

Capital Cost

Southern Intertie Economic Analysis Capital and O&M Cost

Capital cost per April 2003 update
 Transmission O&M annual expense (\$000)
 Transmission O&M escalation rate
 Submarine replacement cost (\$millions)
 Submarine replacement - capital escalation rate
 Submarine replacement year

\$118.8 April 2003 cost estimate
 \$331 Final EIS, July 2002
 2.8% Chugach 2002 Financial Forecast
 \$45 April 2003 cost estimate
 2.8% Chugach 2002 Financial Forecast
 2029 Chugach 1999 depreciation study.

Dollars in millions

Year	Capital Cost	O&M Cost	Grant
2003	\$0.5	\$0.0	(\$0.5)
2004	\$10.0	\$0.0	(\$10.0)
2005	\$35.0	\$0.0	(\$29.2)
2006	\$65.0	\$0.0	\$0.0
2007	\$8.3	\$0.4	\$0.0
2008	\$0.0	\$0.4	\$0.0
2009	\$0.0	\$0.5	\$0.0
2010	\$0.0	\$0.5	\$0.0
2011	\$0.0	\$0.5	\$0.0
2012	\$0.0	\$0.5	\$0.0
2013	\$0.0	\$0.5	\$0.0
2014	\$0.0	\$0.5	\$0.0
2015	\$0.0	\$0.5	\$0.0
2016	\$0.0	\$0.6	\$0.0
2017	\$0.0	\$0.6	\$0.0
2018	\$0.0	\$0.6	\$0.0
2019	\$0.0	\$0.6	\$0.0
2020	\$0.0	\$0.6	\$0.0
2021	\$0.0	\$0.6	\$0.0
2022	\$0.0	\$0.7	\$0.0
2023	\$0.0	\$0.7	\$0.0
2024	\$0.0	\$0.7	\$0.0
2025	\$0.0	\$0.7	\$0.0
2026	\$0.0	\$0.7	\$0.0
2027	\$0.0	\$0.8	\$0.0
2028	\$0.0	\$0.8	\$0.0
2029	\$92.3	\$0.8	\$0.0
2030	\$0.0	\$0.8	\$0.0
2031	\$0.0	\$0.8	\$0.0
2032	\$0.0	\$0.9	\$0.0
2033	\$0.0	\$0.9	\$0.0
2034	\$0.0	\$0.9	\$0.0
2035	\$0.0	\$0.9	\$0.0
2036	\$0.0	\$1.0	\$0.0
2037	\$0.0	\$1.0	\$0.0
2038	\$0.0	\$1.0	\$0.0
2039	\$0.0	\$1.1	\$0.0
2040	\$0.0	\$1.1	\$0.0
2041	\$0.0	\$1.1	\$0.0
2042	\$0.0	\$1.1	\$0.0
2043	\$0.0	\$1.2	\$0.0
2044	\$0.0	\$1.2	\$0.0
2045	\$0.0	\$1.2	\$0.0
2046	\$0.0	\$1.3	\$0.0
PV =	\$109.9	\$5.7	(\$34.8)

Grant	\$46,800,000
EIS funding	(\$6,998,041)
Other	(\$100,000)
Net	\$39,701,959

Utility contribution (sunk cost) \$366,014

Interest Income

Southern Intertie Economic Analysis Capital and O&M Cost - Interest Income Scenario

Capital cost per April 2003 update \$118.8 April 2003 cost estimate
 Transmission O&M annual expense (\$000) \$331 Final EIS, July 2002
 Transmission O&M escalation rate 2.8% Chugach 2002 Financial Forecast
 Submarine replacement cost (\$millions) \$45 April 2003 cost estimate
 Submarine replacement - capital escalation rate 2.8% Chugach 2002 Financial Forecast
 Submarine replacement year 2029 Chugach 1999 depreciation study.

