BUSINESS

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Maine's largest solar farm expected to go online in 2016

BY DARREN FISHELL

BDN STAFF

PORTLAND — The Maine Public Utilities Commission expects the state's largest solar power project to date - planned for Waldo County — to come online later this year.

The project is one of four pilot projects that won the ability to enter long-term contracts with the state's two major utilities, pending local approval. The PUC announced the winners for the pilot program in December. On Friday, it released an order outlining more details about each.

The largest project of the four is the 9.9-megawatt solar farm proposal in the town of Monroe, a project with 70 percent ownership held by Cianbro Development Corp. and 30 percent by solar developer Clear Energy LLC.

In order to qualify as a pilot project under the state law that created the program in 2009, a qualifying local company must have a majority stake in the proj-

The Monroe project would receive 8.5 cents per kilowatt hour, the lowest of the four projects. It still requires local support, according to the PUC, but is anticipated to enter operation this fall.

The commission also approved Georges River Energy, held by members of the family that owns Robbins Lumber in Searsmont, which would use wood waste from the sawmill and local logging contractors to fuel a 7.5-megawatt ceive 10 cents per kilowatt hour.

Consolidated Stocks

The project is one of four that won the ability to enter long-term contracts with the state's two major utilities, pending local approval

biomass system that produces both heat and electricity.

It expects to come online in early 2018 and would receive 9.9 cents per kilowatt hour. The pilot projects set a maximum bid of 10 cents per kilowatt hour to qualify.

And a wind power project originally proposed for land in Fort Fairfield moved a mile north in its final iteration, on 100 acres of farmland in Limestone. The wind power project is from Shamrock Partners, led by Freeport resident Sue Jones.

Jones had proposed and won pilot project approval for the Fort Fairfield site, but that plan was essentially killed, she told the BDN last fall, by an ordinance for wind projects that established a onemile setback from landowners not involved in the project.

That project would receive 8.3 cents per kilowatt hour and still requires a local resolution of support. The project is expected to come online by at least late 2018.

The PUC also approved a combined solar and hydropower system near the American Woolen Mill in Dover-Foxcroft, with a combined capacity of 396 kilowatts, the smallest of the group. It would re-

Small market with big potential

Emera focuses on possibilities of northern Maine electric grid

BY ANTHONY BRINO **BDN STAFF**

With less than 70,000 inhabitants but many miles of sunny, windy hills, Aroostook County has a bright future in renewable energy, in the eyes of Emera Maine executives Steve Sloan and Alan Richardson.

Emera, northern Maine's power utility, is focusing on the reliability of the region's aging grid and preparing for upgrades while studying future options, including the potential of wind and solar power, said Sloan, transmission manager, and Richardson, the president of Emera Maine.

The two executives were speaking with members of the Central Aroostook Chamber of Commerce at Cafe Sopresso in Presque Isle, during a warm winter with fewer power outages than usual. Despite that reliability, northern Maine's electric grid is in need of some rehabilitation and renovation, Sloan said in a presentation.

Aroostook County's grid is "heavily dependent on supply from New Brunswick" and also "has some weaknesses," he said. Overall, half of northern Maine's 350 miles of transmission lines are more than 40 vears old, and at times in recent years electricity generators like the ReEnergy biomass plant have been forced to stay open by the Northern Maine Independent System Administrator, the nonprofit manager of northern Maine's grid, to ensure there would be enough capacity for residential and business users.

The Tinker hydroelectric dam, about a mile downstream and across the U.S. border from Fort Fairfield, has a capacity of 34 megawatts that carries power to consumers in Aroostook County, but its transmission lines are in need of repair.



The Tinker hydroelectric dam along the Aroostook River, downstream of Fort Fairfield. The transmission line connection at Tinker, which brings energy into Maine, is slated for an upgrade.

utility are slated to invest in upgrades to the lines and connections at Tinker. It's a lower-cost, shortterm solution to the reliability problem, and was approved by the Maine Public Utilities Commission, rather than Emera's proposed connection to a power station in Woodstock, New Brunswick.

The upgrades at the Tinker dam will include a new transformer and a higher capacity, but in the longterm Emera is looking to win approval for \$175 million in transmission projects through 2020, 60 percent of that representing replacements of aging infrastructure.

Emera Maine, a part of a Nova Scotia-based utility firm, is also looking to long-term solutions for the next 20 and 30 years.

