

Source **Lawrence Berkeley National Laboratory, Smart Grid Technical Advisory Project**

The Smart Grid Technical Advisory project has been providing technical support since 2009 to the National Association of Regulatory Utility Commissioners, Smart Grid Collaborative. Project support is provided exclusively and directly to state regulatory commissions in the form of workshops, briefing sessions, special projects, webinars and reports. This project is funded through the Lawrence Berkeley National Laboratory by DOE.

This workbook was developed to organize and provide links to news articles, technical reports, regulatory and legislative actions, and organizations that have jurisdiction or concerns over Smart Meter implementation. The material in this workbook was collected from public and private sources to address Smart Meter health, accuracy, privacy, and other concerns.

This workbook is being continually updated. Smart Meters and related smart grid activity is occurring in North America, Europe, and Asia. As a result, new resources are continually being developed. The scope and volume of activity does not allow this or any other resource to capture all relevant material. Consequently this workbook only includes a sampling of resources that our project team was aware of and determined to be most relevant.

The material in this workbook is meant to be a resource, not an exclusive authority on Smart Meter issues. Each workbook tab addresses a separate category of reference material, specifically:

Section	Section Focus	Content
1	Meter Specific	News articles, technical studies, industry reports, field measurements, and critiques from individuals, organizations and associations.
2	Accuracy	News articles and technical reports that address meter accuracy complaints and utility validation tests.
3	Opt-Out	News articles, regulatory and legislative decisions regarding smart meter opt-out policy, conditions, and costs.
4	Privacy - in development	Utility, state, federal and other work products, reports, regulatory decisions, legislation, and other guidelines regarding meter data privacy and cyber security.
5	Cyber Security - in development	
6	Reserved for future topic	
7	Anti Smart Meter web sites	A listing of web sites for anti Smart Meter groups.
8	Sample Testimony	A sampling of comments submitted in regulatory smart grid proceedings. Current content includes a sampling of individual, community and interest group submittals to the Michigan Public Service Commission in Proceeding #17000, Investigation into the Deployment of Smart Meters.
9	Health Studies - related to EMF radiation	Scientific studies and reports that address the research on potential EMF related health effects.
10	Technical Health Studies - address cancers, DNA and other health related issues.	Additional scientific studies, reports, private submittals and other material to address the potential EMF related health effects.

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Source Number	Document Type	Title	Source	Subject Matter - Emphasis	Link
1	Field Test	City of Naperville, Naperville Smart Grid Initiative, Pilot 2 RF Emissions Testing - Plan and Results - V2.0	City of Naperville, September 22, 2011	RF emission testing and contributions from multiple sources under various exposure, duration conditions.	http://naperville.il.us/emlibrary/Smart_Grid/Pilot2-RFemissionsTesting-SummaryReport.pdf
2	Technical Report	Health Impacts of Radio Frequency from Smart Meters, Draft	California Council on Science and Technology, January 2011	examines exposure levels and related factors to health	http://www.ccsct.us/publications/2011/2011smart.pdf
3	Technical Report	Health Impacts of Radio Frequency from Smart Meters, Final	California Council on Science and Technology, April 2011	examines exposure levels and related factors to health	
4	Summary	Electromagnetic Fields and Public Health	World Health Organization, UN, May 2006	O&A regarding RF and wireless sources.	http://www.who.int/mediacentre/factsheets/fs304/en/index.html
5	Industry Report	No Health Threat from Smart Meters	Utilities Telecommunication Council	O&A regarding RF and metering.	http://www.etc.org/utc/no-health-threat-anti-smart-meters-savc-latest-utc-study
6	Industry Report	An Investigation of Radiofrequency Fields Associated with the Iron Smart Meter	EPRI 2010 Technical Report, December 2010	Detailed examination of Iron meters and RF issues	http://heartland.org/policy-documents/investigation-radiofrequency-fields-associated-iron-smart-meter
