

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
RMQ	e	California Energy Commission	Melissa Jones	CA
RMQ	e	California Public Utilities Commission	Katherine Stockton	CA
RMQ	e	Connectivity Standards Alliance	Tobin Richardson	CA
RMQ	e	Electric Reliability Council of Texas, Inc. (ERCOT)	Catherine Meiners	TX
RMQ	e	Illinois Commerce Commission	Christine F. Ericson	IL
RMQ	e	Indiana Utility Regulatory Commission	Beth Heline	IN
RMQ	e	Kansas Corporation Commission	Justin Grady	KS
RMQ	e	Maryland Public Service Commission	Dan Hurley	MD
RMQ	e	Minnesota Public Utilities Commission	Michelle Rosier	MN
RMQ	e	National Association of Regulatory Utility Commissioners	Sam Watson	DC
RMQ	e	Nebraska Public Service Commission	Nichole Mulcahy	NE
RMQ	e	New Jersey Board of Public Utilities	Lauren Mattox	NJ
RMQ	e	Ontario Ministry of Energy	Senka Krsikapa, Jiayang Li, Amanda Fishman	ONT
RMQ	e	Pennsylvania Public Utility Commission	Lee Yalcin, Jeff McCracken	PA
RMQ	e	Public Utilities Commission of Ohio	Krystina Schaefer, Barbara Cote	OH
RMQ	e	Public Utility Commission of Texas	Therese Harris	TX
RMQ	e	Regulatory Commission of Alaska, Dept of Commerce, Community & Economic Development	Bob Pickett	AK
RMQ	e	Vermont Public Service Board	Mary Jo Krolewski	VT
RMQ	g	American Public Gas Association (APGA)	Donnie Sharp, Sydney Novoa	PA
RMQ	g	Latitude Technologies, an ESG Company	Leigh Spangler, Patrick Smith	TX
RMQ	g	Naturgy Servicios S.A. de C.V.	Jose Roberto del Valle	MEX
RMQ	g	Philadelphia Gas Works	Jamie Slavin	PA
RMQ	g	Sprague Operating Resources LLC	Paul Scoff	NH
RMQ	g	Systrends USA	Dave Darnell	AZ
RMQ	g	WEC Energy Group	Tom Aridas	WI
RMQ	s	Big Data Energy Services	J. Cade Burks, Jennifer Teel	TX
RMQ	s	CenterPoint Energy Houston Electric, LLC	John Hudson	TX
RMQ	s	Emil Pena Interests, Inc. (EPII)	Emil Pena	TX
RMQ	s	Green Button Alliance	Jeremy J. Roberts	NC
RMQ	u	Dominion Energy	Brandon Stites	VA
RMQ	u	Duke Energy Corporation	David Lawrence	NC
RMQ	u	Oncor Electric Delivery Company LLC	Debbie McKeever, Chris Rowley, Autry Warren	TX
RMQ	u	Southern Company Services	Lincoln E. Wood, Bret Giles	GA
RMQ	u	WEC Energy Group	Rick Stasik, Aaron Nelson	WI