Among the possibilities the company has been studying are new power generation, demandside efficiency programs and transmission links such as to ISO New England, which would fully link northern Maine's grid to the

Emera and the New Brunswick rest of New England, Sloan said.

At the same time, the region has the opportunity to generate more renewable energy and benefit from selling it at a premium to southern New England states with clean energy mandates, like the pending Number 9 Wind Farm in central Aroostook County would do.

"We do have wind, the ability to produce renewable energy, and the world is paying a big premium," said Richardson, the president and COO of Emera Maine.

As with the 119-turbine Number 9 Wind Farm, the costs would be paid by consumers in Massachusetts and Connecticut, with the region benefiting from the energyrelated jobs and tax payments, Richardson said.

Along with wind, Richardson said that Emera and other utilities want to see rooftop solar expand, as the costs of solar voltaic technology fall, despite the disagreements over net metering and how to pay rooftop solar customers for feeding energy into the grid.

Market Review

Indexes

4613.95

+396.66

+204.79

+12.16

+107.28

52-Wk

6403

	Close	Chg	Div		Close	Chg	Div		52-W	k
3M Co	151.00	+3.68	4.1	IntlBcsh	23.19	+0.52	1.0	Dow Janes indus	High	1
ABB Ltd AbbVie	17.30 54.90	+0.37	2.3	JPMorgCh Kohls	59.50	+2.22	0.6 1.8	Dow Jones indus.	1835	
AbtLab	37.85	+1.14	1.0	LillyEli			1.0	Dow Jones Transport	921	5
AEP	60.97	+1.52	2.2	Loews	37.01	+1.04	2.0	Dow Jones Utility	65	3
Aeropostl	0.26	+0.01		Lowes	71.66	+2.43	0.3	Nasdaq composite	523	2
Aetna	101.84	+3.05	1.0	McDnlds	123.78	+1.40	1.1	NYSE AMEX composite	255	6
AFLAC	57.96	-0.35	1.6	Merck	50.67	+1.47	3.6	NYSE composite	1125	
AK Steel	2.04	+0.09	0.0	MetLife	44.65	+0.87	1.8	·		
ALCATEL LUI				Microsoft	55.09	+3.04	1.5	S&P 500	213	5
Allergan	284.43			Mondelez	43.10		1.4	S&P Mid cap 400	155	1
Allstate Altria	60.60	+1.38	1.2 2.3	Monsanto MorgStan	90.60 25.88	+2.80	0.7 2.2	Wilshire 5000	2253	7
AMovilL	14.14	+0.62	0.5	NewellRub			0.6	Russell 2000	129	6
Anadarko	39.09	+1.84	1.1	NextEraEn	111.71		0.8			-
Apache	42.54	+1.94	1.0	NipponTT	42.76	+1.19	3.1			
ApldMatl	17.65	+0.97	0.4	NokiaCp	7.20	+0.10	0.8			
Apple	97.34	+3.25	2.1	NorthropG	185.06	+4.91	0.2	52	2Wk Hi	52Wk I
AT&T Inc	36.06	+0.53		OneokPtrs	27.34	+0.74	3.2	Bank of America (BAC)	18.48	12.9
Autodesk	46.82	+1.55	1.9	Oracle	36.31	+0.98	3.2			
AvidTch	7.10	+0.25	0.0	Orange	17.67		0.6	Bar Harbor (BHB)	37.98	28.9
