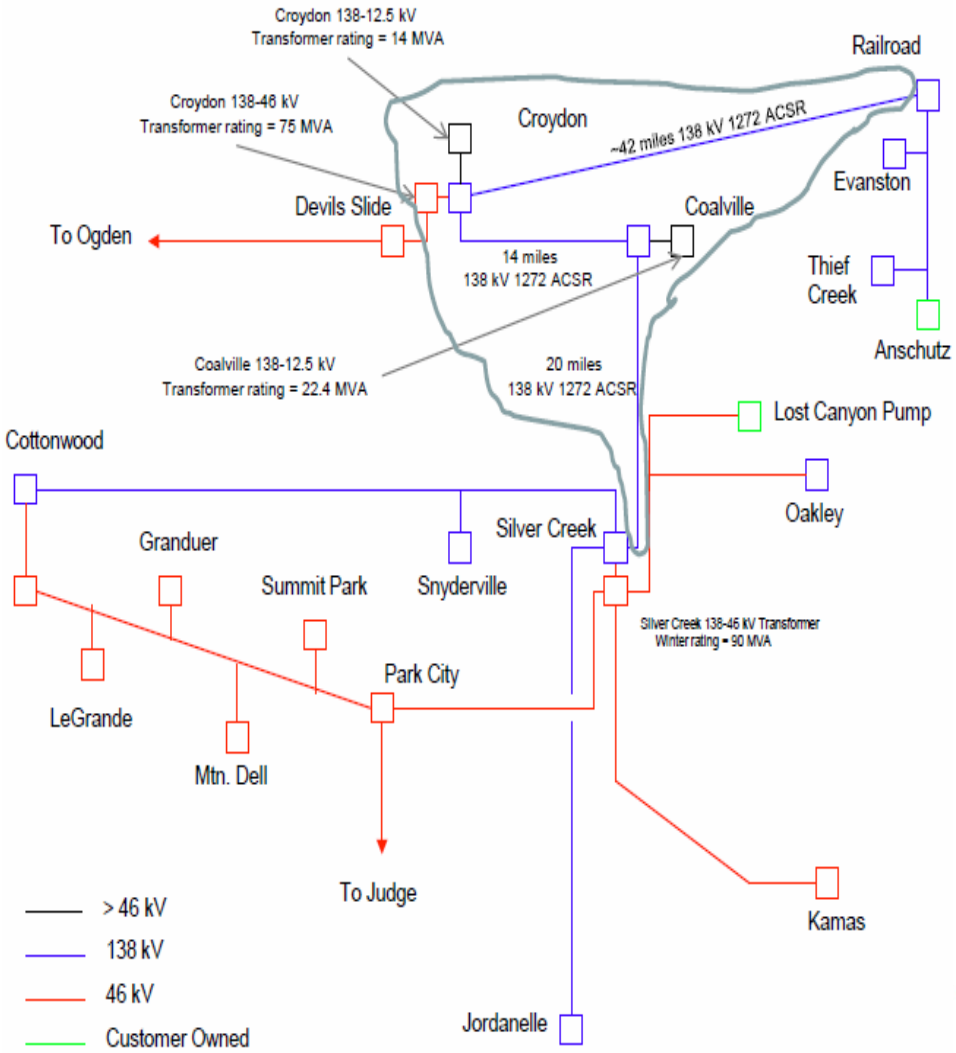
Park City/Midway Budgeted Project



Silver Creek – Railroad 138 kV line:

- New 138 kV line between Railroad and Silver Creek. Decommission existing Henefer sub. A new 138 -12.5 kV Sub Croydon to pick up Henefer load. Decommission 46 kV Lost Creek Pump – devils Slide. Conversion of Coalville sub to 138 -12.5 kV to pick up from Utelite - Wanship.
- In service by Nov 1, 2014.