Grant \$46,800,000
 EIS funding (\$6,998,041)
 Other (\$100,000)
 Net \$39,701,959
 Interest Income \$28,500,000
 Total \$68,201,959

Dollars in millions

Year	Capital Cost	O&M Cost	Grant & Interest Income
2003	\$0.5	\$0.0	(\$0.5)
2004	\$10.0	\$0.0	(\$10.0)
2005	\$35.0	\$0.0	(\$35.0)
2006	\$65.0	\$0.0	(\$24.5)
2007	\$8.3	\$0.4	\$0.0
2008	\$0.0	\$0.4	\$0.0
2009	\$0.0	\$0.5	\$0.0
2010	\$0.0	\$0.5	\$0.0
2011	\$0.0	\$0.5	\$0.0
2012	\$0.0	\$0.5	\$0.0
2013	\$0.0	\$0.5	\$0.0
2014	\$0.0	\$0.5	\$0.0
2015	\$0.0	\$0.5	\$0.0
2016	\$0.0	\$0.6	\$0.0
2017	\$0.0	\$0.6	\$0.0
2018	\$0.0	\$0.6	\$0.0
2019	\$0.0	\$0.6	\$0.0
2020	\$0.0	\$0.6	\$0.0
2021	\$0.0	\$0.6	\$0.0
2022	\$0.0	\$0.7	\$0.0
2023	\$0.0	\$0.7	\$0.0
2024	\$0.0	\$0.7	\$0.0
2025	\$0.0	\$0.7	\$0.0
2026	\$0.0	\$0.7	\$0.0
2027	\$0.0	\$0.8	\$0.0
2028	\$0.0	\$0.8	\$0.0
2029	\$92.3	\$0.8	\$0.0
2030	\$0.0	\$0.8	\$0.0
2031	\$0.0	\$0.8	\$0.0
2032	\$0.0	\$0.9	\$0.0
2033	\$0.0	\$0.9	\$0.0
2034	\$0.0	\$0.9	\$0.0
2035	\$0.0	\$0.9	\$0.0
2036	\$0.0	\$1.0	\$0.0
2037	\$0.0	\$1.0	\$0.0
2038	\$0.0	\$1.0	\$0.0
2039	\$0.0	\$1.1	\$0.0
2040	\$0.0	\$1.1	\$0.0
2041	\$0.0	\$1.1	\$0.0
2042	\$0.0	\$1.1	\$0.0
2043	\$0.0	\$1.2	\$0.0
2044	\$0.0	\$1.2	\$0.0
2045	\$0.0	\$1.2	\$0.0
2046	\$0.0	\$1.3	\$0.0
PV =	\$109.9	\$5.7	(\$59.2)

	Balance Beg.-of-year	Grant & Interest Income Funded Capital Cost	Balance Less Capital Cost	Average Earning 1.0%/year	Balance End-of-year
					\$68.20
2003	\$68.20	\$0.50	\$67.70	\$0.71	\$68.41
2004	\$68.41	\$10.00	\$58.41	\$0.66	\$59.07
2005	\$59.07	\$35.00	\$24.07	\$0.43	\$24.50
2006	\$24.50	\$24.50	(\$0.00)		
Total		\$70.00			

Production Savings

Southern Intertie Economic Analysis Production Costs

The production savings are based on analysis of system operations and preliminary production costing model results. Savings appear to be in the range of \$0.5 million to \$1.0 million per year for the Railbelt. It is assumed savings are \$750,000 per year and escalated at 2.8% per year.

