		DNO revised coverage	5%	
T6.2.4	**SMTS ES13 Aux switch #1 operation e.g. electric heating** **Required by:** Day 1 (2014) **Service Users:** Distribution Network Operators	Message flow to support auxiliary switching and load control messages from Network Operators (central heating). **Minimum Core Service Requirements** **Message Size** 160 bytes **Frequency** 4 per day **Response Time** 600 seconds **Coverage (% meters)** 20% ***DNO revised frequency*** 2014-19: 4 per year, post 2019: up to 4 per day ***DNO revised response time*** 600 seconds ***DNO revised coverage*** 20%	1 This requirement is for switching rather than data collection 2 ENA Use Case 08, 09 3 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis 4 Clarification required whether each message is for an on and off signal, or a single message only constitutes on or off 5 DNO view that this is for Economy 7 like tariffs which will be predominantly managed by suppliers at least in the short term. Supplier should be specifying this if it is to be used to dynamically control electric heating under E7 6 Requirement shown is only for when the DNO requires to take action to change demand due to system issue. Post 2019 this could form part of an Active Network Management toolkit managed by Network Operators
T6.2.5	**SMTS ES13 Aux switch #2 operation e.g. water heating** **Required by:**	Message flow to support auxiliary switching and load control messages from Network Operators (water heating). **Minimum Core**	1 This requirement is for switching rather than data collection 2 ENA Use Case 08, 09 3 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis 4 Clarification required whether each message is for an on and off signal, or a single message only constitutes on or off 5 DNO view that this is for Economy 7 like tariffs which will be predominantly managed by suppliers at least in the short term. Supplier should be specifying this if it is to be used to dynamically control electric heating under E7 6 Requirement shown is only for when the DNO requires to take action to change demand due to system issue. Post 2019 this could form part of an Active Network Management toolkit managed by Network Operators

	Day 1 (2014) **Service Users:** Distribution Network Operators		**Service Requirements** **Message Size** 160 bytes **Frequency** 4 per day **Response Time** 600 seconds **Coverage (% meters)** 20% ***DNO revised frequency*** 4 per year ***DNO revised response time*** 600 seconds ***DNO revised coverage*** 20%	
T6.2.6	**SMTS ES13 Aux switch #3 operation e.g. EV Charging** **Required by:** After 2019 **Service Users:** Distribution Network Operators	Message flow to support auxiliary switching and load control messages from Network Operators (electric vehicle charging).	**Minimum Core** **Service Requirements** **Message Size** 160 bytes **Frequency** 4 per day **Response Time** 600 seconds **Coverage (% meters)** 5% ***DNO revised frequency*** 4 per day post 2019 ***DNO revised response time*** 600 seconds ***DNO revised coverage*** 5%	1 This requirement is for switching rather than data collection 2 ENA Use Case 08, 09 3 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis 4 Clarification required whether each message is for an on and off signal, or a single message only constitutes on or off 5 DNO view that EV charging tariffs will need to be developed by Suppliers and could well require DNO input to avoid overloading networks 6 Requirements shown is only for when the DNO requires to take action to change demand due to system issue. Post 2019 this could form part of an Active Network Management toolkit managed by Network Operators
T6.2.7	**SMTS ES13 Aux switch #4 operation e.g. Heat Pump**	Message flow to support auxiliary switching and load control messages from Network Operators (heat pump).		1 This requirement is for switching rather than data collection. 2 ENA Use Case 08, 09 3 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis 4 Clarification required whether each message is for an on and off signal, or a single message only constitutes

				on or off 5 DNO view that this is for Economy 7 like tariffs which will be predominantly managed by suppliers at least in the short term. Supplier should be specifying this if it is to be used to dynamically control electric heating under E7 6 Requirement shown is only for when the DNO requires to take action to change demand due to system issue. Post 2019 this could form part of an Active Network Management toolkit managed by Network Operators
	Required by: *After 2019* **Service Users:** Distribution Network Operators	 **Message Size** **Frequency** **Response Time** **Coverage (% meters)** ***DNO revised frequency*** ***DNO revised response time*** ***DNO revised coverage***	**Minimum Core Service Requirements** 160 bytes 4 per day 600 seconds 5% 4 per day post 2019 600 seconds 5%	
T6.2.8	**SMTS ES13 Aux switch #5 Microgeneration curtail / dispatch** **Required by:** After 2019 **Service Users:** Distribution Network Operators	Message flow to support auxiliary switching and load control messages from Network Operators (microgeneration control). **Message Size** **Frequency** **Response Time** **Coverage (% meters)** ***DNO revised frequency*** ***DNO revised response time***	 **Minimum Core Service Requirements** 160 bytes 4 per day 600 seconds 20% 4 per day post 2019 600 seconds	1 This requirement is for switching rather than data collection. 2 ENA Use Case 08, 09 3 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis 4 Clarification required whether each message is for an on and off signal, or a single message only constitutes on or off 5 Requirements show is only for when the DNO requires to take action to change export due to system issue