7	Critique	Addendum: Assessment of Radiofrequency Microwave Radiation Emissions from Silver Springs OWS-NIC514 Model Wireless Electric Meter	SAGE Associates, February 18, 2011	Examines RF emissions for Silver Springs meter, uncertain test and measurement	http://www.wfar.com/Sage2_Smart_Meter_PG_E_OWS_report_saad.pdf
8	Critique	Assessment of Radiofrequency Microwave Radiation Emissions from Smart Meters	SAGE Associates, January 1, 2011	Examines RF emissions for Silver Springs meter, uncertain test and measurement	http://sagereports.com/smart-meter-rl/
9	Industry Report	A Discussion of Smart Meters and RF Exposure Issues	EI-AEIC-UTC White Paper, March 2011	Summarizes smart meter RF issues and studies	http://www.aeic.org/meter_service/smartmetersandr031511a.pdf
10	Summary	What consumers need to know about the smart grid and smart meters	Environmental Defense Fund	general information	http://www.edf.org/sites/default/files/EDF-smart-grid-benefits-fact-sheet_0.pdf
11	Technical Report	Radio Frequency Safety Analysis, Schlumberger R300 Automatic Meter Reader	Liteton Electric Light & Water Department, Littleton, IA., August 12, 2001	field tests and review of RF exposure standards, pertinent to AMR not AMI	Not available
12	Critique	Health Impacts of Radio Frequency from Smart Meters	Dr. Magda Havas, B.Sc., Ph.D., October 2, 2010	critique of Calif. Council on Science and Tech Report	http://citizensforafreelife.com/Response-to-CCST-request-for-more-regarding-Smart-Meters-Magda-Havas_25_1109
13	Critique	Comments on the Draft Report by the California Council on Science and Technology	Daniel Hirsch, January 31, 2011	critique of Calif. Council on Science and Tech Report	http://www.ccsct.us/projects/smart2/documents/lettershirsch.pdf
14	Critique	Comments on the Draft Report by the California Council on Science and Technology	California Department of Public Health	critique of Calif. Council on Science and Tech Report	http://www.ccsct.us/projects/smart2/documents/letters3.pdf
15	Critique	Comments on the Draft Report by the California Council on Science and Technology	Pacific Gas and Electric Company,	critique of Calif. Council on Science and Tech Report	http://www.pge.com/includes/docs/pdfs/myhome/edu/safety/_systemworks/rf/ccst/pge_response_to_ccst_report.pdf
16	Critique	Comments on the Draft Report by the California Council on Science and Technology	SAGE Associates, January 17, 2011	critique of Calif. Council on Science and Tech Report	http://sagereports.com/smart-meter-rl/?p=343
17	Industry Report	Smart Meters and Smart Meter Systems: A Metering Industry Perspective	EI-AEIC-UTC White Paper, March 2011	general information	http://www.aeic.org/meter_service/smartmetersfinal032511.pdf
18	Technical Report	PG&E Advanced Metering Assessment Report	California Public Utilities Commission, Structure Consulting Group, LLC., September 2, 2010	field assessment of meter accuracy, safety, installation procedures.	http://smaaa.org/storage/CPUC%2010.pdf
19	Technical Report	Evaluation of Advanced Metering System (AMS) Deployment in Texas	Navigant Consulting, July 30, 2010	field assessment of meter accuracy, safety, installation procedures.	http://www.centerpointenergy.com/staticfiles/CPN/Common/Assets/docs/UCT%20Final%20Report%2007-30.pdf
20	Summary	Review of Health Issue Related to Smart Meters	Maine CDC, November 8, 2010	general information relative to meters and RF	http://www.marbleheadelectric.com/MaineSmartMeters.pdf
21	Summary	Health Effects of Non-ionizing Radiation	Minnesota CDC	general information relative to meters and RF	
22	Industry Report	Radio-Frequency Exposure Levels from Smart Meters: A Case Study of One Model	EPRI, February 2011	field assessment of meter accuracy, safety, installation procedures.	http://www.socalgas.com/documents/ami/EPRI_1022470.pdf
23	Industry Report	A Perspective on Radio-Frequency Exposure Associated with Residential Automation Meter Reading Technology	EPRI, February 2010	general information relative to meters and RF	http://www.nverenergy.com/NVenergy/documents/EPRI_ExpnsureAMI.pdf
24	Summary	Automated Meter Reading (AMR/AMI), Implementation, O&A, Misinformation	Cleveland Utilities	general information relative to meters and RF	http://www.clevelandutilities.com/ami.htm
25	Industry Report	Accuracy of Digital Electricity Meters	EPRI, May 2010	general information relative to meters and RF	http://www.silver.springnet.com/pdfs/epri-smart_meters_epri.pdf
26	Critique	Health Risks Associated with Smart Meters	County of Santa Cruz Health Services Agency, January 13, 2012		http://www.santacruzhealth.org/wp-content/uploads/2009/11/Health-Risks-Associated-With-SmartMeters.pdf
27	Industry Report	A Perspective on Two Smart Meter Memoranda	EPRI Report 1024952, February 2012		
