

Chugach Electric Association

2010-2014 Capital Improvement Program

October 13, 2009

Total Capital Improvement Program

5 -year capital expenditure plan to maintain, improve and/or expand Chugach's generation, transmission & distribution system

- **First year is the 2010 budget (net of reimbursable amounts and inventory).**
- **2011-2014 represents planning estimates that do not include escalation or financing costs.**

Overall

- **Consistent with long-term resource plans.**
- **Designed to meet and/or maintain Chugach's reliability targets.**
- **Justified based on regulatory, safety, reliability requirements, and/or economic value.**

Total CIP

by Function - \$ in millions

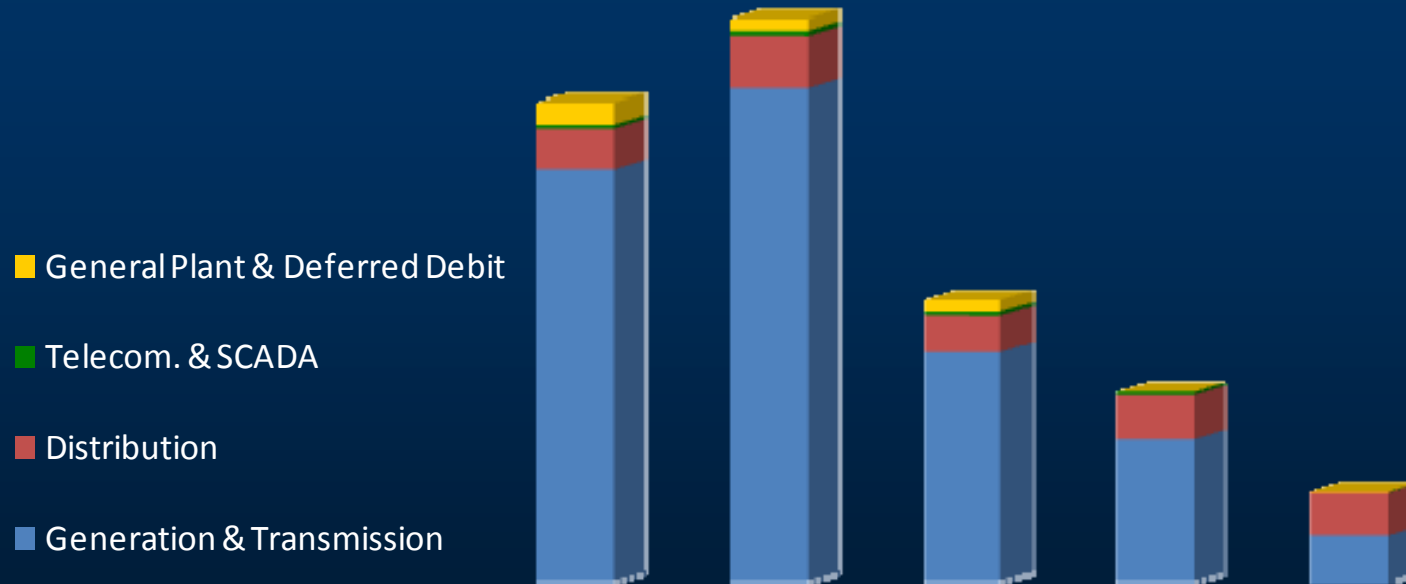
	Total	Targets
Telecom. & SCADA	3.8	4.0
General Plant & Deferred Debit	10.8	5.0
Distribution ⁽¹⁾	51.2	51.0
Generation & Transmission ⁽²⁾	85.0	111.5
SubTotal:	\$ 150.9	\$ 171.5
So. Central Alaska Power Project (183 MW) ⁽³⁾	223.5	223.5
Total with new generation:	\$ 374.4	\$ 395.0

1. Includes distribution and distribution substation
2. Includes generation, transmission and sub-transmission
3. Chugach's portion of the South Central Alaska Power Plant

Total CIP by Function - \$ in millions

* Includes SCPP New Generation

(individual years do not add to totals due to rounding)



	2010	2011	2012	2013	2014	Total
Generation & Transmission*	96.1	115.6	53.7	32.8	10.3	\$308.5
Distribution	9.8	12.4	8.1	10.7	10.3	\$51.2
Telecom. & SCADA	0.9	1.2	1.0	0.7	0.1	\$3.9
General Plant & Deferred Debit	5.1	2.7	2.8	0.0	0.2	\$10.8
Total:	\$111.9	\$131.9	\$65.5	\$44.2	\$20.9	\$374.4

