



# Update on Carbon Markets

*2017 Idaho Master Forest Stewards Fall Meeting*

Gregory Latta

Research Assistant Professor of Forest Economics

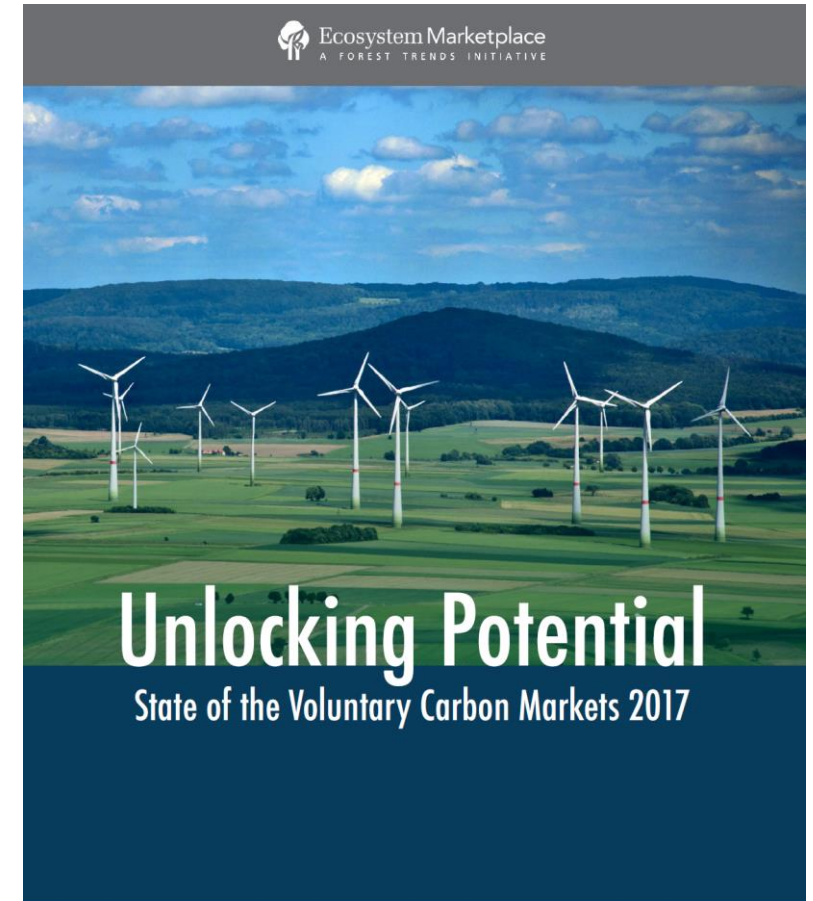
# What are current Prices and Quantities

## Voluntary market prices can be all over the place

Table 2: Transacted Volume, Value, and Average Price by Project Category, 2016

	VOLUME	AVERAGE PRICE	VALUE
<b>RENEWABLES</b>	<b>18.3</b> MtCO <sub>2</sub> e	<b>\$1.4</b>	<b>\$25M</b>
<b>FORESTRY AND LAND USE</b>	<b>13.1</b> MtCO <sub>2</sub> e	<b>\$5.1</b>	<b>\$67M</b>
<b>METHANE</b>	<b>5.6</b> MtCO <sub>2</sub> e	<b>\$1.8</b>	<b>\$10M</b>
<b>EFFICIENCY AND FUEL SWITCHING</b>	<b>4.5</b> MtCO <sub>2</sub> e	<b>\$2.9</b>	<b>\$13M</b>
<b>HOUSEHOLD DEVICE</b>	<b>3.4</b> MtCO <sub>2</sub> e	<b>\$5.2</b>	<b>\$18M</b>
<b>TRANSPORTATION</b>	<b>1.9</b> MtCO <sub>2</sub> e	<b>\$0.3</b>	<b>\$1M</b>
<b>GASES</b>	<b>1.4</b> MtCO <sub>2</sub> e	<b>\$5.7</b>	<b>\$8M</b>
<b>OTHER</b>	<b>0.5</b> MtCO <sub>2</sub> e	<b>\$4.0</b>	<b>\$2M</b>

Notes: Based on 717 transactions representing 48.8 MtCO<sub>2</sub>e in 2016.



Supporter



Sponsors



# What are current Prices and Quantities

Voluntary market prices can be all over the place

**CALIFORNIA CARBON DASHBOARD**  *in beta*  
The latest on emissions policy and cap and trade in the world's 14th largest emitter

## CARBON PRICE

\$/Tonne CO<sub>2</sub>e



5-day moving average price and volume of California Carbon Allowance Futures over time from [ICE End of Day Reports](#). Daily trading volume units are 1000 allowance futures. [Download data](#).

# What are current Prices and Quantities

Project as of yesterday (September 21, 2017)

Registered  
at  
Climate  
Action  
Reserve

Row Labels	Count of Project Name	Sum of Total Number of Offset Credits Registered
Avoided Conversion	6	1,548,512
Avoided Conversion - ARB Compliance	1	131,768
Avoided Grassland Conversion	6	
Coal Mine Methane - Drainage	2	931,263
Coal Mine Methane - VAM	2	278,177
Conservation-Based Forest Management	5	5,062,124
Forestry - MX	1	
Improved Forest Management	26	10,741,562
Improved Forest Management - ARB Compliance	86	22,496,977
Landfill Gas Capture/Combustion	116	26,689,855
Livestock - ARB Compliance	68	2,022,066
Livestock Gas Capture/Combustion	65	2,716,648
Mine Methane Capture - ARB Compliance	1	424,076
Nitric Acid N2O- Secondary Catalyst	5	10,749,244
Nitric Acid N2O- Tertiary Catalyst	1	534,849
Organic Waste Composting	7	527,374
Organic Waste Digestion	2	118,999
Ozone Depleting Substances - Article 5 Imports	5	4,009,926
Ozone Depleting Substances - U.S.	30	6,465,385
Ozone Depleting Substances - U.S. - ARB Compliance	52	4,469,383
Reforestation	7	
Reforestation - ARB Compliance	6	
<b>Grand Total</b>	<b>500</b>	<b>99,918,188</b>