28	News	Rebellion in the Burbs: Dad Has Smart Meter Removed	Stop Smart Meters. Org	Case study and links to multiple anti-smart meter sites and information	no link available, membership access
29	Technical Resource	Radio Frequency Safety	FCC, Office of Engineering and Technology (OET)	FAQ, links to standards regarding RF safety, definitions, etc.	http://transition.fcc.gov/oet/ef/safety/
30	Technical Resource	Staff Discussion Papers	Minnesota Public Utilities Commission,	summary and links to industry sources.	https://www.edockets.state.mn.us/ETiling/edockets/search/Documents.do?method=showDoc&documentid=CC58318&ACFA=4828-8789-5718C30145C1&documentTitle=201119-66363-01
31	Critique	American Academy of Environmental Medicine		Review of Current Literature, January 19, 2012	http://aemonline.org/images/CaliforniaPublicUtilitiesCommission.pdf
32	Critique	Santa Cruz County Department of Health Smartmeter Report		Review of Current Literature, January 13, 2012	http://healthvermont.gov/pubs/gh_assessments/radio_frequency_radiation_and_health_smart_meters.pdf
33	Critique	Radio Frequency Radiation and Health: Smart Meters	Vermont Department of Health	review of current literature, Feb 10, 2012	http://healthvermont.gov/pubs/gh_assessments/radio_frequency_radiation_and_health_smart_meters.pdf
34	Industry Report	EPRI Comments: A Perspective on Two Smart Meter Memoranda	EPRI #1024952, February 2012	Comments on the American Academy of Environmental Medicine and Santa Cruz-Health Agency submissions to the CPUC	http://invest.epri.com/docs/CorporateDocuments/Newsletter%20ENY/0N-2011-09/07-050a.html
35	Industry Report	Swiss Re	Electromag - a phantom Risk	Insurance perspective on issue	http://people.ee.ethz.ch/~serez/presentations/21_Dec_2009/08-STAUB_SwissRE-insurance_Radar.pdf
36	Technical Resource	Characterization of Radio Frequency Emissions from Wireless Smart Meters	Ric Tell	Measurements of emissions	http://www.silver.springnet.com/pdfs/EPRI-Final1021829.pdf
37	Technical Resource	Supplemental Report on an Analysis of Radiofrequency Fields Associated with Operation of the PG&E SmartMeter Program Upgrade System	Ric Tell	Measurements of emissions	http://www.pge.com/includes/docs/pdfs/shared/edsafety/sytemworks/rfsafety/rl_fields_supplemental_report_2008.pdf
38	Technical Resource	An Analysis of Radiofrequency Fields Associated with Operation of the Hydro One Smart Meter System	Ric Tell	Measurements of emissions	http://www.hydroone.com/NAHome/MyAccount/MyMeter/D_documents/Smart_Meters_Report_on_RF.pdf
39	Technical Resource	Smart meters and Smart Meter Systems: A Metering Industry Perspective	Edison Electric Institute	White Paper	http://www.aeic.org/meter_service/smartmetersfinal032511.pdf
40	Technical Resource	A Discussion of Smart Meters and RF Exposure Issues	Edison Electric Institute	White Paper	http://www.aeic.org/meter_service/smartmetersandr031511a.pdf
41	Industry Report	Radio-Frequency Exposure Levels from Smart Meters: A Case Study of One Model	EPRI	Measurements of emissions	http://www.silver.springnet.com/pdfs/EPRI-Final1021829.pdf
42	Industry Report	An Investigation of Radiofrequency Fields Associated with the Iron Smart Meter	EPRI #1021126, December 2010	Measurements of emissions	https://www.cityofmadison.com/water/documents/EPRIsmart_metersstudy.pdf
43	Critique	Review of Health Issues Related to Smart Meters	MONTEREY COUNTY HEALTH DEPARTMENT, PUBLIC HEALTH BUREAU, EPIDEMIOLOGY AND EVALUATION	Review of Current Literature, March 2011	http://publicagenda.co.monterey.ca.us/MS97205/AS9724/A587330/A99413/D092416/00_9816.pdf
44	Technical Report	AMI Meter Electromagnetic Field Survey, EMC Technologies, October 20, 2011	Victoria, Australia technical field measurement study	Electromagnetic Field (EMF) measurement site surveys were conducted on a range of Advance Meter Infrastructure (AMI) meters (also known as Smart Meters) installed in various types of houses. The EMF measurements were performed on AMI Meters installed by the major Victorian Electricity Distribution Businesses (DB) namely – United Energy Distribution, Jemena Electricity Networks, Citipower, Powercor and SP AusNet	http://www.dpi.vic.gov.au/smart-meters/publications/reports-and-consultations/ami-meter-em-field-survey-report

Source Number	Document Type	Title	Source	Subject Matter - Emphasis	Link
1	email	Off-Cycle Electric Smart Meter Change-Out	private email, web link	Claims accuracy problem due to double billing by utility due to off-cycle meter change-out	http://home.earthlink.net/~bviewages/the_electric_smart_meter_accuracy/