BcoSantSA	4.19	+0.07		Penn Gmng	14.13	+0.28	0.7	Camden Nat'l (CAC)	47.49	36.7
BestBuy BkNYMel	27.93 36.22	+0.96	0.3 0.9	Penney PepcoHold	7.26 26.68	+0.44	0.0	Cisco (CSCO)	30.31	22.4
BkofAm	14.14	+0.61	0.9	PepsiCo	99.30	+1.85	1.1	Delhaize (DEG)	26.86	19.5
Boeing	120.13	+2.12	0.7	Pfizer	30.49	+0.29	2.8	Domtar (UFS)	48.30	30.5
BP PLC	32.37	+0.48	4.4	PhilipMor	90.01	+0.95	1.2	Dover (DOV)	78.21	50.9
BrkfldAs	29.96	+0.30	2.4	PPL	35.06	+0.74	4.1			12.2
BrMySq	62.16	+1.00	0.5	Praxair	100.00	+1.80	1.5	Fairchld SC (FCS)	21.71	
Caterpillar	62.24	+1.16	1.5	ProctGam	81.69	+1.87	2.9	General Dynamics (GD)	153.76	121.6
CBS B	47.50	+1.21	3.1	Prudentl	39.34	+1.15	2.7	General Electric (GE)	31.49	19.3
CenterPnt	17.87	+0.33	0.6	OstDiag	65.67	+1.52	1.2	HCA Holdings (HCA)	95.49	43.9
Chevron	86.47 42.58	+0.55	1.0 4.3	Rayonier Raytheon	21.09	+1.72	1.6 1.0	Idexx Labs (IDXX)	164.48	61.5
Citigroup CocaCola		+2.19	0.2	ReynAmer	128.24 49.95	+1.41	2.7	ImmuCell (ICCC)	11.40	5.5
Corning	18.61	+0.62	1.3	RylCarb	81.96	+3.63	1.4	International Paper (IP)	57.90	32.
Deere	77.01	+2.20		Schwab	25.53	+0.71	1.5	·		
Disney	95.82	+2.29		SearsHldgs	16.95	-0.45	0.2	KeyCorp (KEY)	15.70	10.7
DowChm	42.00	+0.45	1.4	Sherwin	255.67	+6.01	0.0	Kimberly-Clark (KMB)	130.05	103.0
DukeEnrg	75.30	+1.83	1.8	SiderurNac	0.77	-0.06	2.7	Kraft Heinz (KHC)	81.20	61.4
DuPont	33.17	+0.63	3.3	Siemens	95.00		0.1	Lake Sunapee Bank (LSBG)	16.35	13.3
ExxonMbl	77.85	+0.86	1.9	SonyCp	23.88	+3.59	3.8	Northeast Bancorp (NBN)	11.02	8.8
Facebook FedExCp	112.21 132.88	+3.10	2.9	Starbucks SwstAirl	60.77	+1.49	0.1 0.8	People's United Fin (PBCT)	16.95	13.6
FidINFin	32.38	+4.00	1.0	Symantec	19.84	+0.34	3.0	Plum Creek Timber (PCL)	51.63	36.9
FidNatInfo	59.73	+1.52	0.8	Target		+1.43	0.6			
FrontierCm	4.55	+0.04	1.0	Textron		+0.63	2.2	PNC (PNC)	100.52	82.
GenElec	29.10	+0.89	0.4	TimeWarn	182.01	+3.53	0.1	RR Donnelley (RRD)	20.22	12.3
GlaxoSKIn	41.29	+0.65	0.9	Toyota	120.03	+3.91	3.0	Sappi Limited (SPPJY)	4.72	2.6
GoldmanS	161.56	+4.50	2.4	Travelers	107.04	+2.57	3.6	State Street (STT)	81.26	50.7
Google	742.95		2.6	UPS B		+2.20		Sysco (syy)	42.03	35.4
Hershey	88.11	+1.11		ValeroE	67.87	+3.33	2.9	The First Bancorp (FNLC)	22.56	16.2
HewlettP Hitachi	9.71	+0.23	2.3 0.5	Vodafone WalterEn	32.20 0.04	+0.95	2.4	·		
Hitachi HomeDp	48.53 125.76	+3.48	1.0	WaiterEn Waste Mng't		+0.88	1.7	United Technologies (UTX)		83.3
Honda	27.02	-0.33	2.4	WellsFargo	50.23	+1.31	0.0	Unum Group (UNM)	38.15	26.4
IBM	124.79			Yahoo	29.51	+0.76	1.6	Verizon Comm (VZ)	50.86	38.0
Intel		±1.05	5.2	7immer	99.26	±1.71	15	WalMart (WMT)	88.00	56.3