Dollars in millions			
Year	Without Southern Intertie	With Southern Intertie	Difference
2003	0.0	0.0	0.0
2004	0.0	0.0	0.0
2005	0.0	0.0	0.0
2006	0.0	0.0	0.0
2007	0.0	(0.8)	(0.8)
2008	0.0	(0.8)	(0.8)
2009	0.0	(0.8)	(0.8)
2010	0.0	(0.8)	(0.8)
2011	0.0	(0.8)	(0.8)
2012	0.0	(0.9)	(0.9)
2013	0.0	(0.9)	(0.9)
2014	0.0	(0.9)	(0.9)
2015	0.0	(0.9)	(0.9)
2016	0.0	(1.0)	(1.0)
2017	0.0	(1.0)	(1.0)
2018	0.0	(1.0)	(1.0)
2019	0.0	(1.0)	(1.0)
2020	0.0	(1.1)	(1.1)
2021	0.0	(1.1)	(1.1)
2022	0.0	(1.1)	(1.1)
2023	0.0	(1.2)	(1.2)
2024	0.0	(1.2)	(1.2)
2025	0.0	(1.2)	(1.2)
2026	0.0	(1.3)	(1.3)
2027	0.0	(1.3)	(1.3)
2028	0.0	(1.3)	(1.3)
2029	0.0	(1.4)	(1.4)
2030	0.0	(1.4)	(1.4)
2031	0.0	(1.5)	(1.5)
2032	0.0	(1.5)	(1.5)
2033	0.0	(1.5)	(1.5)
2034	0.0	(1.6)	(1.6)
2035	0.0	(1.6)	(1.6)
2036	0.0	(1.7)	(1.7)
2037	0.0	(1.7)	(1.7)
2038	0.0	(1.8)	(1.8)
2039	0.0	(1.8)	(1.8)
2040	0.0	(1.9)	(1.9)
2041	0.0	(1.9)	(1.9)
2042	0.0	(2.0)	(2.0)
2043	0.0	(2.0)	(2.0)
2044	0.0	(2.1)	(2.1)
2045	0.0	(2.1)	(2.1)
2046	0.0	(2.2)	(2.2)
PV =	\$0.0	(\$9.9)	(\$9.9)

Capacity Deferral

Southern Intertie Capacity Sharing

New Railbelt generation is driven by retirements of units and replacement with more efficient units. The Southern Intertie does not defer generation additions.

Dollars in millions

Year	Without Southern Intertie	With Southern Intertie	Difference
2003	0.0	0.0	0.0
2004	0.0	0.0	0.0
2005	0.0	0.0	0.0
2006	0.0	0.0	0.0
2007	0.0	0.0	0.0
2008	0.0	0.0	0.0
2009	0.0	0.0	0.0
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
2021	0.0	0.0	0.0
2022	0.0	0.0	0.0
2023	0.0	0.0	0.0
2024	0.0	0.0	0.0
2025	0.0	0.0	0.0
2026	0.0	0.0	0.0
2027	0.0	0.0	0.0
2028	0.0	0.0	0.0
2029	0.0	0.0	0.0
2030	0.0	0.0	0.0
2031	0.0	0.0	0.0
2032	0.0	0.0	0.0
2033	0.0	0.0	0.0
2034	0.0	0.0	0.0
2035	0.0	0.0	0.0
2036	0.0	0.0	0.0
2037	0.0	0.0	0.0
2038	0.0	0.0	0.0
2039	0.0	0.0	0.0
2040	0.0	0.0	0.0
2041	0.0	0.0	0.0
2042	0.0	0.0	0.0
2043	0.0	0.0	0.0
2044	0.0	0.0	0.0
2045	0.0	0.0	0.0
2046	0.0	0.0	0.0
PV =	\$0.0	\$0.0	\$0.0

Reliability

**Southern Intertie
Value of Unserved Energy Due to Outages on the Existing 115 kV Line**

The historical unserved energy and percent saved are based on the EIS estimates.
Dollars in thousands