		DNO revised coverage	1-2%	
T6.2.9	**Real-time rewards/penalties information**	To support provision of real-time rewards and/or penalties information from Network Operators which might be used to support Microgeneration		Remove - function not specified by ENA - duplication with T6.2.8?
	Required by: After 2019 **Service Users:** Distribution Network Operators		**Minimum Core Service Requirements**	
		Message Size	500 bytes	
		Frequency	2 per day	
		Response Time	600 seconds	
		Coverage (% meters)	20%	

Continued

Table 6.3 – Core Service Requirements (with low/moderate potential impact on WAN cost/performance)

Supplier Requirements Only – Separate Table for DNO Requirements

Message flow	Coverage (% meters)	Message Size (bytes)	Response Time (seconds)	Frequency (per year)	Users	Required by
13-month meter read upload	34%	152,224	3600	1	N/A	Day 1 (2014)
Supply fault alarm triggered	1%	160	600	1	N/A + DNO see separate table	Day 1 (2014)
Credit balance update	30%	160	120	12	Other	Day 1 (2014)
Read distributed generation data	20%	282	120	12	Other	Day 1 (2014)
IHD, meter or comms unit s/w upgrade	100%	650,000	86,400	2	Supplier	Day 1 (2014)
Battery status **We only need to know when batteries have degraded to a defined state.**	100%	160	600	1	Supplier	
Consumer meter interaction	100%	160	120	12	Supplier	Day 1 (2014)
Diagnostics (low priority)	10%	160	10,800	1	Supplier	Day 1 (2014)
Diagnostics (routine)	100%	160	120	6	Supplier	Day 1 (2014)
Download/clear data from	20%	600	120	1	Supplier	Day 1 (2014)

Message flow	Coverage (% meters)	Message Size (bytes)	Response Time (seconds)	Frequency (per year)	Users	Required by
meter (on demand)						
Download/clear data from meter (scheduled)	20%	600	600	1	Supplier	Day 1 (2014)
Energisation status check	5%	160	120	1	Supplier + DNO see separate table	Day 1 (2014)
Feed in tariff update (on demand)	5%	160	120	52	Supplier	Day 1 (2014)
Feed in tariff update (scheduled)	5%	160	600	52	Supplier	Day 1 (2014)
Gas calorific value update (on demand)	5%	160	600	12	Supplier	Day 1 (2014)
Gas calorific value update (scheduled)	100%	160	600	365	Supplier	Day 1 (2014)
Gas PTZ value update (scheduled)	100%	160	600	365	Supplier	2017
Leak alarm	5%	160	600	365	Supplier	
Leakage performance reports	5%	150	600	4	Supplier	
Maximum demand read Assumes no HHD available to suppliers: programme fails	100%	160	10,800	12	Supplier + DNO see separate table	Day 1 (2014)

Message flow	Coverage (% meters)	Message Size (bytes)	Response Time (seconds)	Frequency (per year)	Users	Required by
Message to consumer via IHD (on demand)	100%	256	120	12	Supplier	Day 1 (2014)
Message to consumer via IHD (scheduled)	100%	256	600	52	Supplier	Day 1 (2014)
Meter fault alarm triggered	100%	160	600	1	Supplier	Day 1 (2014)
New device added to SMHAN	100%	160	120	4	Supplier	Day 1 (2014)
PAYG: Remote Top up Payment	30%	160	120	365	Supplier	Day 1 (2014)
PAYG: Remote balance Adjustment (ex gratia payment)	30%	160	120	12	Supplier	Day 1 (2014)
PAYG: Remote config of non disc periods	30%	160	120	6	Supplier	Day 1 (2014)
PAYG: Remote config of non disc periods	30%	160	120	6	Supplier	Day 1 (2014)
PAYG: Remote config of debt settings	30%	160	120	12	Supplier	Day 1 (2014)
PAYG: Remote config of debt settings	30%	160	120	12	Supplier	Day 1 (2014)
PAYG: Locally credit top up applied at meter	30%	160	120	12	Supplier	Day 1 (2014)