Nasdad composite	523	52	4292	4613.95	+107.28	+2.3	00	. •	• -	-1.4
NYSE AMEX composite	255	56	1869	2085.22	+43.36	+2.1	2 🔺	. ▼	▼ -1	14.9
NYSE composite	1125	55	8938	9632.71	+234.92	+2.5	i0 🔺	. 🔻	▼ -	-9.9
S&P 500	213	35	1812	1940.24	+46.88	+2.4	l8 ▲	. 🔻	▼ -	-4.0
S&P Mid cap 400	155	51	1215	1317.74	+41.21	+3.2	23 🔺		▼ -	-9.4
Wilshire 5000	2253	37	18550	19926.10	+491.78	+2.5	i3 		▼ -	-6.
Russell 2000	129	96	958	1035.38	+32.11	+3.2	20 🔺		▼ -1	13.
			Loca	l Stock	(5					
5	i2Wk Hi	52Wk Lo	Close	Chg	Chg% Yr	Mo	Qtr	YTD%	P/E	-
Bank of America (BAC)	18.48	12.94	14.14	+0.61	+4.51 ▲	•	▼	-15.98	9.9	(
Bar Harbor (BHB)	37.98	28.97	34.70	+2.61	+8.13 ▲		▼		13.1	
Camden Nat'l (CAC)	47.49		41.97	+1.21	+2.97 ▲	▼	•	-4.81	12.0	
Cisco (CSCO)	30.31	22.47	23.79	+0.69	+2.96 ▲	▼	•	-12.39	12.4	
Delhaize (DEG)	26.86		26.12	-0.01	-0.04	•	•	+7.53	33.7	
Domtar (UFS)	48.30		32.25	+1.26	+4.07 ▼	_	_	-12.72	12.7	
Dover (DOV)	78.21		58.45	+1.83	+3.23 ▲	▼	▼	-4.66	15.1	
Fairchld SC (FCS)	21.71	12.22	20.49	+0.01	+0.05	•	•	-1.06	0.0	
General Dynamics (GD)	153.76	121.61	133.77	+5.12	+3.98 ▲	_	_	-2.61	14.2	
General Electric (GE)	31.49	19.37	29.10	+0.89	+3.15 ▲	_	•		625.9	
HCA Holdings (HCA)	95.49		69.58	+2.07	+3.07 ▲	•	•	+2.88	13.5	
Idexx Labs (IDXX)	164.48		70.14	+5.47	+8.46 ▲	▼	A	-3.81	35.2	
ImmuCell (ICCC)	11.40		5.87		-24.16 ▼	▼	_	-22.15	23.1	
International Paper (IP)	57.90		34.21	+1.56	+4.78 ▼	•	•	-9.26	15.2	
KeyCorp (KEY)	15.70		11.16	+0.08	+0.72 ▼	•	•	-15.39	10.5	
Kimberly-Clark (KMB)	130.05	103.04		+2.15	+1.70	•	•	+0.88	45.7	
Kraft Heinz (KHC)	81.20	61.42	78.06	+1.90	+2.49	•	•	+7.28	0.0	
Lake Sunapee Bank (LSBG			13.74	+0.07	+0.51	•	•	-2.07	11.8	
Northeast Bancorp (NBN)	11.02	8.86	10.50	+0.27	+2.64	▼	•		13.5	
People's United Fin (PBCT)	16.95	13.62	14.37	+0.33	+2.35	•	•	-11.02	16.3	
Plum Creek Timber (PCL)	51.63	36.95	40.51	+1.53	+3.93	\blacksquare	•	-15.11	29.6	
PNC (PNC)	100.52	82.54	86.65	+1.74	+2.05	▼	•	-9.09	11.4	
RR Donnelley (RRD)	20.22	12.37	13.97	+0.51	+3.75 ▲	▼	\blacksquare	-5.10	27.6	
Sappi Limited (SPPJY)	4.72	2.67	4.62		🛦		•			
State Street (STT)	81.26	50.73	55.73	+3.75	+7.21 ▼	\blacksquare	\blacksquare	-16.02	11.5	
Sysco (SYY)	42.03	35.45	39.81	+0.31	+0.78	\blacksquare	\blacksquare	-2.90	36.3	
The First Bancorp (FNLC)	22.56	16.20	19.11	+0.71	+3.86 ▲	▼	▼	-6.64	12.2	
United Technologies (UTX)	124.45	83.39	87.69	+1.24	+1.43	\blacksquare	\blacksquare	-8.72	18.7	(
Unum Group (UNM)	38.15	26.42	28.64	+0.33	+1.17	\blacksquare	\blacksquare	-13.97	19.3	
Verizon Comm (VZ)	50.86	38.06	49.97	+0.96	+1.96			+8.11	11.2	(
WalMart (WMT)	88.00	56.30	66.36	+2.14	+3.33 ▲		•	+8.25	13.8	