Assumptions	WITHOUT SOUTHERN INTERTIE							WITH SOUTHERN INTERTIE							Difference
	Chugach	Seward	MEA	ML&P	GVEA	Homer	Total	Chugach	Seward	MEA	ML&P	GVEA	Homer	Total	
1.8% load growth															
Value of Unserved Energy - "Outage" Cost (\$/kWh)															
2.8% escalation	\$14.00	\$17.00	\$12.00	\$14.00	\$14.00	\$16.00		\$14.00	\$17.00	\$12.00	\$14.00	\$14.00	\$16.00		
Historical Unserved Energy (MWH/yr)	286.9	39.3	208.8	216.4	104.1	85.1		0	0	0	0	0	0		
Southern Intertie Project % of historical saved or MWH saved (if known)	0% 30	50% 0	10% 0	0% 30	5% 0	50% 0		0% 0	0% 0	0% 0	0% 0	0% 0	0% 0		
	<u>Chugach</u>	<u>Seward</u>	<u>MEA</u>	<u>ML&P</u>	<u>GVEA</u>	<u>Homer</u>	<u>Total</u>	<u>Chugach</u>	<u>Seward</u>	<u>MEA</u>	<u>ML&P</u>	<u>GVEA</u>	<u>Homer</u>	<u>Total</u>	
2003	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2004	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2005	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2007	\$504	\$401	\$301	\$504	\$87	\$913	\$2,709	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$2,709)
2008	\$527	\$419	\$314	\$527	\$91	\$955	\$2,835	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$2,835)
2009	\$552	\$439	\$329	\$552	\$96	\$999	\$2,966	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$2,966)
2010	\$577	\$459	\$344	\$577	\$100	\$1,046	\$3,104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$3,104)
2011	\$604	\$481	\$360	\$604	\$105	\$1,094	\$3,249	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$3,249)
2012	\$632	\$503	\$377	\$632	\$110	\$1,145	\$3,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$3,400)
2013	\$662	\$526	\$395	\$662	\$115	\$1,199	\$3,558	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$3,558)
2014	\$692	\$551	\$413	\$692	\$120	\$1,254	\$3,723	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$3,723)
2015	\$725	\$576	\$432	\$725	\$126	\$1,313	\$3,896	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$3,896)
2016	\$758	\$603	\$452	\$758	\$132	\$1,374	\$4,078	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$4,078)
2017	\$794	\$631	\$473	\$794	\$138	\$1,438	\$4,267	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$4,267)
2018	\$831	\$661	\$495	\$831	\$144	\$1,504	\$4,466	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$4,466)
2019	\$869	\$691	\$519	\$869	\$151	\$1,574	\$4,673	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$4,673)
2020	\$910	\$723	\$543	\$910	\$158	\$1,648	\$4,891	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$4,891)
2021	\$952	\$757	\$568	\$952	\$165	\$1,724	\$5,118	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$5,118)
2022	\$996	\$792	\$594	\$996	\$173	\$1,804	\$5,356	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$5,356)
2023	\$1,042	\$829	\$622	\$1,042	\$181	\$1,888	\$5,605	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$5,605)
2024	\$1,091	\$868	\$651	\$1,091	\$189	\$1,976	\$5,866	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$5,866)
2025	\$1,142	\$908	\$681	\$1,142	\$198	\$2,068	\$6,139	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$6,139)
2026	\$1,195	\$950	\$713	\$1,195	\$207	\$2,164	\$6,424	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$6,424)
2027	\$1,250	\$994	\$746	\$1,250	\$217	\$2,265	\$6,723	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$6,723)
2028	\$1,308	\$1,041	\$781	\$1,308	\$227	\$2,370	\$7,036	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$7,036)
2029	\$1,369	\$1,089	\$817	\$1,369	\$238	\$2,480	\$7,363	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$7,363)
2030	\$1,433	\$1,140	\$855	\$1,433	\$249	\$2,596	\$7,705	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$7,705)
2031	\$1,500	\$1,193	\$895	\$1,500	\$260	\$2,717	\$8,063	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$8,063)
2032	\$1,569	\$1,248	\$936	\$1,569	\$272	\$2,843	\$8,438	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$8,438)
2033	\$1,642	\$1,306	\$980	\$1,642	\$285	\$2,975	\$8,831	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$8,831)
2034	\$1,719	\$1,367	\$1,025	\$1,719	\$298	\$3,113	\$9,242	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$9,242)
2035	\$1,799	\$1,431	\$1,073	\$1,799	\$312	\$3,258	\$9,671	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$9,671)
2036	\$1,882	\$1,497	\$1,123	\$1,882	\$327	\$3,410	\$10,121	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$10,121)
2037	\$1,970	\$1,567	\$1,175	\$1,970	\$342	\$3,568	\$10,592	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$10,592)
2038	\$2,061	\$1,640	\$1,230	\$2,061	\$358	\$3,734	\$11,084	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$11,084)
2039	\$2,157	\$1,716	\$1,287	\$2,157	\$374	\$3,908	\$11,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$11,600)
2040	\$2,258	\$1,796	\$1,347	\$2,258	\$392	\$4,090	\$12,139	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$12,139)
2041	\$2,363	\$1,879	\$1,410	\$2,363	\$410	\$4,280	\$12,704	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$12,704)
2042	\$2,473	\$1,967	\$1,475	\$2,473	\$429	\$4,479	\$13,295	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$13,295)
2043	\$2,588	\$2,058	\$1,544	\$2,588	\$449	\$4,687	\$13,913	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$13,913)
2044	\$2,708	\$2,154	\$1,615	\$2,708	\$470	\$4,905	\$14,560	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$14,560)
2045	\$2,834	\$2,254	\$1,691	\$2,834	\$492	\$5,133	\$15,237	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$15,237)
2046	\$2,966	\$2,359	\$1,769	\$2,966	\$515	\$5,372	\$15,945	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$15,945)
PV =	\$8,553	\$6,803	\$5,102	\$8,553	\$1,484	\$15,493	\$45,988	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$45,988)