## North American Energy Standards Board

Sort by Quadrant

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
WEQ	d	Alabama Municipal Electric Authority	Mark Ennis	AL
WEQ	d	American Public Power Association	Desmarie Waterhouse	DC
WEQ	d	Bonneville Power Administration	Eric H. Carter, Michael Steigerwald, Rebecca	OR
WEQ	d	Central Electric Power Cooperative Association	Scott Motsinger	VA
WEQ	d	Duke Energy Corporation	Christopher Suarez	NC
WEQ	d	Florida Municipal Power Agency	Chris Gowder, Bob Nelcoski	FL
WEQ	d	Missouri River Energy Services	Terry Wolf	SD
WEQ	d	National Rural Electric Cooperative Association	Patti Metro, Allison Hamilton	VA
WEQ	d	North American Electric Reliability Corporation (NERC)	Mark Lauby	NJ
WEQ	d	Sacramento Municipal Utility District	Francesca Lippsmeyer, Rosa Gutierrez	CA
WEQ	d	Snohomish County PUD No. 1	Ian Hunter	WA
WEQ	d	Tacoma Power	Rick Applegate	WA
WEQ	d	Tampa Electric Company	Jordan Williams	FL
WEQ	d	WPPI Energy	Todd Komplin	WI
WEQ	e	California Energy Commission	Melissa Jones	CA
WEQ	e	California Public Utilities Commission	Katherine Stockton	CA
WEQ	e	Corpus Christi Liquefaction, LLC	Donna Lowry	TX
WEQ	e	GMO GlobalSign, Inc.	Lila Kee	NH
WEQ	e	Idaho Public Utilities Commission	Adam Rush	ID
WEQ	e	Illinois Commerce Commission	Christine F. Ericson	IL
WEQ	e	Indiana Utility Regulatory Commission	Beth Heline	IN
WEQ	e	Maine Public Utilities Commission	Denis Bergeron	MA
WEQ	e	Minnesota Public Utilities Commission	Michelle Rosier	MN
WEQ	e	National Association of Regulatory Utility Commissioners	Sam Watson	DC
WEQ	e	North American Electric Reliability Corporation (NERC)	Howard Gugel	NJ
WEQ	e	Open Access Technology International, Inc.	Jerry Dempsey	MN
WEQ	e	Public Utilities Commission of Ohio	Krystina Schaefer, Barbara Cote	OH
WEQ	e	Seattle City Light	Cory Anderson	WA
WEQ	e	SSL.com	Leonard Grove	TX
WEQ	e	Vermont Public Service Board	Mary Jo Krolewski	VT
WEQ	e	American Electric Power Service Corp.	David Canter	OH
WEQ	g	Avangrid Renewables, LLC	Jan Korver	OR
WEQ	g	Basin Electric Power Cooperative	JP Maddock	ND
WEQ	g	Black Hills Corporation ( <i>Black Hills Power, Inc.</i> )	Renee Bartlett	SD
WEQ	g	Bonneville Power Administration	Ann Shintani, Juergen Bermejo	OR
WEQ	g	Chugach Electric Association, Inc.	Matthew Clarkson	AK

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
WEQ	g	Deseret Generation & Transmission Co-operative	Clay MacArthur	UT
WEQ	g	Electric Power Supply Association	Nancy Bagot	DC
WEQ	g	Florida Municipal Power Agency	Chris Gowder, Bob Nelcoski	FL
WEQ	g	Hoosier Energy REC	Cory Samm	IN
WEQ	g	Indiana Municipal Power Agency	Colten Mitchell	IN
WEQ	g	KCP&L and Westar, Evergy Companies	Denise Buffington, Anna McCleave	MO
WEQ	g	New Jersey Board of Public Utilities	Lauren Mattox	NJ
WEQ	g	NRG Energy, Inc.	Derek Mauzy, Alan Johnson, Elizabeth Killinger	NJ
WEQ	g	Southern California Edison	Selene Willis	CA
WEQ	g	Southern Company Services, Inc	Steven D. Lowe, JT Wood	GA
WEQ	g	Tenaska, Inc.	Brad Cox	NE
WEQ	g	Tennessee Valley Authority	Karen Utt, valerie Crockett	TN
WEQ	g	Vermont Public Power Supply Authority	Tom Heller	VT
WEQ	g	Wabash Valley Power Association	Scott Berry	IN
WEQ	g	WEC Energy Group	Christopher Plante	WI
WEQ	i	California ISO	Brian Jacobsen	CA
WEQ	i	ISO New England, Inc	John Pearson, Douglas Smith	MA
WEQ	i	MISO	Karen Frank, Bobbi Welch	IN
WEQ	i	New York Independent System Operator, Inc.	Robert Pike	NY
WEQ	i	PJM Interconnection, LLC	Asanga Perera, Gary Helm, Christina Stotesbury	PA
WEQ	i	Southwest Power Pool	Michael Desselle, Charles Yeung, Joshua Phillips	AR
WEQ	m	Allete (dba Minnesota Power)	David Moeller	MN
WEQ	m	American Municipal Power, Inc	Chris Norton	OH
WEQ	m	Basin Electric Power Cooperative	Daniel Schaaf Gallagher	ND
WEQ	m	Bonneville Power Administration	Andrew P. Meyers, Ann Shintani, Tanner Brier	OR
WEQ	m	Constellation Energy Generation, LLC	William Berg	IL
WEQ	m	Florida Power & Light Company	Chuck Helber	FL
WEQ	m	Guzman Energy LLC	James Norwood	CO
WEQ	m	Los Angeles Department of Water and Power	Anton Vu, Eduardo Preciado	CA
WEQ	m	MidAmerican Energy Company	Dennis Kimm	IA
WEQ	m	Nalcor Energy Marketing	Erin McCormack	CAN
WEQ	m	NV Energy	Ryan Atkins	NV
WEQ	m	PacifiCorp	Michael Wilding	OR
WEQ	m	Powerex Corp.	Michael L. McWilliams, Raj Hundal	BC

