

B.02.07 Water Consumption Estimates

FSU Water Consumption Estimates			
Use	Quality	Annual estimate	Comments
Potable water	Potable water quality	1,500 m ³ /yr.	FSU potable water will be supplied from the onshore Regasification Facility potable water distribution system.
Demin Water for main and auxiliary boilers	Demin water from Enemalta demin plant	16m ³ /yr	FSU demin tank will be filled as required from the jetty.
FSU Ballast stabilising tank	Seawater	N/A	Ballast seawater discharge to comply with IMO regulation D-3 Ballast Water management Convention
Cooling Water for auxiliary boilers during STS operations.	Seawater	1,590,000 m ³ /yr	Will not be consumed, as will be used for cooling and discharged back to Marsaxlokk Harbour at an increased temperature of less than 8deg
Cooling Water for auxiliary boilers during a disconnection events	Seawater	360,000 m ³ /yr	Will not be consumed, as will be used for cooling and discharged back to Marsaxlokk Harbour at an increased temperature of less than 8deg
Fire fighting	Seawater	Nominal	For testing purposes only, apart from in an emergency situation.

LNG Regasification plant			
Use	Quality	Annual estimate	Comments
Demin. water/glycol make-up	Demin. water	20 m ³ /yr	Primarily as make-up to replace losses during operation and maintenance.
Potable water	Potable quality	1,100 m ³ /yr.	Operation and Maintenance requirements
Water/Glycol loop auxiliary cooling seawater	Seawater	13,000,000 m ³ /yr.	The cooling seawater outflow temperature increase measured at the outfall discharge shall be less than 8degC for all operating conditions.
Fire fighting	Seawater / freshwater	Nominal	For testing purposes only, apart from in an emergency situation.

CCGT power plant			
Use	Quality	Annual estimate	Comments
Steam cycle make-up water	Demin. Water	32,000 m ³ /yr.	Primarily as make-up to replace losses during operation and maintenance.
Potable water	Potable quality	3,400 m ³ /yr.	Operation and Maintenance requirements
Flushing, washing and aux. closed loop cooling make-up demin. water	Demin. Water	1,200 litres/yr.	Operation and Maintenance requirements
Main CCGT condenser water cooling	Seawater	120,000,000 m ³ /yr.	The cooling seawater outflow temperature increase measured at the outfall discharge shall be less than 8degC for all operating conditions.
Aux. seawater cooling	Seawater	6,900,000 m ³ /yr.	The cooling seawater outflow temperature increase measured at the outfall discharge shall be less than 8degC for all operating conditions.
Fire fighting	Seawater / freshwater	Nominal	For testing purposes only, apart from in an emergency situation.

Cooling seawater required after and before the LNG Terminal and CCGT project

	Before	After	Comments
Detailed seawater consumption	Delimara1:21000m ³ /hr Delimara2:8500m ³ /hr Delimara3:14700m ³ /hr	Delimara1:N/A Delimara2:8500m ³ /hr Delimara3:14700m ³ /hr Delimara4 (CCGT): 16000m ³ /hr	Delimara1 Power plant will be shut down after Delimara4 (CCGT) commences operations. FSU flow is intermittent for a limited number of hours so not included,
Total	44200m³/hr	39200m³/hr	It's expected a decrease of 11.3% on cooling seawater flow rate.