Minimum CT on Kenai

Southern Intertie Thermal Unit on Kenai

Prior to Nikiski moving to Agrum, Chugach operated a Bernice Unit to improve reliability on the Kenai. When Nikiski became operational, it fulfilled the role that Bernice had.

Dollars in millions

Year	Without Southern Intertie	With Southern Intertie	Difference
2003	0.0	0.0	0.0
2004	0.0	0.0	0.0
2005	0.0	0.0	0.0
2006	0.0	0.0	0.0
2007	0.0	0.0	0.0
2008	0.0	0.0	0.0
2009	0.0	0.0	0.0
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
2021	0.0	0.0	0.0
2022	0.0	0.0	0.0
2023	0.0	0.0	0.0
2024	0.0	0.0	0.0
2025	0.0	0.0	0.0
2026	0.0	0.0	0.0
2027	0.0	0.0	0
2028	0.0	0.0	0
2029	0.0	0.0	0
2030	0.0	0.0	0
2031	0.0	0.0	0
2032	0.0	0.0	0
2033	0.0	0.0	0
2034	0.0	0.0	0
2035	0.0	0.0	0
2036	0.0	0.0	0
2037	0.0	0.0	0
2038	0.0	0.0	0
2039	0.0	0.0	0
2040	0.0	0.0	0
2041	0.0	0.0	0
2042	0.0	0.0	0
2043	0.0	0.0	0
2044	0.0	0.0	0
2045	0.0	0.0	0
2046	0.0	0.0	0
PV =	\$0	\$0	\$0

Avoid Outages

Southern Intertie Avoid Outages on Existing Line - Maintenance

The cost to generate power increases when the 115KV is out of service. The table below represents the value of the outage time for the 115KV line during the 10-year rebuild.