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
WEQ	m	Public Service Company of New Mexico	Steven Maestas, Darren Wilkins, Leah Butler	NM
WEQ	m	Seattle City Light	Josh Walter	WA
WEQ	m	Seminole Electric Cooperative, Inc.	Harold Taylor II	FL
WEQ	m	Tennessee Valley Authority	John Fitzgerald, Valerie Crockett	TN
WEQ	m	Xcel Energy, Inc	Stephen Szablya	MN
WEQ	n	Edison Electric Institute	Philip D. Moeller, Jennifer Murray	DC
WEQ	t	Arizona Public Service Company	Twyana Blair, Matt Kura	AZ
WEQ	t	Associated Electric Cooperative, Inc.	Chris McGeeney	MO
WEQ	t	AVANGRID	Jim Clemente	CT
WEQ	t	Avista Corporation	Kenneth Dillon	WA
WEQ	t	Basin Electric Power Cooperative	Mike Kraft, Jill Rummel	ND
WEQ	t	BC Hydro	Brenda Ambrosi, Paulus Mau	BC
WEQ	t	Bonneville Power Administration	Melanie Bersaas, Rebecca Berdahl	OR
WEQ	t	Dominion Energy South Carolina, Inc	Jay Cole, Matt Hammond, James Starling, Kevin Spitzform	SC
WEQ	t	Duke Energy Corporation	Christopher Suarez	FL
WEQ	t	El Paso Electric	Anne Reed	TX
WEQ	t	Entergy Services, Inc.	Yarrow Etheredge	LA
WEQ	t	Florida Power & Light Company	Bernardo Benigni, Miguel Yanes	FL
WEQ	t	Georgia Transmission Corporation	Eric Schultz	GA
WEQ	t	Grant County Public Utility District	Susan Manville	WA
WEQ	t	GS Transmission, LLC	Joshua Martin	CA
WEQ	t	Hydro - Quebec Transenergie	Matthieu Plante, Simon Belanger	QUE
WEQ	t	Idaho Power Company	Kathy Anderson, Nick Day	ID
WEQ	t	JEA	John Babik	FL
WEQ	t	KCP&L and Westar, Eergy Companies	Denise Buffington, Anna McCleave	MO
WEQ	t	LG&E and KU Services Company	Ashley Vinson, Daryn Barker	KY
WEQ	t	Los Angeles Department of Water and Power	Marlon Pather, Jose Dolores, Arevik Petrosyan	CA
WEQ	t	MATL LLP	Ani Chopra	MT
WEQ	t	Morgan, Lewis & Bockius LLP	Stephanie Chapman	DC
WEQ	t	Nebraska Public Power District	Jamison Cawley, Tony Eddleman	NE
WEQ	t	NorthWestern Corporation	Michael McGowan, Frank O'Connor	MT
WEQ	t	NV Energy, Inc.	Charanya Suri	NV