2	Technical Report	PG&E Advanced Metering Assessment Report	California Public Utilities Commission, Structure Consulting Group, LLC, September 2, 2010	Self assessment of meter accuracy, safety, installation procedures.	http://www.scribd.com/doc/42112112/PG&E-Advanced-Metering-Assessment-Report-09-02-10.pdf
3	Technical Report	Evaluation of Advanced Metering System (AMS) Deployment in Texas	Navigant Consulting, July 30, 2010	Self assessment of meter accuracy, safety, installation procedures.	http://www.navigant.com/Content/Assets/Reports/AMS%20Deployment%20in%20Texas%20July%202010.pdf
4	News Article	Attorney offers evidence of faulty PG&E metering in Bakerfield case	Internet	Presents analysis of weather data that show high bills in Bakerfield were due to faulty meter readings, not a rate change	http://www.bakersfield.com/story/2010/09/22/attorney-offers-evidence-faulty-pge-metering-bakerfield-case/311386
5	News Article	25 of 1 million smart meters were inaccurate, Oncor CEO says	Internet	Oncor analysis to identify faulty meter readings accuracy problem, references field tests.	http://www.enr.com/story/2010/09/22/25-of-1-million-smart-meters-were-inaccurate-oncor-ceo-says/311386
6	News Article	Oncor Meters: Confirmed to be Accurate (Again)	Internet, GreenTech Media	Oncor field study on accuracy of smart meters, confirmed.	http://www.greentechmedia.com/articles/story/oncor-meters-confirmed-to-be-accurate-again
7	CPUC Document	Independent Evaluation of PG&E Smart Meters Frequently Asked Questions	CPUC	Frequently Asked Questions regarding smart meters, focus on Structure evaluation of meter accuracy.	http://www.cpuc.ca.gov/Info/Informational/SmartMeters/SmartMetersFAQ.htm
8	News Article	Consumer group criticizes smart meter study	Internet	Consumer groups criticize Structure Report	http://www.enr.com/story/2010/09/22/consumer-groups-criticize-structure-report/311386
9	News Article	Team Study Deems Smart Meters Accurate	Internet	News story investigation into WVEnergy smart meter accuracy.	http://www.wveenergy.com/Content/Assets/Reports/SmartMetersStudy.pdf
10	News Article	Smart Meter Accuracy: The Evidence Comes In	eMeter commentary and summary of Texas / Call reports	summary of meter accuracy investigations	http://www.emeter.com/Smart_Meter_Accuracy_The_Evidence_Comes_In
11	News Article	Are smart meters accurate?	Centerpoint Energy article summarizing Navigant findings	summary of meter accuracy investigations	http://www.centerpointenergy.com/Services/Electricity/Business%20Services/SmartMetering/Pages/SmartMetersAccuracy.aspx?cid=1000002&cid=1000002
12	EEV AEC report	Smart Meters and Smart Meter Systems: A Metering Industry Perspective	EEV AEC report	Addresses health, accuracy and other smart meter issues.	http://www.eemeter.com/Assets/SmartMetersandSmartMeterSystems.pdf
13	YouTube Video	Hydro One Meter and Relay Services: Smart Meter Accuracy	Hydro One video to demo meter accuracy testing	meter accuracy	http://www.youtube.com/watch?v=dvMh30p1
14	News Article	Pepco Tests Smart Meters for Accuracy	PEPCO article explaining smart meter testing and accuracy	meter accuracy	http://www.pepco.com/energy/News/SmartMetersforAccuracy.aspx
15	News Article	Smart Meter Accuracy FAQs	TXU article explaining smart meter testing and accuracy	meter accuracy	http://www.txu.com/SmartMeter/SmartMeterFAQs.aspx
16	YouTube Video	Are smart meters accurate?	EEP article explaining smart meter testing and accuracy	meter accuracy	http://www.youtube.com/watch?v=KdM1j3m1
17	News Article	Pepco's Smart Meters Meet High Standards for Providing Accurate Billing Information	PEPCO blog post explaining smart meter features	meter accuracy	http://pepco.com/SmartMeters/SmartMetersMeetHighStandardsforProvidingAccurateBillingInformation.aspx
18	News Article	APS: Frequently Asked Questions about Smart Meters	Arizona Public Service FAQ explaining smart meter features	all features including accuracy	http://www.aps.com/SmartMeters/SmartMetersFAQ.aspx
19	News Article	Understanding Smart Meters	PPL smart meter FAQ	all features including accuracy	http://www.ppl.com/SmartMeters/SmartMetersFAQ.aspx
20	News Article	Address Smart Meter Concerns with Communication about Benefits	Generic article on smart meters	addresses many features, including accuracy - no documentation just a generic.	http://www.enr.com/story/2010/09/22/address-smart-meter-concerns-with-communication-about-benefits/311386
21	News Article	Smart Meters and AM	FAQ from the Delaware Public Service Commission on smart meters	all features including accuracy	http://www.dpsc.state.de.us/SmartMeters/SmartMetersFAQ.html
22	News Article	Advanced Metering Infrastructure (AMI)	Southern Maryland Electric Cooperative FAQ on smart meters	all features including accuracy	http://www.smdce.com/SmartMeters/SmartMetersFAQ.aspx