Generation Projects



Generation Projects by Type - \$ in millions

Includes SCPP New Generation

(individual years do not add to totals due to rounding)



	2010	2011	2012	2013	2014	Total
Agency Mandated	2.09	11.93	0.00	0.00	0.00	14.02
Retire & Replace	7.78	6.97	3.98	2.46	3.52	24.72
Safety & Security	7.28	0.00	0.00	0.00	0.00	7.28
New Generation	<u>73.65</u>	<u>84.47</u>	<u>44.69</u>	<u>20.68</u>	<u>0.00</u>	<u>223.50</u>
Total	\$90.81	\$103.37	\$48.67	\$23.15	\$3.52	\$269.52

New Generation

- Planning cost estimate of approximately \$223.5 million (nominal) over a 4-year period (2010 – 2013)
 - Internal analysis based on manufacturer supplied data
 - Subject to changes in market-driven input pricing
- 2010 CIP budget is \$73.7 million for:
 - Gas turbine purchase
 - Steam turbine purchase
 - Site Preparation
 - Engineering & Long-lead procurement
 - Permitting

Other Generation Projects

\$ in millions

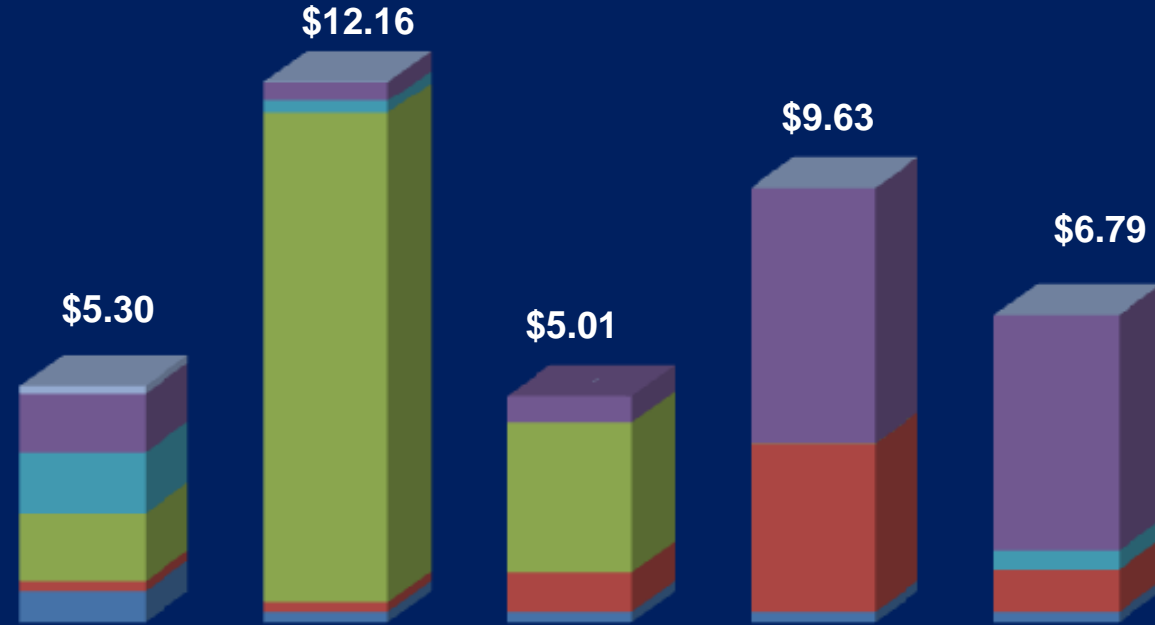
- Major projects in 2010
 - Cooper Lake Power Plant relicense projects (Stetson Creek diversion) ~ \$2.1
 - Beluga Unit 6C Inspection ~ \$6.0
 - IGT Liquid Fuels Systems ~ \$7.0

Transmission & Sub-transmission Projects



Transmission & Subtransmission Projects

by Type - \$ in millions



	2010	2011	2012	2013	2014	5 Year Total
Security	0.17	0.17	0.00	0.00	0.00	\$ 0.34
Retire & Replace	1.29	0.44	0.58	5.65	5.21	\$ 0.49
Reliability	1.39	0.27	0.00	0.00	0.42	\$13.17
New Generation	1.49	10.85	3.34	0.00	0.00	\$ 1.66
Incr. Load Growth	0.22	0.21	0.87	3.74	0.93	\$ 5.96
Agency Mandated	0.68	0.23	0.23	0.23	0.23	\$ 1.59
Total	\$5.30	\$12.16	\$5.01	\$9.63	\$6.79	\$38.89