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				Top Mu	tual Funds				
Last	Chg 1Yr Rtn	Fund	Last	Chg 1Yr Rtn	Fund	Last	Chg 1Yr Rtn	Fund Last	Chg 1Yr Rtn
UNDS		FIDELITY			JPMORGAN			TEMPLETON	
24.38	+0.5 -6.0	Balanced	20.32	+0.33 -4.5	Core Bond Sel	11.68	+0.03 +0.1	GI Bond Adv 11.42	+0.21 -7.0
23.24	+0.33 -1.0	Blue Chip Gr	63.25	+1.2 -3.4	LAZARD			Growth A 20.16	+0.38 -13.9
12.71	+0.03 -0.8	Capital & Inc	8.82	+0.06 -5.7	Emg Mkt Eg Inst	13.07	+0.42 -25.9	THORNBURG	
55.15		Contrafund	93.30	+2.03 -0.1	LOOMIS SAYLES			Intl Val I 22.97	+0.55 -5.7
		Dividend Gr	28.77	+0.67 -5.7	Bd Inst	12.54	+0.07 -9.2	VANGUARD	
		Dvsd Intl	32.85	+0.71 -6.7				500 Index Adm 179.12	+4.33 -3.4
		Freedom 2020	13.97	+0.21 -5.3		28 63	+0.86 -22.2	GNMA Adm 10.77	+0.02 +1.9
		Freedom 2025	11.89	+0.19 -5.6				Health Care Adm 84.64	+1.72 -2.5
		Freedom 2030	14.39	+0.28 -6.6		34 37	+0.28 -11 0	Infl-Prot Inv 13.04	+0.05 -3.0
		Gro Company	122.06	+2.32 -4.7		01.07	10.20 11.0	Ins T StMk Ins+ 43.36	+1.09 -5.3
						9 94	unch _12 1	Instl Indx Inst 177.35	+4.29 -3.4
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								PRIMECAP Inv 93.15	+2.89 -5.6
17.23	+0.26 -6.1							Sh-Tm Inv Adm 10.60	+0.01 +0.9
			10.29	+0.02 -1.8		10.14	uncn. –3.0		unch. +0.6
17.56	+0.51 -11.4					20.00	.072 25		+0.37 -5.3
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A 28.29	+0.56 -3.8					00.00	.110 .00		+0.19 -3.9
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lue I 19.25	+0.62 - 26.5		2.02	+0.03 -11.5					
K									+0.5 -6.0
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151.60	+4.26 -9.3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							+0.63 -0.5
40.40		Ls Bal 1	13.64	+0.2 -6.2	Ret 2020	18.67	unch5.3	Wellington Adm 61.78	+1.09 -3.4
	Last UNDS 24.38 23.24 12.71 55.15 41.20 42.61 48.09 9.14 32.18 19.77 32.85 33.69 47.00 39.61 36.79 17.23 17.56 A 28.29 90.16 13.28 33.05 151.60	Last Chg 1Yr Rtn UNDS 24.38	Last Chg 1Yr Rtn JNDS 24.38 +0.5 -6.0 23.24 +0.33 -0.8 555.15 +0.94 -6.7 41.20 +0.82 -9.5 42.61 +0.97 -10.9 48.09 +1.04 -1.7 38.19 +0.66 -2.8 9.14 +0.03 -9.6 32.18 +0.7 -5.5 19.77 +0.36 -5.3 32.85 +0.7 -6.1 33.69 +0.63 -3.2 47.00 +1.02 -14.5 39.61 +0.8 -8.6 36.79 +0.96 -4.5 17.23 +0.26 -6.1 17.56 +0.51 -11.4 A 28.29 +0.56 -3.8 Islue I 19.25 +0.62 -26.5 (90.16 +1.73 -6.4 13.28 +0.02 -1.9 33.05 +0.8 -21.8 151.60 +4.26 -9.3 JHANCOCK II LS BI 1	Last Chg 1Yr Rtn Fund Last HDELITY	Top Mut	Top Mutual Funds Fund Last Chg 1Yr Rtn Fund JPMORGAN Core Bond Sel LAZARD LAZAR	Top Mutual Funds Fund Last Chg 1Yr Rtn Fund Last JpMongan Core Bond Sel 11.68 Lazardo Lazard	Top Mutual Funds Same Fund Last Chg Tyr Rtn Find Last Chg Tyr Rtn Find Last Chg Tyr Rtn Find Capital & Inc Ras Ras	Top Mutual Funds Section Sec