Message flow	Coverage (% meters)	Message Size (bytes)	Response Time (seconds)	Frequency (per year)	Users	Required by
Query devices on HAN	1%	544	120	12	Supplier	Day 1 (2014)
Remote configuration of settings (on demand)	20%	1,100	120	1	Supplier + DNO see separate table	Day 1 (2014)
Remote configuration of settings (scheduled)	20%	1,100	600	1	Supplier + DNO see separate table	Day 1 (2014)
Remote dis/enablement of supply (scheduled)	20%	160	600	1	Supplier + DNO see separate table	Day 1 (2014)
Security or software patch	100%	400,000	3,600	4	Supplier	Day 1 (2014)
Self registration on installation	100%	160	120	1	Supplier	Day 1 (2014)
Switch between credit and PAYG (on demand)	10%	160	120	1	Supplier	Day 1 (2014)
Switch between credit and PAYG (scheduled)	10%	160	600	1	Supplier	Day 1 (2014)
Tamper alarm triggered (and reset)	10%	160	600	1	Supplier	Day 1 (2014)
Tariff update (on demand)	5%	160	120	1	Supplier	Day 1 (2014)
Tariff update (scheduled)	100%	160	86,400	52	Supplier	Day 1 (2014)

Table 6.3 – Core Service Requirements (with low/moderate potential impact on WAN cost/performance)

DNO Requirements

ENA Use Cases are defined in: ENA Smart Metering System Use Cases, Engage Consulting Limited, April 2010
Document Ref: ENA-CR007-002 -1.1

Additional items that are included in the August IDTS, but not captured in the original table, are shown in red.

Consultation Document Ref	Message Flow	Coverage (% meters)	Message Size (bytes)	Response Time (seconds)	Frequency (per year)	Users	Required by		Issues / comments
T6.3.1	**Electricity Quality Read**							1	Functionality required in all SMs but only the percentage shown will be accessed on a regular basis
	(on demand)	10%	300	30	12	DNO	Day 1 (2014)	2	4 quadrant power flow & rms voltage data
	DNO revision	*2014-19: <1%, post 2019: 1-5%*		*60 seconds*				3	ENA Use Case 07, 11
T6.3.2	**Electricity Quality Read**							1	This data set is not included in the IDTS
	(DG)	1	300	300	17520	DNO	Day 1 (2014)	2	If this relates to planning data it would be collected as part of T6.2.2.
	DNO revision	*Functionality not required - see comments*							
T6.3.3	**Smart Grid - localised**							1	This requirement was raised by the IET and it is not clear what functionality this is intended to deliver.
	weather forecast reports	20	1024	600	1460	DNO	After 2019		
	DNO revision	*Functionality not required - requested by IET*							

T6.3.4	**Smart Grid - Over / under voltage alarm**	100	160	30	50	DNO	Day 1 (2014)	1 2 3	Functionality required in all SMs but only the percentage shown will be accessed on a regular basis ENA Use Case 19 Question how this alarm will be managed/ suppressed. Likelihood that a low voltage condition may exist for a prolonged period or fluctuate
	DNO revision	*1-2%*			*600*				
T6.3.5	**Smart Grid -Re synchronisation of 'islands'**	10	160	30	12	DNO	After 2019	1	This requirement was raised by the IET and it is not clear what functionality this is intended to deliver.
	DNO revision	*Functionality not required - requested by IET*							
T6.3.6	**Smart Grid - Small-scale generation management**	10	160	30	1825	DNO	Day 1 (2014)	1 2	This requirement was raised by the IET and it is not clear what functionality this is intended to deliver. Duplication of T6.2.8
	DNO revision	*Functionality not required - requested by IET*							
T6.3.7	**Smart Grid - V2G support (bids)**	50	160	30	2190	DNO	After 2019	1	This requirement was raised by the IET and it is not clear what functionality this is intended to deliver.
	DNO revision	*Functionality not required - requested by IET*							
T6.3.8	**13-month meter read upload**	34	152,224	3600	1	N/A	Day 1 (2014)		Not DNO requirement
T6.3.9	**Supply fault alarm triggered**	100	160	600	50	N/A	Day 1 (2014)	1 2 3	User is DNO Issue relates to the management of the high volume of alarms in a short space of time in a small geographic area ENA Use Case 14
	DNO revision	*100*	*160*	*600*	*2*				