23	News Article	Smart Meter FAQ	EDSE smart meter FAQ	all features including accuracy	http://www.edse.com/SmartMeters/SmartMetersFAQ.aspx
24	News Article	Hydro bills up in part due to smart meter accuracy	News article on Hydro One	general report, alludes to accuracy improvement	http://www.enr.com/story/2010/09/22/hydro-bills-up-in-part-due-to-smart-meter-accuracy/311386
25	News Article	Wireless Smart Meter Background Information for Burbank/Glendale	FAQ from the Burbank/Glendale Municipal utility on smart meters	all features including accuracy	http://www.burbankglendale.com/SmartMeters/SmartMetersFAQ.aspx
26	News Article	BC Hydro pulls smart meters for testing	News article - utility pulls from meters to test for accuracy in response to high bill complaints.	active response to high bill complaints	http://www.theglobeandmail.com/news/national/british-columbia-bc-hydro-pulls-smart-meters-for-testing/article3921440/

Source Number	Document Type	Utility / State	Name of Article / Source	Subject Matter - Emphasis	Link
1	Report	All States	SAIC Smart Grid Legislative Proceedings, Report to Energy Information Administration, 11/15/2011	survey of state-by-state legislation pertaining to Smart Grid, with meter related issues.	http://205.254.135.24/analysis/studies/electricity/pdf/sreg_policies.pdf
2	News	Arizona	Arizona power fee may mirror 'smart meter' plan in Calif.		http://www.ascentral.com/arizonarepublic/business/articles/2011/11/23/20111123arizona-power-fees-smart-meter-plan-california.html
3	News Article, Regulatory Decision	California, Burbank	Review of City Council Meter opt-out decision		http://articles.latimes.com/2012-03-16/la-bu-burbank-creates-opt-out-policy-for-smart-meter-system-1-new-meter-opt-out-policy-power-customers
4	Regulatory Decision	California, CPUC, PG&E	CPUC Smart Meter Opt-Out Decision		http://docs.cpuc.ca.gov/WORD_PDF/AGENDA_DECISION/157397.PDF
5	Regulatory Decision	California, CPUC, SCE	DECISION MODIFYING DECISION 08-09-038 AND ADOPTING AN OPT OUT PROGRAM FOR SOUTHERN CALIFORNIA EDISON COMPANY'S EDISON SMARTCONNECT PROGRAM		http://docs.cpuc.ca.gov/FILE/PDF/161688.pdf
6	Regulatory Decision	California, CPUC, SDG&E	DECISION MODIFYING DECISION 07-04-043 AND ADOPTING AN OPT-OUT PROGRAM FOR SAN DIEGO GAS & ELECTRIC COMPANY		http://docs.cpuc.ca.gov/FILE/PDF/161677.PDF
7	News Article, Regulatory Decision	California, Glendale	Review of City Council Meter opt-out decision		http://www.alendalenewspress.com/news/in-zoo-0308-city-to-offer-smart-meter-opt-out-0.382105-story
8	Legislative Action	California, Legislature	California Legislative Bill 37 Mandating CPUC Halt Smart Meters to address Opt-Out		http://www.cpuc.ca.gov/NR/rdonlyres/8436AD48-7E9D-4F72-AECE-9218EF278C0E/0/LEGFEMOAB_37_3_24_Comm_brg.pdf
9	News	California, PG&E	PG&E's Smart Meter Opt-Out: The Ins and Outs		http://www.greentechmedia.com/articles/read/pges-smart-meter-opt-out-the-ins-and-outs/
10	News	Canada, Quebec	Hydro-Quebec offers expensive alternative to smart meters, March 30, 2012		http://www.montrealgazette.com/business/Hydro-eriled-opting-smart-meters/638305/story.html
11	News	Consumers Energy, Michigan	Consumes Energy customers could choose not to have smart meters installed in homes		http://www.mlive.com/business/jackson-lansing/index.ssf/2012/02/consumers_energy_customers_could.html
12	Journal Article	Generic	Opting Out: Providing reasonable options for customers who object to smart meters		http://www.fortnightly.com/uploads/01012012_BusinessMoney.pdf
13	News	Generic	Smart Meter Opt-Out Programs Spread Across North America		http://dworld.com/customer_service/smart-meter-opt-out-0112/
14	News	Georgia	Georgia Senate Passes Smart Meter Opt-Out Bill		http://www.smartgridmagazine.com/links/smart-grid-basics/georgia-senate-passes-smart-meter-opt-out-bill?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+SmartGridMagazine%28Smart+Grid+Legal+News%29
15	Legislative Action	Georgia	Georgia Legislation - Bill 459 (actual text)		http://www.smartgridmagazine.com/GeorgiaSenateBill459.pdf
16	Legislative Action	Georgia	Legislation to require opt-out		http://www.smartgridmagazine.com/GeorgiaSenateBill459.pdf
17	Regulatory Decision	Illinois, Naperville	Naperville Smart Grid Initiative, Question/Response Inventory 03/28/2012	Questions and responses to all questions submitted to City Council. Meter Opt-Out addressed.	http://www.naperville.il.us/emplibrary/Smart_Grid/NSGIQuestionResponseInventory.pdf
18	News	Maine	MPUC Decides Smart Meter Investigation		http://www.maine.gov/tools/whatsnew/index.php?topic=cpuc-pressreleases&id=245859&articleid8