Dollars in thousands

	Without Southern Intertie	With Southern Intertie	Difference	Escalated Using a 2.8% Rate
Assumptions:				
Days per year during rebuild	42	0		
Days per year after rebuild	4			
Cost per Day:	\$13,000	-	Difference	2.8% Rate
2003	\$0	\$0	\$0	\$0
2004	\$546	\$0	(\$546)	(\$561)
2005	\$546	\$0	(\$546)	(\$577)
2006	\$546	\$0	(\$546)	(\$593)
2007	\$546	\$0	(\$546)	(\$610)
2008	\$546	\$0	(\$546)	(\$627)
2009	\$546	\$0	(\$546)	(\$644)
2010	\$546	\$0	(\$546)	(\$662)
2011	\$546	\$0	(\$546)	(\$681)
2012	\$546	\$0	(\$546)	(\$700)
2013	\$546	\$0	(\$546)	(\$720)
2014	\$546	\$0	(\$546)	(\$740)
2015	\$52	\$0	(\$52)	(\$72)
2016	\$52	\$0	(\$52)	(\$74)
2017	\$52	\$0	(\$52)	(\$77)
2018	\$52	\$0	(\$52)	(\$79)
2019	\$52	\$0	(\$52)	(\$81)
2020	\$52	\$0	(\$52)	(\$83)
2021	\$52	\$0	(\$52)	(\$85)
2022	\$52	\$0	(\$52)	(\$88)
2023	\$52	\$0	(\$52)	(\$90)
2024	\$52	\$0	(\$52)	(\$93)
2025	\$52	\$0	(\$52)	(\$95)
2026	\$52	\$0	(\$52)	(\$98)
2027	\$52	\$0	(\$52)	(\$101)
2028	\$52	\$0	(\$52)	(\$104)
2029	\$52	\$0	(\$52)	(\$107)
2030	\$52	\$0	(\$52)	(\$110)
2031	\$52	\$0	(\$52)	(\$113)
2032	\$52	\$0	(\$52)	(\$116)
2033	\$52	\$0	(\$52)	(\$119)
2034	\$52	\$0	(\$52)	(\$122)
2035	\$52	\$0	(\$52)	(\$126)
2036	\$52	\$0	(\$52)	(\$129)
2037	\$52	\$0	(\$52)	(\$133)
2038	\$52	\$0	(\$52)	(\$137)
2039	\$52	\$0	(\$52)	(\$141)
2040	\$52	\$0	(\$52)	(\$144)
2041	\$52	\$0	(\$52)	(\$149)
2042	\$52	\$0	(\$52)	(\$153)
2043	\$52	\$0	(\$52)	(\$157)
2044	\$52	\$0	(\$52)	(\$161)
2045	\$52	\$0	(\$52)	(\$166)
2046	\$52	\$0	(\$52)	(\$170)
PV =	\$4,153	\$0	(\$4,153)	(\$4,996)

Southern Intertie Avoid Outages on Existing Line - Adjacent Construction and Weather

The cost to generate power increases when the 115KV is out of service because of construction near the line or due to weather. In addition to typical 10 days of outages per year, avalanches can cause a 4 to 6 week outage. It is assumed avalanches occur every 10 years. Average annual outage is estimated as (4 + 6)/2 weeks x 7 days per week divided by 10 years, or about 4 days per year.