Transmission Projects

\$ in millions

- 115 kV Quartz Creek Transm. Line Rebuild ~ \$10.6 (2012-2015)
- Transmission Station Service upgrades ~ \$1.6 (2011-2013)
- Completion of new 138 kV transmission line - Retherford Substation to O'Malley ~ \$0.9 (2010)
- 138 / 115 kV IT SS to Int'l Junction Transm. Line ~ \$0.6 (2010-2012)
- Completion of 138 kV Yard at IGT ~ \$13.3* (2010-1012)
- New 115 kV Substation @ IGT ~ \$1.8* (2010-2013)

* CEA portion of costs shared as part of New Generation

Sub-transmission Projects

\$ in millions

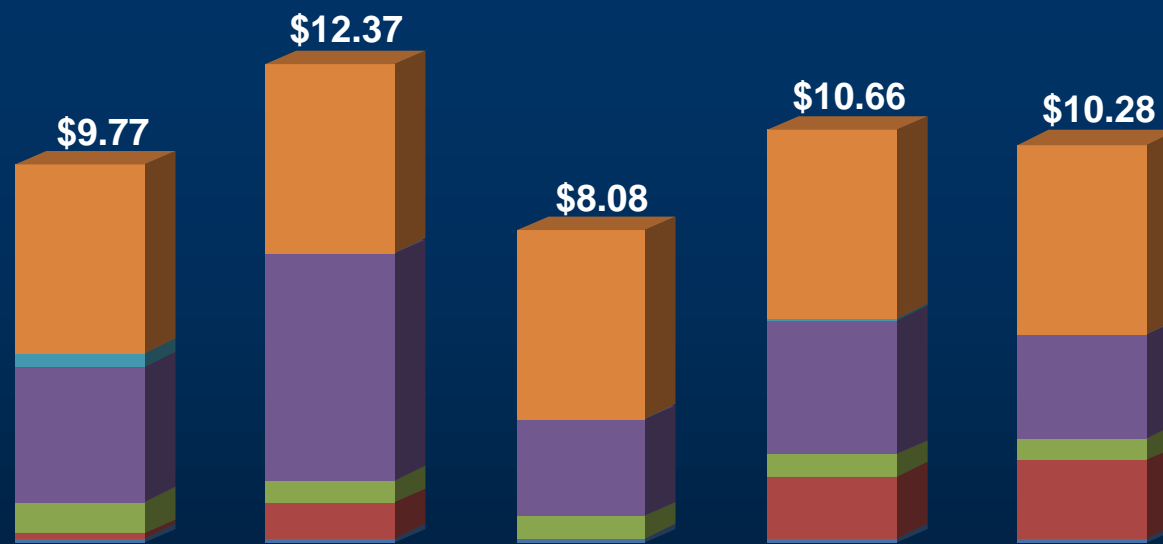
- 34.5 kV underground, Retherford Substation to O'Malley junction - \$0.5 (2014)
- 34.5 kV underground, New Seward to O'Malley Jct. - \$0.5 (2010)
- Huffman Loop – 34.5 kV Feeder to Retherford Subst. - \$4.4 (2012-2013)

Distribution & Distribution Substation Projects



Distribution & Distribution Substation Projects by Type - \$ in millions

(individual years do not add to totals due to rounding)



	2010	2011	2012	2013	2014	5 Year Total
Service to New Customers	4.86	4.87	4.87	4.87	4.87	\$ 24.32
Safety	0.34	0.04	0.04	0.04	0.04	\$ 0.48
Retire & Replace	3.50	5.85	2.47	3.47	2.68	\$ 17.97
Reliability	0.81	0.57	0.57	0.57	0.57	\$ 3.11
Incremental Load Growth	0.12	0.91	0.00	1.58	2.00	\$ 4.61
Agency Mandated	0.13	0.13	0.13	0.13	0.13	\$ 0.66
Total	\$9.77	\$12.37	\$8.08	\$10.66	\$10.28	\$51.16

Basic Services to Customers

(net of reimbursable amounts)

Chugach is required to provide basic service.
This costs just under \$5 million per year.