T6.3.19	**Energisation status check** ***DNO revision***	 *100*	 *160*	 *120*	 *2*	 DNO	 Day 1 (2014)	1 2 3	Also required by DNO ENA Use Case 13 Same requirements as supply fault alarm to check customer supply is restored. Also provides an alternative to supply fault alarm if it is decided that this is too expensive
T6.3.26	**Maximum Demand Read** ***DNO revision***	 *50*	 	 *10800*	 *12*	 *DNO*	 *2014*	1 2 3 4 5	Also required by DNO - IDTS PC08 Part 3 Draft Max /min demand readings consulted upon as part of IDTS Requirements in PC08 Part 3: Import min/max in two periods, Export min/max in two periods ENA requirements are planning timescales i.e 12 hour response Review data size
T6.3.27	**Message to consumer via IHD (on demand)**	100	256	120	12	DNO		1 2 3	May also required by DNO ENA Use Case 12 Longer response time would be acceptable to DNO (hours)
T6.3.28	**Message to consumer via IHD (scheduled)**	100	256	600	52	DNO		1 2 3	May also required by DNO ENA Use Case 12 Longer response time would be acceptable to DNO (hours)
T6.3.39	**Remote configuration of settings (on demand)** ***DNO revision***	 10	 	 900	 4	 DNO	 2014	1 2 3	Also required by DNOs ENA Use Case 20 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis

T6.3.40	**Remote configuration of settings (scheduled)** ***DNO revision***	10		43200	12	DNO	2014	1 2 3 4	Also required by DNOs ENA Use Case 20 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis DNO message size TBC but unlikely to be more than supplier requirements
T6.3.41	**Remote dis/enablement of supply (scheduled)** ***DNO revision***	10%	160	600	1	DNO	2014	1 2 3 4	Also required by DNOs ENA Use Case 09 Functionality required in all SMs but only the percentage shown will be accessed on a regular basis Application during the restoration of faults as an example - see ENA use case
T6.3.49	Smart Grid - Over / under voltage - returned to normal limits	*1-2%*	160	600	50	DNO	Day 1 (2014)	1 2 3 4	Not included in table 6.3 but previously specified Functionality required in all SMs but only the percentage shown will be accessed on a regular basis ENA Use Case 19 Indicates that the Elec Meter has detected that voltage levels have returned to a level within the configurable thresholds
T6.3.50	Incoming Supply Failure Restored	100	160	600	2	DNO	Day 1 (2014)	1 2	Not included in table 6.3 but previously specified ENA Use Case 15 Indicates that the Elec Meter has detected that the Incoming Supply has been Restored following an Incoming Supply Failure
T6.3.51	Voltage sag / swell detected	1-2%	160	43200	50	DNO	Day 1 (2014)	1 2	Not included in table 6.3 but previously specified ENA Use Case 06 Planning data

T6.3.52	Supply Disabled	10	160	600	1	DNO	Day 1 (2014)	1 2 3	ENA Use Case 09 Alarm / Event associated with T6.3.41 to confirm that outage is due to disablement and not fault Indicates that the supply has been restored i.e the contactor is opened
T6.3.53	Supply Restored	10	160	600	1	DNO	Day 1 (2014)	1 2 3	ENA Use Case 09 Alarm / Event associated with T6.3.41 Indicates that the supply has been restored i.e the contactor is closed
T6.3.54	Network Max Demand in a 30min period exceeds threshold	5	160	600	12	DNO	After 2019	1 2 3	ENA Use Case 09 Alarm / Event Indicates that the Elec Meter has detected a threshold set by Networks has been exceeded - this could lead to the supply being disabled.
T6.3.55	Network Energy Limiting Threshold kWh over a definable period exceeded	5	160	600	12	DNO	After 2019	1 2 3	ENA Use Case 09 Alarm / Event The kWh consumption over a definable period has exceeded the threshold set
T6.3.56	Energy and Consumption returned to below Threshold limits	5	160	600	12	DNO	After 2019	1 2 3	ENA Use Case 09 Alarm / Event Indicates that the Max Demands / Consumption measured by the Elec Meter has reduced to a level below the threshold