

Vessel Comparison: Current fleet v. ECO new-build tugs

In July 2018, the Alyeska/SERVS marine services contract will transition from Crowley Marine to Edison Chouest Offshore (ECO). ECO is in the process of designing and building a fleet of new tugs that will escort tankers and perform other operations in Prince William Sound. The Crowley fleet has served Prince William Sound well and was top-of-the-line when constructed. The ECO fleet will incorporate new technology winches and lessons learned from the last 20 years, with additional power, capabilities and flexibility. Included below is a high-level comparison of some of the key capabilities and specifications of the existing fleet versus the new tugs.

Vessel class		Length (feet)	Beam (feet)	Horsepower	Hull Enhancement	Drive Style	Bollard Pull (pounds)	Winches	
								Towing	Escort
General Purpose	Current general purpose/docking tugs	136	36	5,750-7,200	none	Conventional	105K-150K	Conventional	N/A
	ECO general purpose tugs	107	43	6,008	Forward skeg	Azimuthing-drive w/kort nozzle	145K	Conventional	Render/recover
Escort	Current escort tug: Enhanced Tractor Tug	153	48	10,192	Aft skeg	Voith-Schneider cycloidal*	Direct: 208K Dynamic: 420K at 12 kts	N/A	Conventional
	Current escort tug: Prevention and Response Tug	140	42	10,192	none	Azimuthing-drive w/kort nozzles	Direct: 300K Dynamic: no rating	Conventional	Conventional
	ECO escort tug	140	54	12,336	Forward skeg	Azimuthing-drive w/kort nozzle	Direct: >300K by contract Dynamic: 434K at 8 kts	Render/recover	Render/recover
Utility	Current utility tug	207	40	5,700	none	Conventional w/kort nozzles	160k	Conventional	N/A
	ECO utility tug	256	54	11,400	none	Conventional w/kort nozzles	275K	Conventional	N/A

*Some of the existing escort tugs have Voith-Schneider cycloidal drives. When designed, these drives were state of the art for escort service. The new tugs, with azimuthing-drives and a forward skeg, use current escort technology and are better suited for the SERVS system. Azimuthing-drives with kort nozzles provide more bollard pull per horsepower and are more maneuverable than conventional drives.

In the current system, the two types of escort tugs are complementary, with one tug utilizing the cycloidal drive and the other the azimuthing drive with kort nozzles. The new escort tugs, outfitted with render/recover towing and escort winches, Z-drives with kort nozzles, and a forward skeg, are more versatile and combine the best attributes of the cycloidal and azimuthing-drives into one tug.