19	Regulatory Decision	Maine, Central Main Power, Maine PUC	MPUC Smart Meter Opt-Out Decision		http://www.scribd.com/doc/54403904/Maine-PUC-order-dismissing-smart-meter-opt-out-complaints
20	Legislative Action	Maryland, Legislature	House Bill 878	Not yet adopted 4/06/2012 - Requires notification before meter installed, required opt-out with analog meter	http://mlis.state.md.us/2012rs/billfile/hb0878.htm
21	News	Michigan	Smart Meter Opt-Out Legislation Introduced		http://michiganstopsmartmeters.com/2012/02/18/smart-meter-opt-out-legislation-introduced/
22	News	Michigan	DTE to allow opt-out		http://www.hometownlife.com/article/20120315/NEWS10/201203150579/DTE-will-allow-opt-out-smart-meters?odyssey=mod%7Cnews%7Ctext%7Croyal%20ok%7C
23	News	Nevada Public Utilities Commission	Commissioner opposes smart meter opt-outs		http://www.hri.com/business/nevada-puc-commissioner-opposes-smart-meter-opt-outs-140655303.html
24	Regulatory Decision	Nevada, Public Utilities Commission	Draft Commission Opt-Out Order, 2/22/2012		http://thcontent.worldnow.com/kvu/optout.pdf
25	News	Nevada, NV Energy	Nonwireless digital 'smart meter' option approved, but could bring additional costs		http://www.rei.com/article/20120301/012/303010021/Nonwireless-digital-smart-meter-option-approved-could-bring-additional-costs
26	News	Nevada, NV Energy	Potential costs for opting out of smart meters identified		http://www.w01.lasvegassun.com/news/2012/feb/24/potential-costs-opting-out-smart-meters-are-identical/comments/
27	News	Nevada, NV Energy	Nevada PUC approves smart meter opt-out plan		http://www.hri.com/business/nevada-puc-commissioner-opposes-smart-meter-opt-outs-140655303.html
28	Regulatory Decision	Oregon	Portland General Electric: Opt-Out Changes		http://www.portlandgeneral.com/our_company/corporate_info/regulatory_documents/
29	Regulatory Decision	Oregon	Portland General Electric: Opt-Out Proposal		http://edocs.puc.state.or.us/efdocs/UAA/14251uaa142641.pdf
30	Regulatory Decision	Oregon	Portland General Electric: Opt-Out Proposal- Approved		http://edocs.puc.state.or.us/efdocs/UAC/14412uac115542.pdf
31	News	Quebec	Hydro-Quebec offers expensive alternative to smart meters		http://montreal.ctv.ca/serveet/arc/local/6/TVNews/20120314/mi_hydro_120314/20120314/7hub-MontrealHome
32	News	Texas	Texas Opt-Out of Smart Meters Petition		http://www.petitiononline.com/TCTPABN/petition.html
33	News	United Kingdom	UK Smart Meters Optional		http://www.smartmeters.com/the-news/3001-uk-smart-meters-optional.html
34	News	Vermont	Vermont and the Opt-Out Provision		http://www.intelligentutility.com/article/11/11/vermont-and-opt-out-provision
35	News	Vermont	Legislation to allow opt-out		http://www.manchesterjournal.com/local/ci_20178995/smart-meter-overnight-bill-heads-senate
36	Regulatory Decision	Vermont	Central Vermont Public Service and Green Mountain Power 11/07/2011	Meter related policies	http://www.cvsp.com/ProgramsServices/smartpower/assets/2011%2012%2016%20int%20Reply%20Comment.pdf

Source Number	Document Type	Utility / State	Name of Article / Source	Subject Matter - Emphasis	Link
1	Report	Federal	DOE Data Access and Privacy Issues Related to Smart Grid Technologies, Oct.5, 2010	Review of the issues with recommendations for addressing data access and protection	http://energy.gov/sites/prod/files/gcprotd/documents/Broadband_Report_Data_Privacy_10_5.pdf
2	Summary of NAESB Standard REQ.21	Federal	REQ.21 Energy Services Provider Interface	Review of NAESB standards development process addressing the Green Button Initiative, ESPI Tool Kit, and links to the standards products.	http://www.naesb.org/ESPI_Standards.asp
3	Report	U.S. Department of Health & Human Services	Summary of the HIPAA Privacy Rule, May 2003	Summary of health data privacy rules, considered a framework for meter data access	http://www.hhs.gov/ocr/privacy/hipaa/understanding/summary/privacy_summary.pdf
4	Summary of FTC Principles	Federal Trade Commission	Fair Information Practice Principles	Summary of FIPs adopted by FTC.	http://www.ftc.gov/reports/privacy3/fairinfo.shtml
5	Regulatory Decision, CPUC	California, PG&E, SCE, and SDG&E	Decision Adopting Rules to Protect the Privacy and Security of the Electricity Usage Data of Customers, July 28, 2011	Regulatory decision addressing meter data access	http://docs.cpuc.ca.gov/published/FINAL_DECISION/140369.htm https://www.cdt.org/files/pdfs/PUCN205Smart%20Grid%20Final.pdf
6	Review and Commentary	Privacy Party legal review	Establishing a Framework for Third Party Access to Consumer Specific Energy-Use Data, DowLohnes, PLLC, December 12, 2011	Overview and state by state review of regulatory positions regarding meter data access privacy issues, principles and practices.	http://www.dowlohn.com/files/upload/smarterid.pdf