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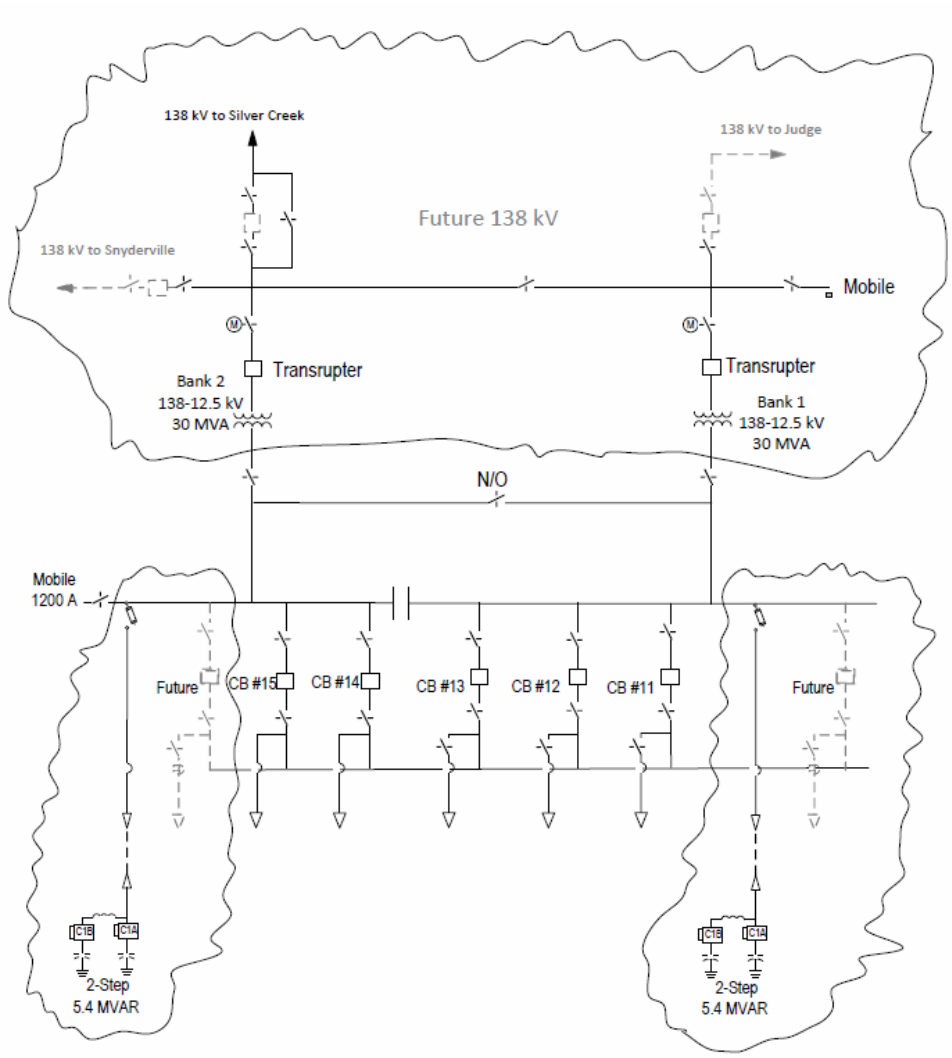
Estimated cost: $38,000,000

Park City/Midway Proposed Project



Park City Sub 138 KV conversion:

- Decommission existing 46 kV sub.
- Install 2X 30MVA 138-12.4 kV Xfmr with a 138 kV feed from Silver Creek.
- In service by Nov 1, 2014.

Estimated cost: $13,000,000

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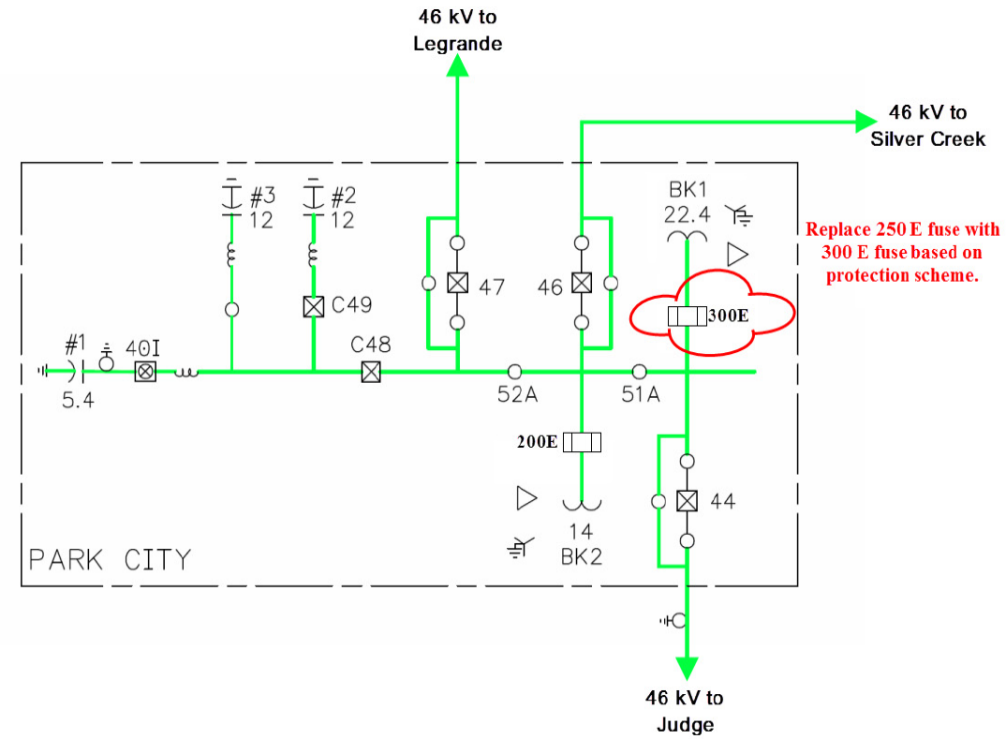
Park City/Midway N-0 System Improvements