# What are current Prices and Quantities

Project as of yesterday (September 21, 2017)

**Registered  
at  
American  
Carbon  
Registry**

Row Labels	Count of Project ID	Sum of Total Number of Credits Registered
Agricultural Land Management	5	39,982
Carbon Capture & Storage (CCS)	5	21,780,080
Coal Mine Methane	6	1,275,447
Energy Efficiency	2	439,035
Forest Carbon	84	56,962,945
Fuel Switching	3	255,129
Industrial Gas Substitution	1	7,984,006
Industrial Process Emissions	9	1,012,189
Landfill Gas Capture & Combustion	12	5,671,631
Livestock Waste Management	19	558,803
Ozone Depleting Substances	47	4,682,375
Renewable Energy	5	677,691
Transport / Fleet Efficiency	36	934,709
Wastewater Treatment	1	100,000
<b>Grand Total</b>	<b>235</b>	<b>102,374,022</b>

# What are current Prices and Quantities

**CAR**

**ACR**

Row Labels	Count of Project Name	Sum of Total Number of Offset Credits Registered
<b>Active ARB Project</b>	<b>112</b>	<b>21,245,216</b>
Avoided Conversion - ARB Compliance	1	131,768
Improved Forest Management - ARB Compliance	18	14,435,602
Livestock - ARB Compliance	51	1,877,442
Mine Methane Capture - ARB Compliance	1	424,076
Ozone Depleting Substances - U.S. - ARB Compliance	41	4,376,328
<b>Active Registry Project</b>	<b>17</b>	<b>8,299,054</b>
Improved Forest Management - ARB Compliance	11	8,061,375
Livestock - ARB Compliance	5	144,624
Ozone Depleting Substances - U.S. - ARB Compliance	1	93,055
<b>Early Action</b>	<b>110</b>	<b>26,897,095</b>
Avoided Conversion	6	1,548,512
Coal Mine Methane - Drainage	2	931,263
Coal Mine Methane - VAM	2	278,177
Conservation-Based Forest Management	5	5,062,124
Improved Forest Management	19	10,499,529
Livestock Gas Capture/Combustion	48	2,177,913
Ozone Depleting Substances - U.S.	28	6,399,577
<b>Not ARB Eligible</b>	<b>147</b>	<b>42,696,630</b>
Avoided Grassland Conversion	6	
Forestry - MX	1	
Landfill Gas Capture/Combustion	116	26,689,855
Livestock Gas Capture/Combustion	2	575
Nitric Acid N2O- Secondary Catalyst	5	10,749,244
Nitric Acid N2O- Tertiary Catalyst	1	534,849
Organic Waste Composting	7	527,374
Organic Waste Digestion	2	118,999
Ozone Depleting Substances - Article 5 Imports	5	4,009,926
Ozone Depleting Substances - U.S.	2	65,808
<b>Not Eligible</b>	<b>29</b>	<b>780,193</b>
Improved Forest Management	7	242,033
Livestock Gas Capture/Combustion	15	538,160
Reforestation	7	
<b>Proposed Project</b>	<b>85</b>	
Improved Forest Management - ARB Compliance	57	
Livestock - ARB Compliance	12	
Ozone Depleting Substances - U.S. - ARB Compliance	10	
Reforestation - ARB Compliance	6	
<b>Grand Total</b>	<b>500</b>	<b>99,918,188</b>

Row Labels	Count of Project ID	Sum of Total Number of Credits Registered
<b>Early Action</b>	<b>4</b>	<b>287,542</b>
Forest Carbon	2	
Ozone Depleting Substances	2	287,542
<b>Listed - Active ARB Project</b>	<b>71</b>	<b>25,294,446</b>
Coal Mine Methane	3	1,044,599
Forest Carbon	15	19,340,413
Livestock Waste Management	12	514,601
Ozone Depleting Substances	41	4,394,833
<b>Listed - Active Registry Project</b>	<b>12</b>	<b>31,522,187</b>
Coal Mine Methane	1	230,848
Forest Carbon	11	31,291,339
<b>Listed - Proposed Project</b>	<b>53</b>	
Coal Mine Methane	2	
Forest Carbon	42	
Livestock Waste Management	5	
Ozone Depleting Substances	4	
<b>Not ARB Eligible</b>	<b>95</b>	<b>45,269,847</b>
Agricultural Land Management	5	39,982
Carbon Capture & Storage (CCS)	5	21,780,080
Energy Efficiency	2	439,035
Forest Carbon	14	6,331,193
Fuel Switching	3	255,129
Industrial Gas Substitution	1	7,984,006
Industrial Process Emissions	9	1,012,189
Landfill Gas Capture & Combustion	12	5,671,631
Livestock Waste Management	2	44,202
Renewable Energy	5	677,691
Transport / Fleet Efficiency	36	934,709
Wastewater Treatment	1	100,000
<b>Grand Total</b>	<b>235</b>	<b>102,374,022</b>



# Thank You

**Greg Latta**

Research Assistant Professor in Forest Economics

Department of Natural Resources and Society

University of Idaho

[glatta@uidaho.edu](mailto:glatta@uidaho.edu)