	2010	2011	2012	2013	2014	Total
Meters	0.3	0.3	0.3	0.3	0.3	1.5
Overhead Line Extensions	0.1	0.1	0.1	0.1	0.1	0.7
▶ Underground Line Extensions	1.4	1.4	1.4	1.4	1.4	7.2
▶ Operation's Capital Replacements and New Services	3.0	3.0	3.0	3.0	3.0	15.0
Total:	\$4.8	\$4.8	\$4.8	\$4.8	\$4.8	\$24.4

Reimbursable Relocation Projects

- Chugach is reimbursed an average of 90% of the project cost for agency requested relocations.
- Chugach share of cost is \$0.13 million annually.
- Major 2010 projects include:
 - Lake Otis & Tudor intersection
 - Victor Road
 - West Dowling Road

Cable Replacement & Rehabilitation Projects

- Cable Replacement is an on-going project to replace underground distribution cable.
 - Projects in 2010 include the subdivisions of Stonegate, Emerald Hills, Oceanview, Farr and Chester Heights subdivisions.
- Cable Rehabilitation is a method used to restore older cable for reliable use and guarantees 15 years of additional life.
 - Projects in 2010 include Chugach Meadows, Campbell Lake Heights, Woodlands, Glenn, Sun Valley Heights, Mesa Verde, Bear Valley, Woodlands, Stolle, Newland and Spring Tree subdivisions.

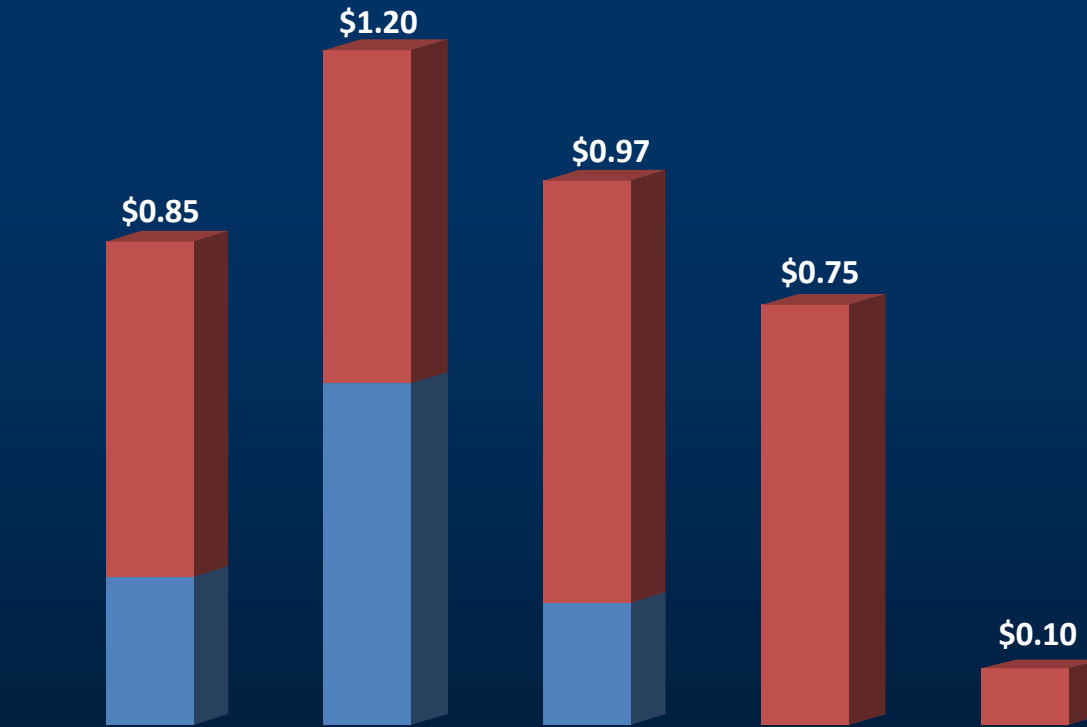
Distribution Substations and Feeder Ties

- **Airport 412 Feeder Tie Improvements ~ \$1.03** 2014, Completion in 2015
- **Abbott Loop Substation ~ \$2.95** Thru 2014, Completion in 2015
- **Girdwood Substation upgrade ~ \$2.65** 2010 – 2011

Misc. Other Projects

Other Projects by Type - \$ in millions

(individual years do not add to totals due to rounding)