Park City Fuse Replacement:

- 46 kV fuses on Xfrm#1 projected to be overloaded in base year.
- In service by Nov 1, 2012.

Estimated cost: $3,000

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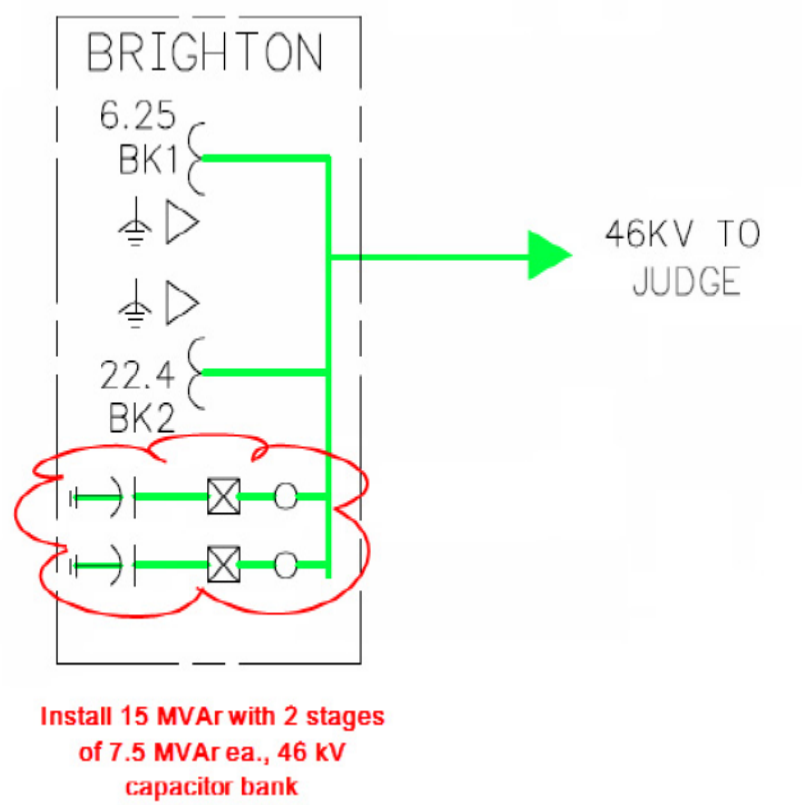
Park City/Midway N-1 System Improvements



Brighton Substation Upgrade:

- Under a number of N-1 system may experience low voltage conditions.
- Install 2-stage 7.5 MVAr cap bank @ Brighton by Nov 2014.