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
WEQ	t	Open Access Technology International, Inc.	Ben Stander	MN
WEQ	t	PacifiCorp	Rick Vail	OR
WEQ	t	Platte River Power Authority	Matthew Thompson	CO
WEQ	t	Portland General Electric	Tina Gary, Johnny Useldinger	OR
WEQ	t	Puget Sound Energy, Inc.	Lisa MacKay	WA
WEQ	t	San Diego Gas & Electric Company	Miguel Duran	CA
WEQ	t	Santee Cooper	Adam Taylor	SC
WEQ	t	SaskPower Corporation	Shauntel Anderson, Andrew Munro	CAN
WEQ	t	Seminole Electric Cooperative, Inc	Harold Taylor II	FL
WEQ	t	Southern Company Services, Inc.	Wes Barber, JT Wood	GA
WEQ	t	Tennessee Valley Authority	Jason L. Adams, Heather Burnette, Valerie Crockett, Ron Robinson	TN
WEQ	t	The Connecticut Light and Power Company	David Burnham, Andrew Y. Tan	CT
WEQ	t	Tri-State Generation and Transmission Association, Inc.	Igor Kormaz	CO
WEQ	t	Tucson Electric Power Company	Raquel Aguilar, Pamela Reed	AZ
WEQ	t	Versant Power	Lisa Martin	ME
WEQ	t	Western Area Power Administration	Ben Hammer, Steve Sanders	CO
WEQ	t	Western Electricity Coordinating Council	Layne Brown	UT
WEQ	ts	FIS	Robin Pollara	TX
WEQ	ts	Group 8760 LLC	Jim Buccigross	AL
WEQ	ts	Hartigen Solutions LLC	Andy Tritch	TX
WEQ	ts	Monitoring Analytics, LLC	John Dadourian	PA
WEQ	ts	National Institute of Standards and Technology	David A. Wollman	MS
WEQ	ts	PCI Energy Solutions	Javier Martin, Bryan Kelly	OK
WEQ	ts	Reliable Energy Analytics	Richard Brooks	MA
WEQ	ts	SoftSmiths, Inc.	Lawrence S. Stone	TX
WGQ	e	Argonne National Laboratory	Dariusz Blachowicz, Michael McLamore, Stephen Folga	IL
WGQ	e	California Energy Commission	Melissa Jones	CA
WGQ	e	Calpine Corporation	Rachael Marsh	TX
WGQ	e	Department of Energy	Christopher Freitas	DC
WGQ	e	Entergy Services, Inc.	Gabby Diaz, Blas Pina	LA
WGQ	e	Florida Power & Light Company	Paul Zhang	FL
WGQ	e	Idaho Public Utilities Commission	Adam Rush	ID
WGQ	e	Imperial Irrigation District	Timothy Hamilton, R. Marc Printy	CA
WGQ	e	Midcontinent Independent System Operator, Inc.	Brad Decker	IN
WGQ	e	Omaha Public Power District	David Theobald	NE
WGQ	e	Power Authority of the State of New York (dba NYPA)	Dennis Chang	NY
WGQ	e	Sabine Pass Liquefaction, LLC	Donna Lowry	TX
WGQ	e	Salt River Project Agricultural Improvement & Power	Willis E. McCluskey	AZ
WGQ	e	Southern Company Services, Inc.	Alan Kilpatrick, Sarah Myrick	GA