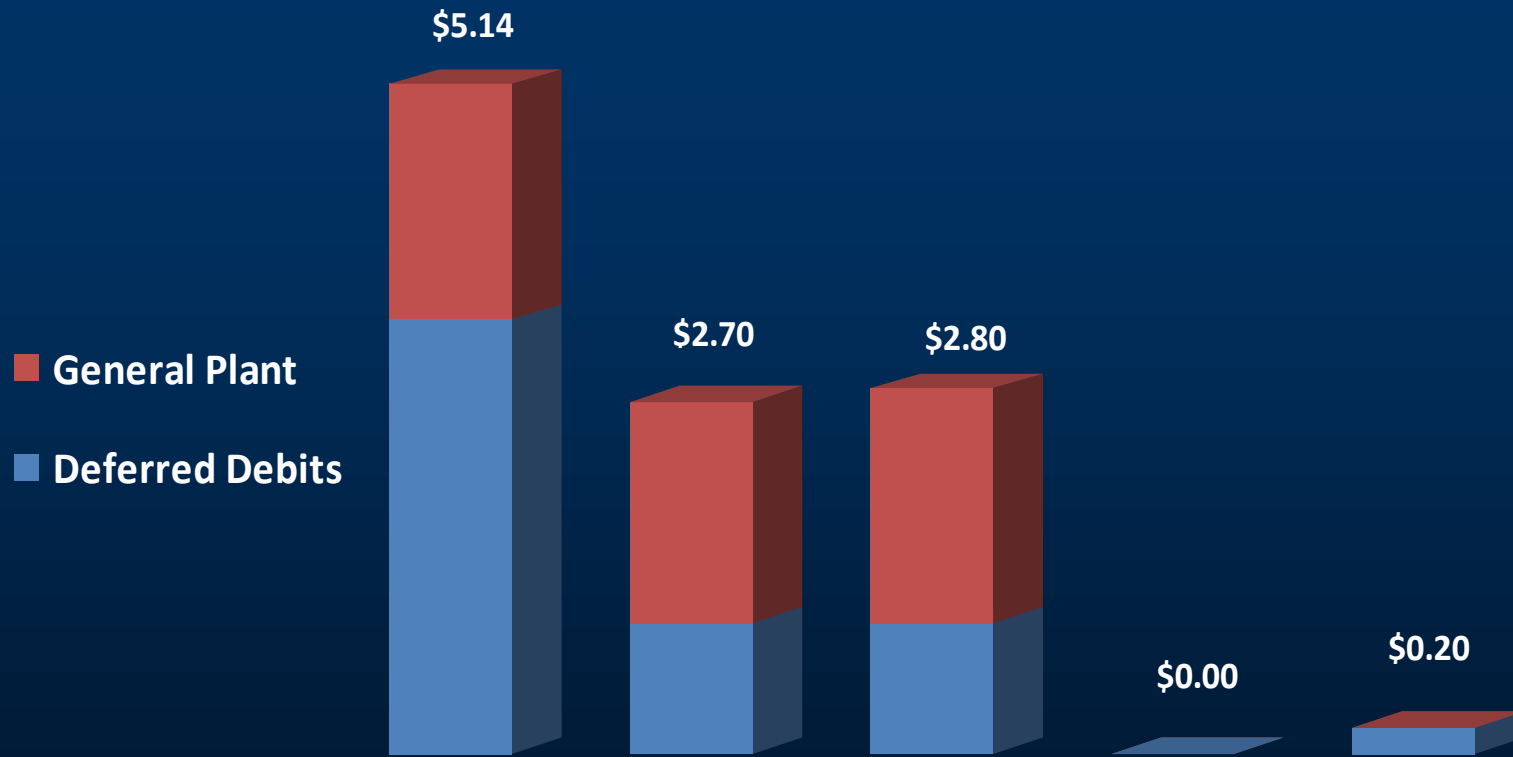
	2010	2011	2012	2013	2014
■ Telecommunications	0.59	0.59	0.75	0.75	0.10
■ SCADA	0.26	0.61	0.22	0.00	0.00

Telecommunications and SCADA

- 2010 Telecommunications and SCADA projects include:
 - SCADA Migration, Microwave business enhancement, Dave's Crk to Quartz Crk & Quartz Crk to Sunrise microwave replacements, Communications Power Improvements and Turnagain Arm communication improvement.

Other Projects by Type - \$ in millions

(individual years do not add to totals due to rounding)



	2010	2011	2012	2013	2014	TOTAL
Deferred Debits	3.3	1.0	1.0	0.0	0.2	5.5
General Plant	1.8	1.7	1.8	0.0	0.0	5.3
TOTAL	5.14	2.70	2.80	0.00	0.20	10.84

General Plant & Deferred Debit Projects

- **2010 General Plant projects include:**
 - Relay security & Data access, OnPoint expansion, SCADA A/C Unit replacement, CIS replacement, Operations work management, asset management and design automation. Misc. Plant upgrades.
- **2010 Deferred Debit projects include:**
 - Gas negotiations, transmission station service capacity review study, ConocoPhillips compressor project, Rate Case, Fuel security / gas storage, CIP financing and labor negotiations.

Discussion