



TECHNICAL REPORT

**Machine-to-Machine communications (M2M);  
Smart Energy Infrastructures security;  
Review of existing security measures and  
convergence investigations**

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**Reference**

DTR/SmartM2M-021

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**Keywords**

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**ETSI**

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## Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Smart Machine-to-Machine communications (SmartM2M).

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## Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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# 1 Scope

The present document reviews security methods provided by deployed standards used in the Smart Energy industry (e.g. IEC 62351 [i.7], IEC 62443 [i.8]) or mandated by regulation (e.g. Requirements from the German BSI for Smart Meter Gateways and Secure Element) as well as gaps identified by the Smart Grid Information Security group for the M/490 mandate, in order to identify areas where ETSI may bring additional value, e.g. by extending or harmonising security solutions where possible.

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## 2 References

### 2.1 Normative references

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] Department of Energy & Climate Change: "The Smart Metering System" (leaflet).

NOTE: Available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/336057/smart\\_metering\\_leaflet.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/336057/smart_metering_leaflet.pdf).

[i.2] Federal Office for Information Security: "Protection Profile for the Gateway of a Smart Metering System (Smart Meter Gateway PP)", Version 1.3, March 2014 and "Protection Profile for the Security Module of a Smart Meter Gateway (SecMod-PP)", Version 1.03 December 2014.

NOTE: Available at [https://www.bsi.bund.de/SharedDocs/Zertifikate/PP/aktuell/PP\\_0073.html](https://www.bsi.bund.de/SharedDocs/Zertifikate/PP/aktuell/PP_0073.html) and [https://www.bsi.bund.de/SharedDocs/Zertifikate/PP/aktuell/PP\\_0077+V2.html](https://www.bsi.bund.de/SharedDocs/Zertifikate/PP/aktuell/PP_0077+V2.html), respectively.

[i.3] Federal Office for Information Security: "Technische Richtlinie BSI TR-03109", Version 1.0, March 2013 (in German).

NOTE: Available at <https://www.bsi.bund.de/DE/Publikationen/TechnischeRichtlinien/tr03109/index.htm.html>.

[i.4] Association of Energy Network Operators in the Netherlands: "P1 Companion Standard - Dutch Smart Meter Requirements", Version 5.0, May 2014.

NOTE: Available at <http://www.netbeheernederland.nl/publicaties/publicatie/?documentregistrationid=272367618>.