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
WGQ	e	Southwest Power Pool	Joshua Phillips	AR
WGQ	e	Tennessee Valley Authority	Karen Stampfli, Sandy Walker, and Paul Smith	TN
WGQ	I	American Gas Association	Matthew J. Agen, Pete Connor	OH
WGQ	I	Avangrid Networks (Gas)	John Rudiak	CT
WGQ	I	Cascade Natural Gas Association	Eric Wood	WA
WGQ	I	Citizens Energy Group	Mike Bartone	IN
WGQ	I	Colorado Springs Utilities	Scott Murphy	CO
WGQ	I	Consolidated Edison Company of NY	Meg Tubridy, Dana Lazarus, Dmitriy Kiselev	NY
WGQ	I	DTE Gas Company	Jennifer A. Marinelli	MI
WGQ	I	Eversource Energy	Eric Soderman	CT
WGQ	I	National Fuel Gas Distribution Corporation	Jeffrey Same	NY
WGQ	I	National Grid	Andrew MacBride	MA
WGQ	I	New Jersey Natural Gas	Kathryn Ferreira	NJ
WGQ	I	NiSource Inc.	Patrick Pluard	IN
WGQ	I	Northwest Natural Gas Company	Scott Johnson	OR
WGQ	I	ONE Gas, Inc.	Larry Dykes	OK
WGQ	I	Pacific Gas and Electric Company	Chris K. Fan, Patti Lewis, Pete Koszalka	CA
WGQ	I	Peoples Gas Systems	Karen L. Bramley	FL
WGQ	I	Piedmont Natural Gas	Todd Breece, Brady Gould, Sarah Stabley	NC
WGQ	I	Southern California Gas Company	Shawn Fife	CA
WGQ	I	Southern Company Gas	Tim Sherwood, Kenneth Yagelski	GA
WGQ	I	Southwest Gas Corporation	Christopher Brown, Mark Litwin, Eric Rost	NV
WGQ	I	Spire Inc	Greg Staton	MO
WGQ	I	Unitil Service Corporation	Dan Main	NH
WGQ	I	WEC Energy Group	Todd Duffield, Russell Laursen	WI
WGQ	pl	Alliance Pipeline, LP	Robert Engelhardt	ALB
WGQ	pl	Atmos Energy	Shelly Bass	TX
WGQ	pl	Boardwalk Pipelines	Kim Van Pelt, Joe Hager	TX
WGQ	pl	Cheniere Creole Trail Pipeline, LP	Joe Vance	TX
WGQ	pl	Crestwood Equity Partners LP	Christine Dixon, Rob de Cardenas	TX
WGQ	pl	Dauphin Island Gathering Partners	Shannon Miller	CO
WGQ	pl	Double E Pipeline, LLC	John Griffin	TX
WGQ	pl	Eastern Gas Transmission & Storage, Inc	Rachel A. Hogge	VA
WGQ	pl	Eastern Shore Natural Gas Company	Marianne Coker	DE
WGQ	pl	Enbridge (U.S.) Inc.	Megan Miller, Christopher Burden	TX
WGQ	pl	Energy Transfer Equity, L.P.	Michael Langston, Larry Biediger, William White, Miki Kolobara	TX
WGQ	pl	Equitrans, LP	John Quinn	PA

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
WGQ	pl	Florida Southeast Connection LLC	Jack Brink	FL
WGQ	pl	Freeport LNG Development L.P.	Adam Valentine	TX
WGQ	pl	Golden Pass Pipeline, LLC	Diane Neal	TX
WGQ	pl	Great Basin Gas Transmission Company	Frank Maglietti, Carol Vogel	NV
WGQ	pl	Iroquois Gas Transmission System	Tom Gwilliam	CT
WGQ	pl	Kern River Gas Transmission Company	Jon Rowley	UT
WGQ	pl	Kinder Morgan Inc	Gene Nowak, Mark Gracey, Nichole Lopez, Gina Mabry	TX
WGQ	pl	Kinetica Partners, LLC	Lynn Nguyen, Bill Prentice	TX
WGQ	pl	National Fuel Gas Supply Corp.	Deborah Kupczyk	NY
WGQ	pl	Northern Natural Gas	Micki Hoffee, Vickie Wonder	NE
WGQ	pl	ONEOK, Inc.	Denise Adams, Sara Rogers	OK
WGQ	pl	Sempra Infrastructure	Jerrod L. Harrison, Arminda Silva	CA
WGQ	pl	Southern Star Central Gas Pipeline	Matt McCoy, Ronnie Hensley	KY
WGQ	pl	Tallgrass Operations, LLC	Karl Almquist	KS
WGQ	pl	TC Energy Corporation	Steven W. McCord, Millie S. Moran, Sherry Hill	TX
WGQ	pl	UGI Central Gas Control, LLC	Rebecca Myers	PA
WGQ	pl	Vector Pipeline L.P.	Dennis Scheibe	MI
WGQ	pl	Venture Global LNG, Inc.	Keith Larson, Sandra Snyder, Sanjay Gupta, Michael DiCarlo	VA
WGQ	pl	WBI Energy Transmisison, Inc.	Nancy Senger, Lori Myerchin	ND
WGQ	pl	Williams	Carolyn Arens, John Cassapo, John Suchar	TX
WGQ	pr	Ascent Resources - Utica, LLC	Will Jordan	OK
WGQ	pr	BP Energy	Sarah Tomalty	TX
WGQ	pr	Chesapeake Energy Marketing LLC	Teresa Baumann	OK
WGQ	pr	Chevron Natural Gas	Jay Dibble	TX
WGQ	pr	ConocoPhillips Company	Ben Schoene	TX
WGQ	pr	Devon Energy Corporation	Brandon Guderian	OK
WGQ	pr	EOG Resources, Inc	Amy Mitchell	TX
WGQ	pr	EQT Energy LLC	Mark Moyer	PA
WGQ	pr	Exxon Mobil Corporation	Chris Russo	TX
WGQ	pr	Occidental Energy Marketing, Inc	Shawn McGovern, Scott Marshall, Connie Graham	TX
WGQ	pr	SWN Energy Services Company, LLC	Mark Wilke	TX
WGQ	s	Trellis Energy Software, LLC	Rakesh Agrawal	CA
WGQ	s	Castleton Commodities Merchant Trading L.P.	Tara Liscombe	CT
WGQ	s	Centro Nacional de Control del Gas Natural (CENAGAS)	Ivan Vazquez Mendez, Alejandra Olivas	MEX