7	Report	Federal, Department of Commerce	Commercial Data Privacy and Innovation in the Internet Economy: A Dynamic Policy Framework, December 16, 2010	A framework for addressing online privacy in US	http://www.ntia.doc.gov/files/ntia/publications/iptf_privacy_greenpaper_12162010.pdf
8	Report, Policy Guidelines	Federal, White House	CONSUMER DATA PRIVACY IN A NETWORKED WORLD: A FRAMEWORK FOR PROTECTING PRIVACY AND PROMOTING INNOVATION IN THE GLOBAL, DIGITAL ECONOMY, February 2012	Guidelines for data privacy, references to FTC, other sources	http://www.whitehouse.gov/sites/default/files/privacy-final.pdf
9	Guidelines	Private Industry Guidelines	BBB Code of Business Practices (BBB Accreditation Standards)	Recommendations for online data and other practices assembled by the Better Business Bureau, March 2012	http://www.bbb.org/us/bbb-accreditation-standards/
10	Regulatory Rule	Colorado, PUC Regulatory rule	Colorado Department of Regulatory Agencies, Public Utilities Commission, Rules Regulating Electric Utilities, 723-3 Part 3 §3029(a)	Third party contracts with utilities, contractual requirements for implementing and maintaining security, allowed uses, and data maintenance requirements.	http://www.dora.state.co.us/bur/rules/723-3.pdf
11	Regulatory Rules and Guidelines	Wisconsin, PUC	Policy and Procedures Manual, Wisconsin, March 7, 2011	Policy and procedures for vendors interfacing with utilities on energy related programs, includes data access and sharing.	http://vendornet.state.wi.us/Vendornet/wais/docs/16446_1.PDF
12	Law Review Article	National, Privacy Party legal review	Taking the "Long View" on the Fourth Amendment, Stored Records and the Sanctity of the Home, D.K.Mulligan and J. Lerner, Stanford Technology Law Review, February 2, 2008.	Review of potential Fourth Amendment implications for meter data.	http://str.stanford.edu/2008/02/taking-the-long-view-on-the-fourth-amendment/
13	Report	National Guidelines	Security Profile for Third Party Data Access, NIST Cyber Security Working Group & UCALug Security Working Group, V1.0, May 18, 2011	Discusses security requirements for parties participating in three-way relationships that involve the ownership and handling of sensitive energy/meter data.	http://www.smartgridpedia.org/images/6/65/3PDA_Security_Profile_-_v1_0_-_20110518.pdf
14	Guidelines	National Guidelines	Generally Accepted Privacy Principles and Criteria, AICPA	Privacy principles for managing customer data	http://www.aicpa.org/InterestAreas/InformationTechnology/Resources/Privacy/GenerallyAcceptedPrivacyPrinciples/DownloadableDocuments/GAPP_Principles%20and%20Criteria.pdf
15	Report	Canada, British Columbia	Investigation Report F11-03, British Columbia Hydro and Power Authority	Comments by Utility Consumers' Action Network and Privacy Rights Clearinghouse on the Assigned Commissioner's February 8th Scoping Memo, March 5, 2010	http://www.oipc.bc.ca/orders/investigation_reports/IR-F11-03.pdf
16	Regulatory Testimony	California, PG&E, SCE, and SDG&E	Comments by UCAN and Privacy Rights Clearinghouse on CPUC proceeding regarding meter data collection and smart grid, links to resources.		http://www.ucan.org/files/UCANSmartGridCommentsfnl_0.pdf
17	Report	California, CEC Funded report	Privacy in the Smart Grid: An Information Flow Analysis, UC Berkeley School of Information, D.K.Mulligan, March 2011.	Documents smart grid meter data information flows, outlines the laws and agencies at local, state, and national level that impact relate to meter data access and privacy.	http://uc-ciee.org/downloads/Privacy_in_Smart_Grid_Final_Report.pdf
18	Regulatory Testimony	California, Regulatory Guidance	Implementing Smart Privacy, Addressing Privacy Concerns in the California Smart Grid, Center for Democracy and Technology, J.M.Urban, October 25, 2010	Overview of privacy concerns, guidance to the CPUC	http://www.cpuc.ca.gov/NB/rdonlyres/DEA86C25-3E10-4D3E-8A62-E0407658C782/0/CDTCPUUPresentationOct25Workshop.pdf
19	Report	Federal, Report	U.S. Department of Energy Smart Grid Privacy Workshop, Summary Report, January 31, 2012	Summary of workshops held by DOE to examine the issues related to privacy and the collection of consumer electricity usage data.	http://www.smartgrid.gov/sites/default/files/doc/Files/Privacy%20Report%202012_03_19%20Final.pdf
20	Report, Policy Guidelines	National, NIST, SGIP Working Group Report	Guidelines for Smart Grid Cyber Security: Vol. 2, Privacy and the Smart Grid, NISTIR 7628	First major report issued by the CSWG on Smart Grid Cyber Security and Privacy. Outlines the issues with recommendations.	http://csrc.nist.gov/publications/nistir/ir7628/nistir-7628_vol2.pdf