14.00 +0.26 -7.5

		ncies		
	Last	Chg	Qtr	Year
Euro	0.923	+0.009	+0.014	+0.040
British Pound	0.702	+0.006	+0.054	+0.038
Canadian Dollar		-0.006	+0.089	+0.135
Japanese Yen	121.06	+2.250	+0.450	+2.800
Mexican Peso	18.100	-0.227	+1.608	+3.303
Swiss Franc	1.023	+0.009	+0.035	+0.099
Israeli Shekel	3.961	+0.011	+0.102	+0.028
Norwegian Kror		+0.065	+0.197	+0.85
South African R	and 15.891	-0.302	+2.072	+4.34
	Commo	dities		
Energy	Units	Date	Close	Chg
Crude oil NYM	\$/Barrel	Mar	33.62	+0.40
Natural gas NYI	M Mil. BTU	Mar	2.30	+0.12
Heating oil NYM	1 Gallon	Feb	1.06	+0.02
Gasoline NYM	Gallon	Feb	1.10	+0.02
Metals	0/4		1110 10	0.00
Gold CMX	\$/1oz.	Feb	1116.40	+0.80
Silver CMX	\$/1oz.	Feb	14.23	+0.01
HG Copper CMX		Feb	2.06	+0.02
Platinum NYM Agricultural	\$/1oz.	Mar	873.60	+6.40
Soybean CBT	¢/5000 BSL	Mar	882.25	+14.50
Corn CBT	¢/5000 BSL	Mar	372.00	+6.50
Wheat CBT	¢/5000 BSL	Mar	479.25	+7.00
Live cattle CME		Feb	135.30	-0.13
	Treas	uries		
		Yr.Chg	Wk N	lo Qtr
3-month T-bill	0.31 -0.02	0.01		10 41
6-month T-bill	0.43 -0.01	0.06		, _
h2-WK I-NIII		11 14	•	7 A
52-wk T-bill	0.44 0.00	0.14 0.52		7 A
2-year T-note	0.78 -0.05	0.52	•	7 🔺
2-year T-note 5-year T-note	0.78 -0.05 1.33 -0.07	0.52 1.27	* *	7 ▲ 7
2-year T-note	0.78 -0.05	0.52	* *	7 🔺
2-year T-note 5-year T-note 10-year T-note	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04	0.52 1.27 1.76 2.32	* *	7 A 7 V
2-year T-note 5-year T-note 10-year T-note	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04	0.52 1.27 1.76 2.32	* \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7 A 7 7 7 7 7
2-year T-note 5-year T-note 10-year T-note 30-year T-bond	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close	0.52 1.27 1.76 2.32 Market	S %Chg	γ Δ γ Ψ γ Ψ γ Ψ
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79	0.52 1.27 1.76 2.32 Market Chg +152.01	%Chg +2.56	%Y, −10.65
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02	0.52 1.27 1.76 2.32 Tarket Chg +152.01 +94.86	%Chg +2.56 +2.19	%Y -10.66 -4.63
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02 17518.30	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85	%Chg +2.56 +2.19 +2.80	%Y -10.65 -0.56
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02 17518.30 19683.11	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28	%Chg +2.56 +2.19 +2.80 +2.54	%Y -10.6 -4.6 -0.5 -19.9
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02 17518.30 19683.11 1300.98	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58	%Chg +2.56 +2.19 +2.80 +2.54 +0.98	%Y -10.67 -4.63 -0.50 -17.99
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58 +28.53	**Chg +2.56 +2.19 +2.80 +2.54 +0.98 +0.57	%Y -10.6i -4.6i -0.50 -19.9i -17.99 -8.60
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02 17518.30 19683.11 1300.98	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58	%Chg +2.56 +2.19 +2.80 +2.54 +0.98	%Y -10.6i -4.6i -0.50 -19.9i -17.99 -8.60
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.85 +476.85 +487.28 +12.58 +28.53 +158.52	**Chg +2.56 +2.19 +2.80 +2.54 +0.98 +0.57	%Y -10.6i -4.6i -0.50 -19.9i -17.99 -8.60
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Global N Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58 +28.53 +158.52	**Chg +2.56 +2.19 +2.80 +2.54 +0.98 +0.57	% Y — 10.6: —4.6: —0.5: —19.9: —17.9: —8.6: —8.7!
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord DAX	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11 Most A	0.52 1.27 1.76 2.32 Tarket Chg +152.01 +94.86 +476.85 +487.28 +12.58 +28.53 +158.52 Chg	%Chg +2.56 +2.19 +2.80 +2.54 +0.98 +0.57 +1.64	%YY