Estimated cost: $1,900,000

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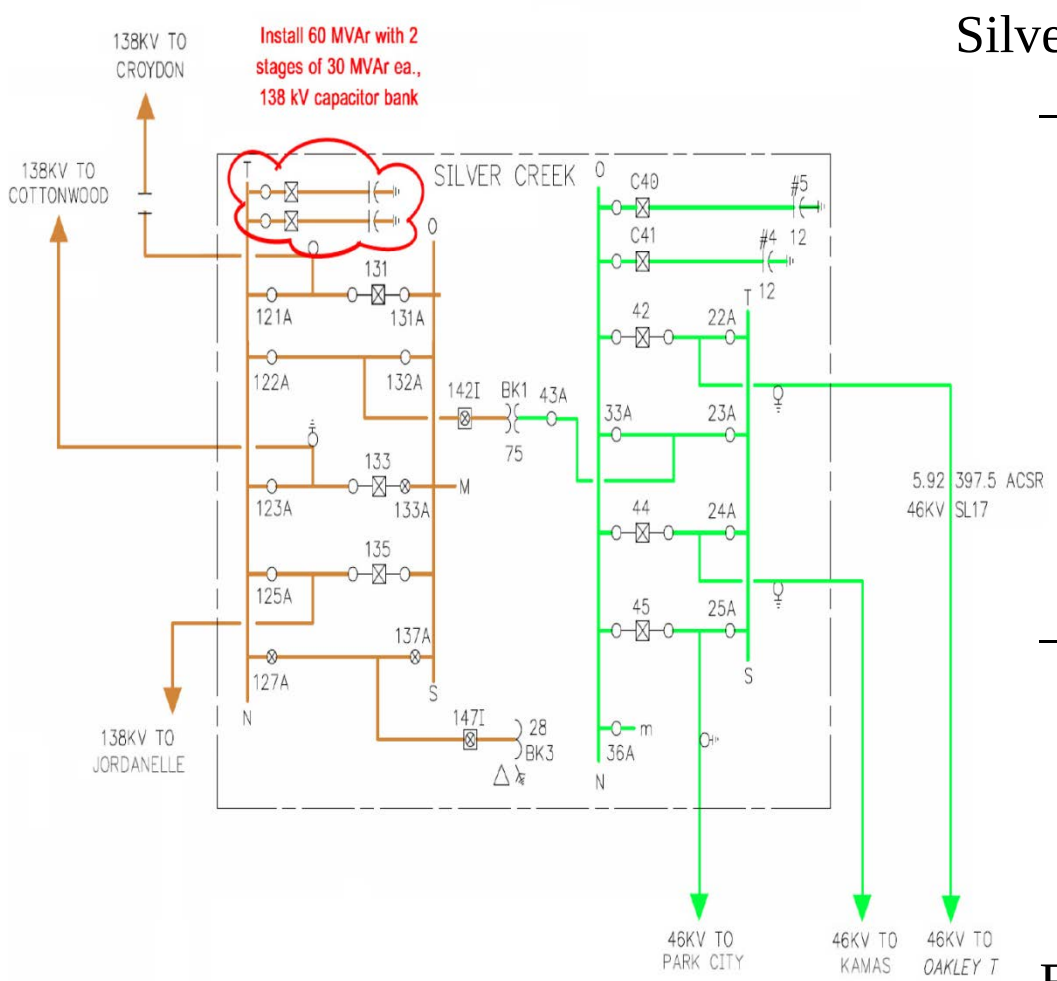
Park City/Midway N-1 System Improvements



Silver Creek Sub Upgrade

- During loss of Midway Xfmr, outage on Cottonwood – Snyderville or Midway – Wallsburg 138 kV line system may experience low voltage conditions.
- Install 2-stages of 30 MVAr cap bank @ Silvercreek Sub by Nov 2014.

Estimated cost: 3,400,000

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Park City/Midway Area Recommended Construction Schedule

Recommended Construction Schedule

2012 Construction - In service before Nov 1, 2012			**Cost ****
Fig 4	Park City	Replace over dutied high side fuse on T-4024	$ 3,000
		subtotal	$ 3,000
2013 Construction - In service before Nov 1, 2013			
	No construction projected for this year		
		subtotal	$ -
2014 Construction - In service before Nov 1, 2014			
Fig 5	Brighton	Install 46 kV, 15 MVAr capacitor bank	$ 1,900,000
Fig 6	Silver Creek	Install a 138 kV, 60 MVAr capacitor bank	$ 3,400,000
Fig 7	Park City	Park City 138 kV conversion	$ 13,000,000
Fig 8	Silver Creek-Railroad	Silver Creek -Railroad 138 kV transmission line & Decommissioning of 46 kV line between Lost Creek Pump – Devils Slide	$ 38,000,000
		subtotal	$ 56,300,000
2015 Construction - In service before Nov 1, 2015			
	No construction projected for this year		
		subtotal	$ -
2016 Construction - In service before May 1, 2016			
	No construction projected for this year		
		subtotal	$ -
		Grand total	**$ 56,303,000**

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- Any Questions or Comments?

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- The End

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