May 31, 2024

Quadrant	Segment	Member Company	Contact	State/Province
WGQ	s	Coalition for Renewable Natural Gas	David Cox	CA
WGQ	s	Concord Energy LLC	Stephen Tsai	CO
WGQ	s	Constellation Energy Generation, LLC	Lisa Simpkins, Joseph Kirwan, Andrea Kullman, Jennifer Scott	MD
WGQ	s	DTE Energy Trading, Inc	Dena Crawford, Christopher M. York, Cynthia Klots, Shelley Greene	MI
WGQ	s	EDF Trading North America, LLC	Courtney Smith	TX
WGQ	s	Element Markets Renewable Energy, LLC	Keri Richardson Bevel	TX
WGQ	s	Emera Energy Services, Inc.	Keith Sutherland, Jumoke Arowolo	CAN
WGQ	s	Emerson Automation Solutions	Martha Rendon	TX
WGQ	s	Essentia Advisory Partners	Mark Davis	TX
WGQ	s	FIS	Martin Wilson	TX
WGQ	s	Glencore Ltd.	Andrew McNamara	NY
WGQ	s	Group 8760 LLC	Jim Buccigross	AL
WGQ	s	Gunvor USA LLC	David Webster, Wayne Mandel	TX
WGQ	s	Hartree Partners, LP	Boris Sominsky	CO
WGQ	s	Keywest Strategic Systems, Inc.	Joel Gaudet	CAN
WGQ	s	Latitude Technologies, an ESG Company	Leigh Spangler, Patrick Smith	TX
WGQ	s	Macquire Energy America, Inc	Kevin Pooler	CA
WGQ	s	Mercuria Energy American, Inc.	Martha Thalman	TX
WGQ	s	Mitsui & Co. Energy Marketing and Services, (USA), Inc	Cheryl Rankin	TX
WGQ	s	NRG Energy, Inc.	James Maguire	NJ
WGQ	s	Energex LLC	Jay Bhatti	TX
WGQ	s	Ovintiv Marketing Inc	Jeff Jarvis	CO
WGQ	s	Quorum Software	Courtney Harmon	TX
WGQ	s	Sequent Energy Management, L.L.C	Kathryn L. McCoy, Jim Cornwell	TX
WGQ	s	Shell Energy North American (US), LP	Eric Gillaspie	TX
WGQ	s	Skipping Stone, LLC	Greg Lander	MA
WGQ	s	The Energy Authority, Inc	John Raiford	FL
WGQ	s	Third Coast Midstream, LLC	Cindy Ludwig	TX
WGQ	s	Trading Counsel Solutions	Nicole Russell	LA
WGQ	s	United Energy Trading LLC	Thomas Smith	CO
WGQ	s	Vitol Inc.	Averill Conn, Seth Cochran	TX
WGQ	s	World Fuel Services, Inc.	Elizabeth Williams	MN

\*The quadrant abbreviations are: **RMQ**: Retail Markets Quadrant, **WEQ**: Wholesale Electric Quadrant, **WGQ**: Wholesale Gas Quadrant

\*\* The segment abbreviations are: **RMQ**: u – retail electric utilities, g – retail gas market interests, e – retail electric end users/public agencies, s – retail electric service providers/suppliers.

**WEQ**: m – marketer/broker, d – distribution, i – independent grid operators/planners, t – transmission owner, e – end user, g – generator, ts – technology/services.

**WGQ**: s – services, pl – pipeline, l – LDC, pr – producer, e – end user