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord DAX Bank of Ameri (BA Citizns Fncl (CFG)	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11 Most A Close	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.53 +125.53 +158.52 Active Chg +0.61 -0.49	**Chg +2.56 +2.19 +2.80 +2.54 +0.57 +1.64 **YTD%** +4.5 -2.3	%Y, V W W W W W W W W W W W W W W W W W W
2-year T-note 5-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord DAX Bank of Ameri (BA Citizns Fncl (GF6) Microsoft (MSF1)	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11 Most A Close	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58 +28.53 +158.52 Active Chg +0.61 -0.49 +3.04	**Chg +2.56 +2.19 +2.80 +2.54 +0.98 +0.57 +1.64	%YY \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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2-year T-note 5-year T-note 10-year T-note 10-year T-bond TSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord DAX Bank of Ameri (BA Citizns Fncl (CFG) Microsoft (MSFT) Apple (APPL) Facebook (FB)	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11 Most A Close 14.14 21.25 55.09 97.34 112.21	0.52 1.27 1.76 2.32 Aarket Chg +152.01 +94.86 +476.85 +487.28 +12.58 +28.53 +158.52 Active Chg +0.61 -0.49 +3.04 +3.25 +3.10	**************************************	%YY \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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2-year T-note 5-year T-note 10-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord DAX Bank of Ameri (BA Citizns Fncl (CFG) Microsoft (MSFT) Apple (AAPL) Facebook (FB) Ford Motor (F) GE (GE)	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11 Most A Close 14.14 21.25 55.09 97.34 112.21 30.49 29.10	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58 +28.53 +158.52 Active Chg +0.61 -0.49 +3.04 +3.25 +3.04 +3.25 +3.10 +0.23 +0.24 +0.	**Chg +2.56 +2.19 +2.80 +2.54 +0.98 +0.57 +1.64 ** **YTD%** +4.5 -2.3 +5.8 +3.5 +2.8 +1.0 +2.0 +3.2	%Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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2-year T-note 5-year T-note 10-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord DAX Bank of Ameri (BA Citizns Fncl (CFG) Microsoft (MSFT) Apple (AAPL) Facebook (FB) Pfizer (PFE) Ford Motor (F) GE (GE) HP (HPQ)	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11 Most A Close 14.14 21.25 55.09 97.34 112.21 30.49 29.10	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58 +28.53 +158.52 Active Chg +0.61 6 -0.49 +3.04 +3.25 +3.10 +0.23 +0.23	**Chg +2.56 +2.19 +2.80 +2.54 +0.98 +0.57 +1.64 **YTD%** +4.5 -2.3 +5.8 +3.5 +2.8 +1.0 +2.0 +2.0 +3.2 +2.4	%Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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2-year T-note 5-year T-note 5-year T-note 10-year T-note 10-year T-note 30-year T-bond FTSE 100 CAC 40 Nikkei 225 Hang Seng SET All Ord DAX Bank of Ameri (BA Citizns Fncl (CFG) Microsoft (MSFT) Apple (AAPL) Facebook (FB) Pfizer (PFE) Ford Motor (F) GE (GE) HP (HPQ)	0.78 -0.05 1.33 -0.07 1.92 -0.06 2.75 -0.04 Close 6083.79 4417.02 17518.30 19683.11 1300.98 5056.60 9798.11 Most A Close 14.14 21.25 55.00 97.34 112.21 30.49 11.94 29.10 9.71	0.52 1.27 1.76 2.32 Market Chg +152.01 +94.86 +476.85 +487.28 +12.58 +12.58 +28.53 +158.52 Active Chg +0.61 -0.49 +3.04 +3.25 +3.10 +0.29 +0.23 +0.89 +0.23 Gainel	YTD% +4.5 -2.3 +5.8 +3.5 +2.0 +2.54 +0.98 +0.57 +1.64	%Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