21	Report	Federal, EPA Report	Utility Best Practices Guidance for Providing Business Customers With Energy Use and Cost Data, November 2008	Results from a three year study by National Action Plan for Energy Efficiency	http://www.epa.gov/cleanenergy/documents/suca/utility_data_guidance.pdf
22	Report, Policy Guidelines	Illinois, Naperville Report	City of Naperville Grid Initiative (NSGI), Protecting the Privacy of Naperville Electricity Customers: A Customer Privacy and Advocacy Handbook.	Handbook developed by Naperville to guide collection and use of energy use data related to their advanced metering initiative.	http://naperville.il.us/emplibrary/Smart_Grid/NSGI-CPAHandbook.pdf
23	Report, Policy Guidelines	National, NIST, SGIP Working Group Report	Recommended Privacy Practices for Customer Energy Usage Data, SGIP Cyber Security Working Group, Privacy Subgroup, December 22, 2011	Addresses third-party data access of customer energy usage data. Material drawn from access rules established for NAESB Requirement 22	http://naesb.org/pdf4/data_privacy051911w1.doc
24	Report	National Regulatory Research Institute	Smart Grid Data: Must There Be Conflict Between Energy Management and Consumer Privacy?	General report outlining the data privacy issues.	http://www.nrii.org/pubs/telecommunications/NRRI_smart_grid_privacy_dec10-17.pdf
25	Legislation	Oklahoma, legislation	Oklahoma House Bill 1079, Electric Usage Data Protection Act, effective May 24, 2011	requiring an electric utility to provide certain access to and maintain the confidentiality of customer information; authorizing certain use of customer-identifiable usage data without consent; requiring an electric utility to provide standard usage data to a customer as a component of basic service; requiring an electric utility to provide nonstandard usage data to a customer under certain circumstances;	http://e-lobbyist.com/qaits/OK/HB1079
26	Report, Policy Guidelines	Canada, Report, Policy Guide	Smart Grid Privacy 101: Privacy by Design in Action - Power Morning. A Primer for Regulators, Cavoukian, October 25, 2010	Policy guidelines for access and usage of meter data.	http://www.privacybydesign.ca/content/uploads/2010/10/smart-grid-primer.pdf
27	Presentation	National, NIST, SGIP Working Group Report	NISTIR7628, Guidelines for Smart Grid Security, NIST, U.S. Department of Commerce, Ohio PUC presentation January 26, 2011	Overview of smart grid privacy issues and NISTIR 7628 guidelines.	http://www.puc.ohio.gov/emplibrary/files/media/CMFiles/WebcastRelated%20SC60%20Outreach_Slides_Day_1.pdf
28	Report, Policy Guidelines	Canada, Report, Policy Guide	Operationalizing Privacy by Design: The Ontario Smart Grid Case Study, February 2011	a collaborative effort between The Information and Privacy Commissioner of Ontario, Canada, along with Hydro One, IBM, GE and Telvent.	http://www.ipc.on.ca/images/Resources/ibd-ont-smartgrid-casestudy.pdf
29	Presentation	Private Industry Presentation	Privacy and the Smart Grid: New Frontiers, New Challenges, Jules Polonetsky, The Future of Privacy Forum, November 2, 2009	Presentation in the Netherlands, overview of smart grid privacy concerns, market issues.	http://www.futureofprivacy.org/wp-content/uploads/2009/11/microsoft-powerpoint-smart-grid-privacy-madrid-powerpoint-ja-fina1.pdf
30	Report	Colorado, Smart Grid Report	Smart Grid Deployment in Colorado: Challenges and Opportunities, University of Colorado at Boulder, June 2010	outlines the technical, business, and policy challenges to deploying smart grids and highlights the energy initiative in Colorado, privacy addressed.	http://telecom.colorado.edu/sites/default/files/eeo_SGwhitepaper_final.pdf
31	Article, Summary	National focus	Keeping Your Kilowatts Private, Public Utilities Fortnightly, April 2012	Survey of state policies and legislation on customer data privacy	http://www.fortnightly.com/display_pdf.cfm?id=04012012_TechCorridor.pdf
32	Major Privacy Resource	National focus	The Smart Grid and Privacy	Electronic Privacy Information Center (EPIC) - major reference source with links to report, studies, articles and other resources	http://epic.org/privacy/smartergrid/smartergrid.html
33	Report	National focus	Smart Meter Data: Privacy and Cybersecurity, Congressional Research Service, February 3, 2012	Reviews the legal privacy and cyber security issues related to the implementation of smart meters and the interval data collection issues.	http://www.fas.org/sgp/crs/misc/R42338.pdf