	Without Southern Intertie	With Southern Intertie	Difference	Escalated Using a 2.8% Rate	TOTAL
Assumptions:					
Number of days out of service per year:	14	0			
Cost per Day:	\$13,000	-	Difference	2.8% Rate	
2003	\$182	\$182	\$0	\$0	\$0
2004	\$182	\$182	\$0	\$0	(\$561)
2005	\$182	\$182	\$0	\$0	(\$577)
2006	\$182	\$182	\$0	\$0	(\$593)
2007	\$182	\$0	(\$182)	(\$203)	(\$813)
2008	\$182	\$0	(\$182)	(\$209)	(\$836)
2009	\$182	\$0	(\$182)	(\$215)	(\$859)
2010	\$182	\$0	(\$182)	(\$221)	(\$883)
2011	\$182	\$0	(\$182)	(\$227)	(\$908)
2012	\$182	\$0	(\$182)	(\$233)	(\$933)
2013	\$182	\$0	(\$182)	(\$240)	(\$960)
2014	\$182	\$0	(\$182)	(\$247)	(\$986)
2015	\$182	\$0	(\$182)	(\$254)	(\$326)
2016	\$182	\$0	(\$182)	(\$261)	(\$335)
2017	\$182	\$0	(\$182)	(\$268)	(\$344)
2018	\$182	\$0	(\$182)	(\$275)	(\$354)
2019	\$182	\$0	(\$182)	(\$283)	(\$364)
2020	\$182	\$0	(\$182)	(\$291)	(\$374)
2021	\$182	\$0	(\$182)	(\$299)	(\$385)
2022	\$182	\$0	(\$182)	(\$308)	(\$395)
2023	\$182	\$0	(\$182)	(\$316)	(\$407)
2024	\$182	\$0	(\$182)	(\$325)	(\$418)
2025	\$182	\$0	(\$182)	(\$334)	(\$430)
2026	\$182	\$0	(\$182)	(\$343)	(\$442)
2027	\$182	\$0	(\$182)	(\$353)	(\$454)
2028	\$182	\$0	(\$182)	(\$363)	(\$467)
2029	\$182	\$0	(\$182)	(\$373)	(\$480)
2030	\$182	\$0	(\$182)	(\$384)	(\$493)
2031	\$182	\$0	(\$182)	(\$394)	(\$507)
2032	\$182	\$0	(\$182)	(\$405)	(\$521)
2033	\$182	\$0	(\$182)	(\$417)	(\$536)
2034	\$182	\$0	(\$182)	(\$428)	(\$551)
2035	\$182	\$0	(\$182)	(\$440)	(\$566)
2036	\$182	\$0	(\$182)	(\$453)	(\$582)
2037	\$182	\$0	(\$182)	(\$465)	(\$598)
2038	\$182	\$0	(\$182)	(\$478)	(\$615)
2039	\$182	\$0	(\$182)	(\$492)	(\$632)
2040	\$182	\$0	(\$182)	(\$506)	(\$650)
2041	\$182	\$0	(\$182)	(\$520)	(\$668)
2042	\$182	\$0	(\$182)	(\$534)	(\$687)
2043	\$182	\$0	(\$182)	(\$549)	(\$706)
2044	\$182	\$0	(\$182)	(\$565)	(\$726)
2045	\$182	\$0	(\$182)	(\$580)	(\$746)
2046	\$182	\$0	(\$182)	(\$597)	(\$767)
TOTAL	\$2,374	\$651	(\$1,723)	(\$2,672)	(\$7,668)

115kV Rebuild Cost Less

Southern Intertie Reduced Line Maintenance Costs

This represents O&M savings from spending less overtime to maintain the existing 115kV line with the new Southern Intertie and the rebuild is deferred.

Dollars in thousands

	Without Southern Intertie	With Southern Intertie	PV = (\$11,356) Difference
2003	\$0	\$0	\$0
2004	\$5,000	\$0	(\$5,000)
2005	\$5,000	\$0	(\$5,000)
2006	\$5,000	\$0	(\$5,000)
2007	\$5,000	\$0	(\$5,000)
2008	\$5,000	\$4,500	(\$500)
2009	\$5,000	\$4,500	(\$500)
2010	\$5,000	\$4,500	(\$500)
2011	\$5,000	\$4,500	(\$500)
2012	\$5,000	\$4,500	(\$500)
2013	\$5,000	\$4,500	(\$500)
2014	\$0	\$4,500	\$4,500
2015	\$0	\$4,500	\$4,500
2016	\$0	\$4,500	\$4,500
2017	\$0	\$4,500	\$4,500
2018	\$0	\$0	\$0
2019	\$0	\$0	\$0
2020	\$0	\$0	\$0
2021	\$0	\$0	\$0
2022	\$0	\$0	\$0
2023	\$0	\$0	\$0
2024	\$0	\$0	\$0
2025	\$0	\$0	\$0
2026	\$0	\$0	\$0
2027	\$0	\$0	\$0
2028	\$0	\$0	\$0
2029	\$0	\$0	\$0
2030	\$0	\$0	\$0
2031	\$0	\$0	\$0
2032	\$0	\$0	\$0
2033	\$0	\$0	\$0
2034	\$0	\$0	\$0
2035	\$0	\$0	\$0
2036	\$0	\$0	\$0
2037	\$0	\$0	\$0
2038	\$0	\$0	\$0
2039	\$0	\$0	\$0
2040	\$0	\$0	\$0
2041	\$0	\$0	\$0
2042	\$0	\$0	\$0
2043	\$0	\$0	\$0
2044	\$0	\$0	\$0
2045	\$0	\$0	\$0
2046	\$0	\$0	\$0
PV =	\$33,550	\$22,194	(\$11,356)