	Close	Chg	YTD%	Volume
Bank of Ameri (BAC)	14.14	+0.61	+4.5	1592798
Citizns Fncl (CFG)	21.25	-0.49	-2.3	948742
Microsoft (MSFT)	55.09	+3.04	+5.8	835575
Apple (AAPL)	97.34	+3.25	+3.5	643128
Facebook (FB)	112.21	+3.10	+2.8	625880
Pfizer (PFE)	30.49	+0.29	+1.0	567285
Ford Motor (F)	11.94	+0.23	+2.0	520533
GE (GE)	29.10	+0.89	+3.2	505890
HP (HPQ)	9.71	+0.23	+2.4	474681
Big	gest G	ainer	s	
	Close	Chg	YTD%	Volume
Axiall (AXLL)	17.93	+8.13	+83.0	156572
TimkenSteel (TMST)	9.01	+3.86	+75.0	79372
Avenue Finan (AVNU)	19.24	+5.53	+40.3	14630
Energous (WATT)	6.24	+1.48	+31.1	50217
Chiasma (CHMA)	10.30	+2.11	+25.8	3068
CN Customer (CCRC)	8.05	+1.59	+24.6	295
Coherent (COHR)	77.27	+14.73	+23.6	12478
Mimecast (MIME)	7.59	+1.39	+22.4	3022
Gigamon (GIMO)	26.15	+4.05	+18.3	23681
Big	gest L	.osers	8	
	Close	Chg	YTD%	Volume
ImmuCell (ICCC)	5.87	-1.87	-24.2	1833
Quality Syst (QSII)	13.11	-3.16	-19.4	40193
Moog (M0G.A)	46.33	-8.82	-16.0	5691
Unwired Plan (UPIP)	9.28	-1.48	-13.8	308
Abaxis (ABAX)	43.55	-6.88	-13.6	13340
Axsome (AXSM)	7.83	-1.20	-13.3	258
Natural Groc (NGVC)	18.01	-2.72	-13.1	7448
Tuesday Mrng (TUES)	5.57	-0.80	-12.6	35970
Costamare (CMRE)	7.27	-0.86	-10.6	7532
Financial da	ta provid	ded by	Thomso	on Reuter

Wall St. surges at end of awful January

BY NOEL RANDEWICH **REUTERS**

Wall Street surged over 2 percent on Friday after the Bank of Japan unexpectedly cut interest rates and Microsoft led a major rally in technology shares, repairing some of the damage to the S&P 500's worst January since 2009.

Slammed by collapsing oil prices that have fed doubts about the health of the global economy, stocks have had a volatile start to the year. At one point last week, the S&P's loss for 2016 reached 11 percent before recovering to end the month down 5 percent.

The index rose 2.48 percent on Friday, its strongest day since September.

"Sentiment certainly had swung to a wildly negative scenario," said Michael Church, president of Addison Capital Management in Philadelphia. "What happens if there is not a recession? What happens if China stabilizes and the Fed doesn't raise rates aggressively?"

Global equities got a surprise boost on Friday after Japan's central bank cut a benchmark rate below zero to stimulate its econo-

Stocks were also lifted by weak fourth-quarter U.S. gross domestic product growth data, which bolstered arguments that the Federal Reserve might go slower than expected on future rate hikes.

While the Fed has not ruled out a rate hike in March, many investors believe recent global economic and financial turmoil may lead it to wait.

Microsoft shares jumped 5.83 percent on better-than-expected results.

The software company was the biggest influence on the S&P 500 and the Nasdaq and helped push the S&P tech sector up 3.6 percent, its strongest session since August.

Fourth-quarter corporate reporting season is well under way, with S&P 500 companies on average expected to post a 4.1 percent drop in earnings, according to Thomson Reuters I/B/E/S. Excluding energy companies, earnings are seen rising 2.1 percent.

The Dow Jones industrial average ended 2.47 percent higher at 16,466.30 while the S&P 500 gained 46.88 points or 2.48 percent higher to end at 1,940.24.

The Nasdaq Composite surged 2.38 percent to 4,613.95.

For the week, the Dow gained 2.3 percent, the S&P added 1.7 percent and the Nasdaq increased 0.5 percent.

That left the Dow down 5.5 percent for the month and the Nasdaq 7.9 percent lower, its largest monthly loss since May 2010.

Infographics designed and produced by Custom Flow Solutions, LLC

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